CLEARSIGN COMBUSTION CORP
Form S-1/A
April 06, 2012

As filed with the Securities and Exchange Commission on April 6, 2012

Registration No. 333-177946

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

PRE-EFFECTIVE AMENDMENT NO. 4

TO

FORM S-1

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

CLEARSIGN COMBUSTION CORPORATION

(*Exact Name of Registrant as Specified in Its Charter*)

Washington	3823	26-2056298
(*State or other jurisdiction of* incorporation or organization)	(*Primary Standard Industrial* Classification Code Number)	(*I.R.S. Employer* Identification No.)

12870 Interurban Avenue South

Seattle, Washington 98168

(206) 673-4848

(*Address, including zip code, and telephone number, including area code, of registrant's principal executive offices*)

Richard Rutkowski

Chief Executive Officer

ClearSign Combustion Corporation

12870 Interurban Avenue South

Seattle, Washington 98168

(206) 673-4848

(*Name, address, including zip code, and telephone number, including area code, of agent for service*)

***Copies to*:**

Kevin Friedmann, Esq.
Edgar D. Park, Esq.
Richardson & Patel, LLP
750 Third Avenue, 9th Floor
New York, New York 10017
Telephone: (212) 561-5559
Fax: (917) 591-6898

Andrew Hudders, Esq.
Carl Van Demark, Esq.
Golenbock Eiseman Assor Bell & Peskoe LLP
437 Madison Avenue
New York, New York
Telephone: (212) 907-7300
Fax: (212) 754-0330

As soon as practicable after the effective date of this Registration Statement.

(*Approximate date of commencement of proposed sale to the public*)

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box. x

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ¨

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ¨

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ¨

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
(*Do not check if a smaller reporting company*)	

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered (1)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee	
Common Stock, $0.0001 par value per share(2)	3,450,000	$ 4.00	$ 13,800,000	$ 1,581.48	
Underwriter Warrant (3)(4)	1	$ —	$ 100	$ —	
Common Stock underlying Underwriter's Warrant	345,000	$ 5.00	$ 1,725,000	$ 197.69	
Common Stock, $0.0001 par value per share (5)	454,545	$ 4.00	$ 1,818,180	$ 208.36	
Total	4,249,546	$ 4.00	$ 17,343,280	$ 0.00	(6)

(1) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended, for the public offering and Rule 457(a) for the offering by the security holder.

(2) Offered pursuant to the registrant’s initial public offering, including 450,000 shares of our common stock representing 15% of the shares offered to the public that the underwriter has the option to purchase to cover over-allotments, if any.

(3) No registration fee required pursuant to Rule 457(g) under the Securities Act of 1933.

(4) Represents a warrant granted to the underwriter to purchase shares of common stock in an amount up to 10% of the number of shares sold to the public in this offering.

(5) Represents shares of the registrant's common stock being offered for distribution by the security holder named in this registration statement.

(6) On November 14, 2011 the registrant paid a filing fee of $3,365.02.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until this Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

EXPLANATORY NOTE

This registration statement contains two forms of prospectus, as set forth below.

- *Public Offering Prospectus.* A prospectus to be used for the initial public offering by the registrant of 3,000,000 shares of common stock, not including the over-allotment option (the "Public Offering Prospectus"), through the underwriter named on the cover page of the Public Offering Prospectus.

- *Security Holder Prospectus.* A prospectus to be used in connection with the potential distribution by the Security Holder of up to an aggregate of 454,545 shares of the registrant's common stock (the "Security Holder Prospectus").

The Public Offering Prospectus and the Security Holder Prospectus will be identical in all respects except for the following principal points:

- they contain different front covers;

- they contain different tables of contents;

- the summary of The Offering is deleted from the Security Holder Prospectus;

- they contain different Use of Proceeds sections;

- a Shares Registered for Distribution section is included in the Security Holder Prospectus;

- the Underwriting section from the Public Offering Prospectus is deleted from the Security Holder Prospectus and a Plan of Distribution section is inserted in its place;

- the Legal Matters section in the Security Holder Prospectus deletes the reference to counsel for the underwriter; and

- they contain different back covers.

The registrant has included in this registration statement, after the financial statements, a set of alternate pages to reflect the foregoing differences between the Security Holder Prospectus and the Public Offering Prospectus.

THE INFORMATION IN THIS PROSPECTUS IS NOT COMPLETE AND MAY BE CHANGED. THESE SECURITIES MAY NOT BE SOLD UNTIL THE REGISTRATION STATEMENT FILED WITH THE SECURITIES AND EXCHANGE COMMISSION IS EFFECTIVE. THIS PROSPECTUS IS NOT AN OFFER TO SELL THESE SECURITIES AND WE ARE NOT SOLICITING AN OFFER TO BUY THESE SECURITIES IN ANY STATE WHERE THE OFFER OR SALE IS NOT PERMITTED.

SUBJECT TO COMPLETION, DATED APRIL 6, 2012

PRELIMINARY PROSPECTUS

3,000,000 Shares of Common Stock

ClearSign Combustion Corporation is offering 3,000,000 shares of its common stock, $0.0001 par value.

This is an initial public offering of our common stock. We expect the public offering price to be $4.00 per share. There is presently no public market for our common stock. We intend to apply for listing of our common stock on The Nasdaq Capital Market under the symbol “CLIR”, which listing we expect to occur upon consummation of this offering. No assurance can be given that our application will be approved. If the application is not approved, we will not complete this offering.

Pursuant to a registration rights agreement, we are concurrently registering 454,545 shares of our common stock for distribution by a shareholder (the “Security Holder”). All of these shares are subject to a 180 day lock-up period for sales into the public market. If the shares are sold, the shares will be sold at a price of $4.00 per share until our common stock is quoted on the OTC Bulletin Board or listed on The Nasdaq Capital Market, at which time the shares, if sold, will be sold at prevailing market prices or privately negotiated prices. We will not receive any of the proceeds from the sale of the common stock which is distributed by the Security Holder.

Investing in our common stock involves a high degree of risk. See “Risk Factors” beginning on page 7 for a discussion of information that should be considered in connection with an investment in our securities.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

MDB Capital Group LLC is the underwriter for our initial public offering. MDB Capital Group LLC has provided placement agency services and consulting services to us in the past. If we sell all of the common stock we are offering, we will pay to MDB Capital Group LLC approximately $[_____], or 8.75%, of the gross proceeds of this offering and non-accountable expenses equal to $160,000. MDB Capital Group LLC and its associated persons collectively hold directly 1,042,001 shares of our common stock, representing 19.7% of the outstanding shares. Therefore, we have engaged Chardan Capital Markets, LLC as a "qualified independent underwriter," to which we will pay a fee of $110,000, of which $25,000 has been paid in advance. For a more complete discussion of the compensation we will pay to the underwriter, please see the section of this prospectus titled "Underwriting". In connection with this offering, we have also agreed to issue to MDB Capital Group LLC a warrant to purchase shares of our common stock in an amount up to 10% of the shares of common stock sold in the public offering, with an exercise price equal to 125% of the per-share public offering price.

	Per Share	Total
Public offering price	$	$
Underwriting discounts and commissions	$	$
Proceeds to us (before expenses)(1)	$	$

(1) Does not include a non-accountable expense allowance equal to $160,000 payable to MDB Capital Group LLC, the underwriter, and the fee of $110,000 payable to Chardan Capital Markets, LLC, the qualified independent underwriter. See “Underwriting” for a description of compensation payable to the underwriter.

The underwriter also may purchase an additional 450,000 shares of our common stock amounting to 15% of the number of shares offered to the public, within 45 days of the date of this prospectus, to cover over-allotments, if any, on the same terms set forth above.

The underwriter expects to deliver the shares on or about _____, 2012.

MDB Capital Group LLC

The date of this prospectus is _____, 2012.

TABLE OF CONTENTS

	Page
PROSPECTUS SUMMARY	1
SUMMARY SELECTED FINANCIAL INFORMATION	8
RISK FACTORS	9
BUSINESS	17
PROPERTIES	38
MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS	39
DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE	43
EXECUTIVE COMPENSATION	47
DESCRIPTION OF CAPITAL STOCK	50
DIVIDEND POLICY AND OTHER SHAREHOLDER MATTERS	55
SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED SHAREHOLDER MATTERS	55
CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE	56
UNDERWRITING	57
USE OF PROCEEDS	63
CAPITALIZATION	64
DILUTION	64
LEGAL MATTERS	65
EXPERTS	65
WHERE YOU CAN FIND MORE INFORMATION	66
DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES	66
INDEX TO FINANCIAL STATEMENTS	67

Unless otherwise stated or the context otherwise requires, the terms "ClearSign," "we," "us," "our" and the "Company" refer to ClearSign Combustion Corporation.

You should rely only on the information contained in this prospectus. We have not authorized anyone to provide you with additional or different information. The information contained in this prospectus is accurate only as of the date on the front cover of this prospectus, regardless of the time of delivery of this prospectus or of any sale of our common stock.

No dealer, salesperson or any other person is authorized in connection with this offering to give any information or make any representations about us, the securities offered hereby or any matter discussed in this prospectus, other than those contained in this prospectus and, if given or made, the information or representations must not be relied upon as having been authorized by us. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any security other than the securities offered by this prospectus, or an offer to sell or a solicitation of an offer to buy any securities by anyone in any circumstance in which the offer or solicitation is not authorized or is unlawful.

Prospectus Summary

This summary highlights selected information contained elsewhere in this prospectus and does not contain all the information that you need to consider in making your investment decision. You should carefully read this entire prospectus, as well as the information to which we refer you, before deciding whether to invest in our common stock. You should pay special attention to the "Risk Factors" section of this prospectus to determine whether an investment in our common stock is appropriate for you.

This registration statement, including the exhibits and schedules thereto, contains additional relevant information about us and our securities. With respect to the statements contained in this prospectus regarding the contents of any agreement or any other document, in each instance, the statement is qualified in all respects by the complete text of the agreement or document, a copy of which has been filed or incorporated by reference as an exhibit to the registration statement.

About ClearSign Combustion Corporation

We are a development stage company. We design and develop technologies that aim to improve key performance characteristics of combustion systems including energy efficiency, emissions control, fuel flexibility and overall cost effectiveness. Our Electrodynamic Combustion Control™ (ECC™) technology introduces a computer-controlled electric field into the combustion zone to improve control of flame shape and heat transfer. This same technique can also be used to optimize the complex chemical reactions that occur during combustion in order to minimize harmful emissions while maximizing system efficiency.

We have designed and built 3 prototypes. We have not yet developed products using our technology or applied our technology to existing products. Based on our research and testing, we believe that our technology can be applied at any scale and that the potential cost savings and economic benefits to owners and operators of large-scale combustion systems, in particular, such as those used to provide heat for industrial processes or to generate electric power, could be considerable. We believe that our technology would allow owners and operators of such systems to benefit from substantially reduced costs associated with the construction (including refurbishment and upgrade), operation and maintenance of these systems, as compared to combustion systems that use currently available technology. We believe that our technology may also substantially reduce the cost of compliance with air quality regulations as compared to the current generation of air pollution control (APC) technologies. Our Electrodynamic Combustion Control™ technology is, to our knowledge, the only combustion technology that exists today that has the promise to simultaneously improve emissions control performance and meet regulatory standards, while yielding a significant *increase* in energy efficiency. We believe our technology can be adapted to various fuel types and multiple system sizes and configurations, and can be deployed on both a retrofit and new-build basis.

We were incorporated in Washington on January 23, 2008. The address of our corporate headquarters is 12870 Interurban Avenue South, Seattle, Washington 98168 and our telephone number is (206) 673-4848. Our website can be accessed at www.clearsigncombustion.com. The information contained on or that may be obtained from our website is not, and shall not be deemed to be, a part of this prospectus.

The Industry

Nearly two-thirds of the world's total energy consumption is accounted for by combustion of hydrocarbon and other fuels in boilers, furnaces, kilns and turbines. These are used to generate electrical power, to provide heat for all manner of industrial processes and for building heat and they consume and produce more than 50 quadrillion British thermal units (Btus) of energy annually in the U.S. In order to maximize energy efficiency while keeping pace with regulatory guidelines for air pollution emissions, operators of these systems are continually installing, maintaining and upgrading a variety of costly process control, air pollution control and monitoring systems. In its December 2010 Air Pollution Management Report, The McIlvaine Company projected that just under $42 billion will be invested globally in equipment to reduce air pollution in 2011. In its August 2011 report, The McIlvaine Company further projected this market will grow at an average rate of 6% per year over the next decade.

Our Proprietary Technology

Overview. While we have not deployed our technology commercially, if the results we have observed in our testing can be replicated on a commercial scale, we believe our proprietary technology platform may increase energy efficiency and improve fuel flexibility and environmental performance for most types of industrial and commercial combustion systems. We believe our technology will compare favorably with current industry-standard air pollution control and efficiency technologies, including electrostatic precipitators, fabric filters, selective catalytic reduction devices, low- and ultra-low NOx burners, excess air systems and other such technologies. These systems account for the majority of energy utilization worldwide, and include those used in:

- electrical power generation,
- the hydrocarbon and chemical processing industries,
- petroleum refining, and
- all manner of industrial and commercial steam generation and industrial process heat.

Technical requirements. Our technology consists, in its simplest form, of four major components: (a) a computer, (b) software delivering proprietary algorithms to (c) a power amplifier (resident outside the combustion chamber) and (d) electrode(s) (inside the combustion chamber). The electrodes are designed to best suit the specific geometry of a given installation. Because the system's basic components are available 'off the shelf', or require manufacturing techniques that are well within the current state of the art, ClearSign does not depend on any third-party external technology that has not yet been developed.

ClearSign's Electrodynamic Combustion Control™ technology makes use of computer-controlled high-voltage electric fields to manipulate the movement of electrically charged molecules (ions) that are a natural product of the combustion process. The pulsed field creates very powerful electrostatic forces (body forces) within the flame and the surrounding gas cloud. These forces can be manipulated to precisely control flame shape and the transfer of heat to, through, or away from a surface as desired. Because we can selectively target and mobilize specific charged molecules, our technology provides an unprecedented level of precision for optimizing combustion chemistry to suppress formation of pollutants at the flame source.

This approach enables multiple effects to be applied individually or in combination, including the following:

- *Better combustion* – less unburned fuel and better fuel/air mixing increases efficiency and reduces pollutant formation.
- *Superior flame quality* – optimizes flame shape and flame stability to maximize energy efficiency.
- *Precision control of heat transfer* – increases thermal efficiency and therefore, fuel efficiency.
- *Control over combustion reaction chemistry* – enables control over flame chemistry, which can selectively promote, suppress, retard or accelerate chemical reactions as desired to minimize formation of pollutants and enhance

pollution abatement.

- *Agglomeration of particulate* – particulate matter in exhaust is formed into large, more easily removed clusters, which are much more efficiently removed compared to particulate generated by existing technologies.

The gain in energy efficiency provided by our technology in boilers, kilns, furnaces and turbines stems in part from our ability to precisely control the flow of hot gases within a gas volume. In most cases, efficiency is increased by increasing heat flux onto targeted surfaces and reducing heat loss from other surfaces. Additionally, because the formation of pollutants is greatly reduced at the source, the 'load' placed on downstream pollution control equipment is also reduced, lowering both capital and operating expense and yielding a positive return on investment for system operators.

Intellectual Property. Our background research has not identified any public information, such as patents or published articles, relating to our technology that would affect our freedom to operate. To date, ClearSign has conceived and recorded, and is diligently working toward filing patent applications on or constructing more than 100 inventions that we believe represent proprietary, patentable subject matter. To date, we have filed 22 patent applications and plan to prepare and file more. See "Intellectual Property Protection" for additional information. We primarily rely on a combination of patent laws, confidentiality procedures and contractual restrictions with our employees and others to establish and protect our intellectual property rights. However, the steps we take to protect our intellectual property rights may be inadequate or we may be unable to secure patents and intellectual property protection for all of our technology. Moreover, others may independently develop technologies that are competitive with ours or infringe our intellectual property. Our success and ability to compete will depend, in large part, upon our intellectual property and our ability to protect it.

Prototypes and Our Experimental Data. We have designed and built 3 prototype systems: a small "bench-top" configuration of 5,000 Btu/hour, a larger system of 25,000 Btu/hour and a scale reactor of 250,000 to 1,000,000 Btu/hour to demonstrate our technology with both pre-mixed and diffusion flames. This reactor can accommodate a variety of fuel types and can be up-, down-, or side-fired. We have conducted over 400 experiments using a variety of analytical and measurement tools. Examples of the analytical equipment used in our tests include calorimetry to record data relating to heat transfer, thermocouple arrays to map heat distribution, EPA-certified methods and NBS-certified calibration gases to measure pollutant formation, videography, and visible and Schlieren photography to measure flame shape. Our technology's ability to control and improve both flame chemistry and heat transfer in configurations for multiple fuels suggests a wide range of potential commercial scale applications.

Our tests with coal, tire-derived-fuel (TDF) and wood have shown reductions in visible particulate matter (PM) of over 80% (using EPA test Method 9, a measure of visible opacity at timed intervals), with significant, simultaneous reductions in carbon monoxide (CO) and exit gas temperature (indicative of superior heat transfer to the process). In testing we have achieved such reductions in unburned carbon, CO, and particulates without increased NO_X emissions. We have also demonstrated the ability to selectively and precisely control flame shape, heat transfer and heat distribution.

Our experiments and designs also suggest improvements in flame stability and that our technology could be retrofitted to or even replace Low and Ultra-Low NO_X burners. We believe this may result in potential efficiency increases in the range of 20% to 30% for a large number of industrial gas-fired boilers.

Our technology has not been tested or verified by any independent third party.

Key technical challenges. As with any new industrial technology, scaling our technology from lab prototype to a field-operating unit will require deliberate staging from the initial retrofit installation of systems of a "meaningful but manageable" scale, to progressively larger and more complex systems. We are currently beginning testing a system

with a 1,000,000 Btu/hr burner, which is similar in size to the wall-fired burners used in some configurations of steam methane reformers (SMR) used in the production of hydrogen. Because of the large numbers, wide variety and varying capacities of combustion systems, we believe we will be able to identify and target progressively larger systems without requiring significant 'step-function' increases in scale.

The Combustion Markets

Overview . We believe that both the industrial combustion and power generation segments offer enormous opportunity for us. In its December 2010 Air Pollution Management Report, The McIlvaine Company projected that just under $42 billion will be invested globally in equipment to reduce air pollution in 2011. Based on our own internal estimates, we believe the total addressable market for ClearSign ECC is between $5.1 billion and $12.2 billion in the United States alone. Each segment, however, has significantly different design-build and sales cycles. The power generation opportunity is characterized by large individual installations (ranging into the billions of dollars), with longer times to revenue. Industrial combustion systems are generally smaller, much more numerous, and tend to be represented by a manageable number of design variations. For this reason, we intend to target the retrofit of industrial combustion systems as an early market entry point, using techniques developed from these early installations to inform the design of systems for larger utility boilers.

Partnership Strategy. We intend to form research and development partnerships in order to further develop and commercialize our technology. While we have commenced seeking such partners and have engaged in discussions with several companies and personnel with certain government agencies, we have not yet entered into any definitive partnership or sponsorship agreements. Among the types of partners ClearSign will seek to establish relationships with are:

- Industry research groups, whose mission is the development and testing of new technologies for the eventual benefit of their member companies;
- Government entities such as the U.S. Department of Energy, that are chartered with the development of longer-range and potentially disruptive energy technologies;
- Engineering and Construction (E&C) companies interested in differentiating their offerings while increasing profitability;
- Large OEMs interested in ClearSign's technology

ClearSign plans to initially market solutions that will enable cost-effective retrofitting of our technology onto existing, standard system designs to simultaneously improve both their energy efficiency and pollution control characteristics. ClearSign also believes that, as a next-stage development effort, our technology will form the basis of completely redesigned, next-generation combustion systems with disruptive performance characteristics, offering benefits to operators which are not possible using conventional system designs.

We believe that our Electrodynamic Combustion Control™ technology has the potential to transform industries that rely upon combustion, and is broadly applicable in large, scalable, global markets.

Going Concern

Our independent registered public accounting firm has issued an unqualified opinion with an explanatory paragraph to the effect that there is substantial doubt about our ability to continue as a going concern. This unqualified opinion with an explanatory paragraph could have a material adverse effect on our business, financial condition, results of operations and cash flows. See "Management's Discussion and Analysis of Financial Condition and Results of Operations - Liquidity and Capital Resources" and Note 2 to our financial statements included elsewhere in this prospectus.

We experienced net losses of $2,976,295 and $395,587 for the years ended December 31, 2011 and 2010, respectively. As of December 31, 2011, our accumulated deficit was $4,490,238.

We have no committed sources of capital and do not know whether additional financing will be available when needed on terms that are acceptable, if at all. This going concern statement from our independent registered public accounting firm may discourage some investors from purchasing our stock or from providing alternative capital financing to us. The failure to satisfy our capital requirements will adversely affect our business, financial condition, results of operations and prospects.

Unless we raise additional funds, either through the sale of equity securities or one or more collaborative arrangements, we will not have sufficient funds to continue operations. Even if we take these actions, they may be insufficient, particularly if our costs are higher than projected or unforeseen expenses arise.

Risks Related to Our Business

Our business is subject to a number of risks. You should understand these risks before making an investment decision. If any of these risks actually occurs, our business, financial condition or results of operations would likely be materially adversely affected. In such case, the trading price of our common stock would likely decline, and you may lose all or part of your investment. Below is a summary of some of the principal risks we face. The risks are discussed more fully in the section of this prospectus below entitled “Risk Factors.”

- We are a development stage company with a limited operating history and it is uncertain whether we will ever be profitable. We anticipate future losses and negative cash flow, which may limit or delay our ability to become profitable.

- We may raise additional financing by issuing new securities, which may have terms or rights superior to those of our shares of common stock, which could adversely affect the market price of our shares of common stock and our business.

- If we do not receive additional financing when and as needed in the future, we may not be able to continue our research and development efforts or commence the commercialization of our technology and materials.

- If we are unable to keep up with rapid technological changes, our technology may become obsolete.

- Our efforts may never demonstrate the feasibility of our technology.

- Our technology and its industrial applications have not yet been safety tested.

- We may be unable to protect our intellectual property.

Stock Split

On December 21, 2011 our board of directors, pursuant to the authority granted by Section 23B.10.020 of the Washington Business Corporation Act, approved a 1.25-for-1 split of our common stock and an increase to our authorized shares of common stock from 50,000,000 shares to 62,500,000 shares. The stock split and the increase to the authorized shares were effective on December 22, 2011, the date that the Articles of Amendment to our Articles of Incorporation were filed with the Secretary of State of the State of Washington. All of the information in this prospectus reflects the stock split.

THE OFFERING

The following summary contains basic information about our initial public offering and our common stock and is not intended to be complete. It does not contain all the information that may be important to you. For a more complete understanding of our common stock, please refer to the section of this prospectus entitled "Description of Capital Stock."

Issuer	ClearSign Combustion Corporation, a Washington corporation.
Common stock offered by us	3,000,000 shares of common stock, par value $0.0001 per share.
Over-allotment option	We have granted an option to our underwriter to purchase up to an additional 450,000 shares of common stock within 45 days of the date of this prospectus in order to cover over-allotments, if any.
Common stock outstanding prior to this offering	5,157,716 shares of common stock (1)
Common stock outstanding after this offering	8,157,716 shares of common stock (1)(2)
Use of Proceeds	We intend to use the net proceeds from our sale of common stock in this offering as follows: approximately $5 million for research and development including capital expenditures, $1 million for protection of intellectual property, $1.25 million for exploration of market opportunities, and the balance for working capital and general corporate purposes. See "Use of Proceeds" and "Plan of Operation" in "Management's Discussion and Analysis of Financial Condition and Results of Operations" for additional information.
Market and trading symbol for the common stock	There is currently no market for our common stock. We intend to apply for listing of our common stock on The Nasdaq Capital Market under the symbol "CLIR".
Underwriter common stock purchase warrant	In connection with this offering, we have also agreed to sell to MDB Capital Group LLC and its designees a warrant to purchase up to 10% of the shares of common stock sold in this offering. If this warrant is exercised, each share may be purchased by MDB Capital Group LLC at $_____ per share (125% of the price of the shares sold in this offering.)
Lock-Up Agreements	With the exception of one stockholder who holds 3,555 shares of our common stock, our current shareholders, including our officers and directors, are subject to lock-up agreements for periods that are no less than 180 days and no more than one year. The number of shares of common stock subject to a 180 day lock-up period totals 2,193,196 shares, including shares owned by the

	Security Holder which may not be offered for sale into the public market for 180 days, and the number of shares of common stock subject to a one year lock-up period totals 2,960,020 shares. If the Security Holder distributes its shares, 182,000 additional shares will be subject to the one year lock-up period. For more information about the lock-up agreements, see the section titled “Underwriting - Lock-Up Agreements” in this prospectus.
Qualified Independent Underwriter	MDB Capital Group LLC and its associated persons collectively hold directly 1,042,001 shares of our common stock, representing 19.7% of the outstanding shares. Therefore, we have engaged Chardan Capital Markets, LLC as a "qualified independent underwriter," to which we will pay a fee of $110,000, of which $25,000 has been paid in advance. For a more complete discussion of the qualified independent underwriter, please see the section titled "Underwriting – Conflict of Interest” in the prospectus.

(1) The number of shares of our common stock to be outstanding both before and after this offering is based on the number of shares outstanding as of March 31, 2012 and excludes:

- 359,375 shares of our common stock issuable upon exercise of stock options under our 2011 Equity Incentive Plan at a weighted average exercise price of $2.20 per share;
- 216,368 shares of our common stock reserved for issuance under outstanding warrant agreements, at a weighted average exercise price of $2.05 per share;
- 141,180 shares of our common stock reserved for future issuance under our 2011 Equity Incentive Plan; and
- the shares of our common stock issuable upon exercise of the warrant issued to MDB Capital Group LLC.

Unless otherwise specifically stated, information throughout this prospectus assumes that none of our outstanding options or warrants to purchase shares of our common stock are exercised.

(2) Unless otherwise indicated, the number of shares of common stock presented in this prospectus excludes shares issuable pursuant to the exercise of the underwriter's over-allotment option.

Pursuant to a registration rights agreement, we are concurrently registering 454,545 shares of our common stock for distribution. All of these shares are subject to a 180 day lock-up period for sales into the public market, unless the Security Holder distributes its shares whereupon approximately 182,000 of its shares would then be subject to a one year lock-up period. If the shares are sold, the shares, when sold, will be sold at a price of $4.00 per share until our common stock is quoted on the OTC Bulletin Board or listed on The Nasdaq Capital Market, at which time the shares, if sold, will be sold at prevailing market prices or privately negotiated prices. We will not receive any of the proceeds from the sale of the common stock to be distributed by the Security Holder.

SUMMARY SELECTED FINANCIAL INFORMATION

The table below includes historical selected financial data for each of the years ended December 31, 2011 and 2010, derived from our audited financial statements included elsewhere in this prospectus.

You should read the historical selected financial information presented below in conjunction with the "Management's Discussion and Analysis of Financial Condition and Results of Operations" section and our financial statements and the notes to those financial statements included elsewhere in this prospectus. Historical results are not necessarily indicative of the results that may be expected for any future period.

	For the Years Ended December 31,	
	2011	2010
STATEMENT OF OPERATIONS:		
Operating Expenses		
Research and Development	$463,076	$—
General and Administrative	2,516,384	395,587
Total Operating Expenses	2,979,460	395,587
Loss from Operations	(2,979,460)	(395,587)
Other Income (Expense)	3,165	—
Net Loss	$(2,976,295)	$(395,587)
Net Loss per common share, basic and diluted	$(0.67)	$(0.15)
Weighted average common shares outstanding, basic and diluted	4,435,763	2,580,885

	December 31,	
	2011	2010
STATEMENT OF FINANCIAL CONDITION:		
Working Capital	$622,661	$(373,948)
Total Assets	1,636,155	100,522
Long Term Liabilities	17,475	—
Total Stockholders' Equity (Deficit)	874,417	(316,806)

RISK FACTORS

We are subject to various risks that may materially harm our business, prospects, financial condition and results of operations. An investment in our common stock is speculative and involves a high degree of risk. In evaluating an investment in shares of our common stock, you should carefully consider the risks described below, together with the other information included in this prospectus.

The risks described below are not the only risks we face. If any of the events described in the following risk factors actually occurs, or if additional risks and uncertainties later materialize, that are not presently known to us or that we currently deem immaterial, then our business, prospects, results of operations and financial condition could be materially adversely affected. In that event, the trading price of our common stock could decline, and you may lose all or part of your investment in our shares. The risks discussed below include forward-looking statements, and our actual results may differ substantially from those discussed in these forward-looking statements.

Risks Related to Our Business

We are a company with a limited operating history and our future profitability is uncertain. We anticipate future losses and negative cash flow, which may limit or delay our ability to become profitable.

We are a company with a limited operating history and no revenues to date. We may never generate revenues. We have incurred losses since our inception and expect to experience operating losses and negative cash flow for the foreseeable future. As of December 31, 2011, we had a total accumulated deficit of $4,490,238. We anticipate our losses will continue to increase from current levels because we expect to incur additional costs and expenses related to prototype development, consulting costs, laboratory development costs, marketing and other promotional activities, the addition of engineering and manufacturing personnel, and our continued efforts to form relationships with strategic partners. We may never be profitable.

If we do not receive additional financing when and as needed in the future, we may not be able to continue our research and development efforts or commence the commercialization of our technology and our business may fail.

Our business is highly capital-intensive, and requires significant capital investments in order for it to develop. Our cash on hand will likely not be sufficient to meet all of our future needs and we will likely require substantial additional funds in excess of our current financial resources in the future for research, development and commercialization of our technology, to obtain and maintain patents and other intellectual property rights in our

technology, and for working capital and other purposes, the timing and amount of which are difficult to ascertain. Until our technology generates revenues sufficient to support our operations, we plan to obtain the necessary working capital for operations through the sale of our securities, but we may not be able to obtain financing in amounts sufficient to fund our business plans. Furthermore, if our target customers are slow to adopt our technology, we may require additional investment capital in order to continue our operations. If we cannot obtain additional funding when and as needed, our business might fail.

Our independent registered public accounting firm has issued an unqualified opinion with an explanatory paragraph to the effect that there is substantial doubt about our ability to continue as a going concern.

Our independent registered public accounting firm has issued an unqualified opinion with an explanatory paragraph to the effect that there is substantial doubt about our ability to continue as a going concern. This unqualified opinion with an explanatory paragraph could have a material adverse effect on our business, financial condition, results of operations and cash flows. See “Management’s Discussion and Analysis of Financial Condition and Results of Operations - Liquidity and Capital Resources” and Note 2 to our financial statements included elsewhere in this prospectus.

We have no committed sources of capital and do not know whether additional financing will be available when needed on terms that are acceptable, if at all. This going concern statement from our independent registered public accounting firm may discourage some investors from purchasing our stock or from providing alternative capital financing to us. The failure to satisfy our capital requirements will adversely affect our business, financial condition, results of operations and prospects.

Unless we raise additional funds, either through the sale of equity securities or one or more collaborative arrangements, we will not have sufficient funds to continue operations. Even if we take these actions, they may be insufficient, particularly if our costs are higher than projected or unforeseen expenses arise.

We may be required to raise additional financing by issuing new securities, which may have terms or rights superior to those of our shares of common stock, which could adversely affect the market price of our shares of common stock and our business.

We will require additional financing to fund future operations, including expansion, capital costs and the costs of any necessary implementation of technological innovations or alternative technologies. We may not be able to obtain financing on favorable terms, if at all. If we raise additional funds by issuing equity securities, the percentage ownership of our then-current shareholders will be reduced. Further, we may have to offer new investors in our equity securities rights that are superior to the holders of common stock, which could adversely affect the market price and the voting power of shares of our common stock. If we raise additional funds by issuing debt securities, the holders of these debt securities would similarly have some rights senior to those of the holders of shares of common stock, and the terms of these debt securities could impose restrictions on operations and create a significant interest expense for us which could have a materially adverse effect on our business.

Current worldwide economic conditions may adversely affect our business, operating results and financial condition.

The United States economy has recently experienced, and continues to experience, slower growth. Some financial and economic analysts predict that the world economy may be entering into a period of prolonged slow economic growth characterized by high unemployment, limited availability of credit, increased rates of default and bankruptcy, and decreased consumer and business spending. These developments, if they occur, could negatively affect our business, prospects, operating results and financial condition in a number of ways. For example, recent worldwide economic developments have had, and may continue to have, an adverse effect on the global credit markets. Credit has tightened significantly in the last several years, resulting in financing terms that are less attractive to borrowers, and in many cases, the unavailability of certain types of debt financing. If these economic conditions continue or worsen, and if we are required to obtain debt financing during some stage of our development to meet our working capital or other business needs, we may not be able to obtain that financing. Further, even if we are able to obtain the financing we need, it may be on terms that are not favorable to us, with increased financing costs and restrictive covenants.

Our brand name and technology may not achieve recognition in our market segment, and if this were to occur our results of operations and financial condition would suffer.

Our brand name and technology are new and unproven. If we are unable to effectively develop and timely promote our brand and technology and gain recognition in our market segment, we may not be able to successfully achieve sales revenue and our results of operations and financial condition would then suffer. Our ability to achieve future revenue will depend highly upon the awareness of our potential customers of our products, services and solutions. While we plan to achieve this brand recognition and awareness over time, there cannot be assurance that awareness and recognition of our brand will develop in a manner or pace that is necessary for us to achieve profitability in the near term.

We may fail to adequately protect our proprietary technology, which would allow our competitors to take advantage of our research and development efforts.

Our long-term success largely depends on our ability to market our technology. We rely on a combination of patent, trade secret and other intellectual property laws, confidentiality and security procedures and contractual provisions to establish and protect our proprietary rights in our technology, products and processes. If we fail to obtain or maintain these protections, we may not be able to prevent third parties from using our proprietary technologies. Our pending or future patent applications may not result in issued patents. In addition, any patents issued to us in the future may not contain claims sufficiently broad to protect us against third parties with similar technologies or products or from third parties infringing such patents or misappropriating our trade secrets or provide us with any competitive advantage. In addition, effective patent and other intellectual property protection may be unenforceable or limited in foreign countries. If a third party initiates litigation regarding the validity of our patents, and is successful, a court could revoke our patents or limit the scope of coverage for those patents.

We also rely upon trade secrets, proprietary know-how and continuing technological innovation to remain competitive. We protect this information with reasonable security measures, including the use of confidentiality and invention assignment agreements with our employees and consultants and confidentiality agreements with strategic partners. It is possible that these agreements may not be sufficient or that these individuals or companies may breach these agreements and that any remedies for a breach will be insufficient to allow us to recover our costs and damages. Furthermore, our trade secrets, know-how and other technology may otherwise become known or be independently discovered by our competitors.

We may incur substantial costs as a result of litigation or other proceedings relating to patent and other intellectual property rights.

A third party may sue us or one of our current or future strategic collaborators for infringing its intellectual property rights. Likewise, we may need to resort to litigation to enforce our patent rights or to determine the scope and validity of third-party intellectual property rights. The cost to us of any litigation or other proceeding relating to intellectual property rights, even if resolved in our favor, could be substantial, and the litigation would divert our efforts. Some of our competitors may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. If we do not prevail in this type of litigation, we or our strategic collaborators may be required to pay monetary damages; stop commercial activities relating to our product; obtain one or more licenses in order to secure the rights to continue manufacturing or marketing certain products; or attempt to compete in the market with substantially similar products. Uncertainties resulting from the initiation and continuation of any litigation could limit our ability to continue some of our operations. In addition, a court may require that we pay expenses or damages, and litigation could disrupt our commercial activities.

If we are unable to keep up with rapid technological changes, our products may become obsolete.

The market for alternative energy products is characterized by significant and rapid technological change and innovation. Although we intend to employ our technological capabilities to create innovative products and solutions that are practical and competitive in today’s marketplace, future research and discoveries by others may make our products and solutions less attractive or even obsolete compared to other alternatives that may emerge.

Our efforts may never demonstrate the feasibility of our product.

Our research and development efforts remain subject to all of the risks associated with the development of new products based on emerging and innovative technologies, including without limitation unanticipated technical or other problems, our ability to scale our technology to large, industrial applications, conditions in the field during installation and the possible insufficiency of funds for completing development of these products. Technical problems, including

those specific to customer site implementation, may result in delays and cause us to incur additional expenses that would increase our losses. If we cannot complete, or if we experience significant delays in completing, research and development of our technology for use in potential commercial applications, particularly after incurring significant expenditures, our business may fail.

Our technology and its industrial applications have not yet been safety tested.

There is inherent danger in dealing with the combustion process. There is additional danger in modifying this process in ways that are new and, as yet, untested on a commercial scale. Although we have not yet encountered any areas of risk in the development or testing of our products beyond those already inherent in the combustion process or those particular to an industrial site, the Company may be exposed to liabilities should an industrial accident occur during development, testing, or operation in our laboratory or during field implementation of our technology.

We will depend on approval from various local, state and federal agencies to implement and operate our technology

Our technology includes augmentation of the combustion process, inclusion of an electric field to selectively promote, suppress, retard or accelerate chemical reactions as desired, and a resulting reduction in certain emissions and required air pollution control. Field implementation of our technology will therefore require permits from various local, state and federal agencies that regulate mechanical and electrical infrastructure and fire and air pollution control. Our technology may be subject to heightened scrutiny since it will be new to these governing bodies. As such, there may be delays or rejections in applications of portions of or all of our technology in the individual jurisdictions involved.

Market acceptance of our technology is difficult to predict. If our technology does not achieve market acceptance, our business could fail.

We cannot predict the rate of adoption or acceptance of our technology by potential customers, thought leaders or prospective channel partners. While we may be able to effectively demonstrate the feasibility of our technology, this does not guarantee the industrial combustion and power generation market will accept it, nor can we control the rate at which such acceptance may be achieved. In certain of our market segments, there is a well-established channel with a limited number of companies engaged in reselling to our target customers. Failure to achieve productive relations with a sufficient number of these prospective partners may impede adoption of our solutions. Additionally, some potential customers in our target industries are historically risk-averse and, on occasion, have been slow to adopt new technologies. If our technology is not accepted in the industrial combustion and power generation market, we may not earn enough by selling or licensing our technology to support our operations, recover our research and development costs or become profitable and our business could fail.

Because our technology has not yet been fully developed or implemented, we are uncertain of our profit margins and whether such profit margins, if achieved, will be able to sustain our business.

We have neither completed laboratory testing, nor fully developed our product, cost of goods or pricing. As a result, we cannot predict our profit margins. Our operating costs could increase significantly compared to those we currently anticipate due to unanticipated results from the development process, application of our technology to unique or difficult processes, regulatory requirements and particular field implementations. Further, we envision our pricing to be highly dependent on the benefits that our customers believe they will achieve using our products. Accordingly, we cannot predict whether or when we will achieve profitability, and if achieved, the amount of such profit margins.

Many of our potential competitors have greater resources, and it may be difficult to compete against them.

The energy industry is characterized by intense competition. Many of our potential competitors have better name recognition and substantially greater financial, technical, manufacturing, marketing, personnel and/or research capabilities than we do. Although at this time we do not believe that any of our potential competitors has technology similar to ours, if and when we release products based on our technology, potential competitors may respond by developing and producing similar products. Many firms in the energy industry have made and continue to make substantial investments in improving their technologies and manufacturing processes. In addition, they may be able to price their products below the marginal cost of production in an attempt to establish, retain or increase market share. Because of these circumstances, it may be difficult for us to compete successfully in the energy market.

The loss of the services of our key management and personnel or the failure to attract additional key personnel could adversely affect our ability to operate our business.

A loss of one or more of our current officers or key employees could severely and negatively impact our operations. Specifically, the loss of services of Richard Rutkowski, Chief Executive Officer and President, or Joseph Colannino, Chief Technology Officer, could significantly harm our business. We have no present intention of obtaining key-man life insurance on any of our executive officers or management. Additionally, competition for highly skilled technical, managerial and other personnel is intense. As our business develops, we might not be able to attract, hire, train, retain and motivate the highly skilled managers and employees we need to be successful. If we fail to attract and retain the necessary technical and managerial personnel, our business will suffer and might fail.

Risks Related to this Offering and Owning Our Common Stock

Prior to the completion of our initial public offering, there was no public trading market for our common stock.

The offering under this prospectus is an initial public offering of our securities. Prior to the closing of the offering, there will have been no public market for our common stock. While we plan to list our shares on the Nasdaq Capital Market, we cannot assure you that our listing application will be approved, and that a public market for our common stock will develop. If our Nasdaq listing application is not approved, we may not complete the offering.

If a public market for our common stock develops, it may be volatile. This may affect the ability of our investors to sell their shares as well as the price at which they sell their shares.

If a market for our common stock develops, the market price for the shares may be significantly affected by factors such as variations in quarterly and yearly operating results, general trends in the alternative energy industry, and changes in state or federal regulations affecting us and our industry. Furthermore, in recent years the stock market has experienced extreme price and volume fluctuations that are unrelated or disproportionate to the operating performance of the affected companies. Such broad market fluctuations may adversely affect the market price of our common stock, if a market for it develops.

We have the right to issue shares of preferred stock. If we were to issue preferred stock, it is likely to have rights, preferences and privileges that may adversely affect the common stock.

We are authorized to issue 2,000,000 shares of “blank check” preferred stock, with such rights, preferences and privileges as may be determined from time-to-time by our board of directors. However, no preferred stock is currently issued and outstanding. Our board of directors is empowered, without shareholder approval, to issue preferred stock in one or more series, and to fix for any series the dividend rights, dissolution or liquidation preferences, redemption prices, conversion rights, voting rights, and other rights, preferences and privileges for the preferred stock. No shares of preferred stock are presently issued and outstanding and we have no immediate plans to issue shares of preferred stock. The issuance of shares of preferred stock, depending on the rights, preferences and privileges attributable to the preferred stock, could adversely reduce the voting rights and powers of the common stock and the portion of the Company’s assets allocated for distribution to common stock holders in a liquidation event, and could also result in dilution in the book value per share of the common stock we are offering. The preferred stock could also be utilized, under certain circumstances, as a method for raising additional capital or discouraging, delaying or preventing a change in control of the Company, to the detriment of the investors in the common stock offered hereby. We cannot assure you that the Company will not, under certain circumstances, issue shares of its preferred stock.

We have not paid dividends in the past and have no immediate plans to pay dividends.

We plan to reinvest all of our earnings, to the extent we have earnings, in order to market our products and to cover operating costs and to otherwise become and remain competitive. We do not plan to pay any cash dividends with respect to our securities in the foreseeable future. We cannot assure you that we would, at any time, generate sufficient surplus cash that would be available for distribution to the holders of our common stock as a dividend. Therefore, you should not expect to receive cash dividends on the common stock we are offering.

Management of our Company is within the control of the board of directors and the officers. You should not purchase our common stock unless you are willing to entrust management of our Company to these individuals.

All decisions with respect to the management of the Company will be made by our board of directors and our officers, who will beneficially own ___% of our common stock. Holders of the common stock who purchase in this offering will not obtain majority control of the Company. Therefore, management will retain the power to elect a majority of the board of directors who shall, in turn, have the power to appoint the officers of the Company and to determine, in accordance with their fiduciary duties and the business judgment rule, the direction, objectives and policies of the Company including, without limitation, the purchase of businesses or assets; the sale of all or a substantial portion of the assets of the Company; the merger or consolidation of the Company with another corporation; raising additional capital through financing and/or equity sources; the retention of cash reserves for future product development, expansion of our business and/or acquisitions; the filing of registration statements with the Securities and Exchange Commission for offerings of our capital stock; and transactions which may cause or prevent a change in control of the Company or its winding up and dissolution. Accordingly, no investor should purchase the common stock we are offering unless such investor is willing to entrust all aspects of the management of the Company to such individuals.

We have a significant number of options and warrants outstanding and we may issue additional options in the future to employees, officers, directors, independent contractors and agents. Sales of the underlying shares of common stock could adversely affect the market price of our common stock.

As of March 31, 2012, we had outstanding options and warrants for the purchase of 359,375 and 216,368 shares of common stock, respectively. Under the ClearSign Combustion Corporation 2011 Equity Incentive Plan (the “Plan”), we have the ability to grant awards of options to employees, officers, directors, independent contractors and agents. Furthermore, we have reserved an additional 141,180 shares of common stock for such awards and the Plan provides that this number may increase quarterly beginning on October 1, 2011 up to 10% of the number of shares issued by the Company each quarter. The holders may sell these shares in the public markets from time to time, without limitations on the timing, amount or method of sale. If our stock price rises, the holders may exercise their warrants and options and sell a large number of shares. This could cause the market price of our common stock to decline.

We will incur significant increased costs as a result of becoming a public company that reports to the Securities and Exchange Commission and our management will be required to devote substantial time to meet compliance obligations.

As a public company reporting to the Securities and Exchange Commission, we will incur significant legal, accounting and other expenses that we did not incur as a private company. We will be subject to reporting requirements of the Securities Exchange Act of 1934 and the Sarbanes-Oxley Act of 2002, as well as rules subsequently implemented by the Commission that impose significant requirements on public companies, including requiring establishment and maintenance of effective disclosure and financial controls and changes in corporate

governance practices. In addition, on July 21, 2010, the Dodd-Frank Wall Street Reform and Protection Act was enacted. There are significant corporate governance and executive compensation-related provisions in the Dodd-Frank Act that are expected to increase our legal and financial compliance costs, make some activities more difficult, time-consuming or costly and may also place undue strain on our personnel, systems and resources. Our management and other personnel will need to devote a substantial amount of time to these new compliance initiatives. In addition, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance, and we may be required to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. As a result, it may be more difficult for us to attract and retain qualified people to serve on our board of directors, our board committees or as executive officers.

Shares eligible for future sale may adversely affect the market.

From time to time, certain of our shareholders may be eligible to sell all or some of their shares of common stock by means of ordinary brokerage transactions in the open market pursuant to Rule 144, promulgated under the Securities Act, subject to certain limitations. In general, pursuant to Rule 144, non-affiliate shareholders may sell freely after six months subject only to the current public information requirement (which disappears after one year). Of the 5,157,716 shares of our common stock outstanding as of March 31, 2012, approximately 2,527,016 shares are held by "non-affiliates" and will be freely tradable without restriction once we become subject to the reporting requirements of section 13 or 15(d) of the Securities Exchange Act of 1934 for a period of at least 90 days. Any substantial sale of our common stock pursuant to Rule 144 or pursuant to any resale prospectus (including sales by investors of securities acquired in connection with this offering) may have a material adverse effect on the market price of our common stock.

We may allocate the net proceeds from this offering in ways which differ from our estimates based on our current plans and assumptions discussed in the section titled "Use of Proceeds" and with which you may not agree.

The allocation of net proceeds of the offering set forth in the “Use of Proceeds” section below represents our estimates based upon our current plans and assumptions regarding industry and general economic conditions, our future revenues and expenditures. The amounts and timing of our actual expenditures will depend on numerous factors, including market conditions, cash generated by our operations, business developments and related rate of growth. We may find it necessary or advisable to use portions of the proceeds from this offering for other purposes. Circumstances that may give rise to a change in the use of proceeds and the alternate purposes for which the proceeds may be used are discussed in the section entitled “Use of Proceeds” below. You may not have an opportunity to evaluate the economic, financial or other information on which we base our decisions on how to use our proceeds. As a result, you and other shareholders may not agree with our decisions. See "Use of Proceeds" for additional information.

You will experience immediate dilution in the book value per share of the common stock you purchase.

Because the price per share of our common stock being offered is substantially higher than the book value per share of our common stock, you will experience substantial dilution in the net tangible book value of the common stock you purchase in this offering. Based on an assumed offering price of $[____] per share, if you purchase shares of common stock in this offering, you will experience immediate and substantial dilution of $[_____] per share in the net tangible book value of the common stock at December 31, 2011. See the section titled “Dilution” below for a more detailed discussion of the dilution you will incur if you purchase common stock in this offering.

Our charter documents and Washington law may inhibit a takeover that shareholders consider favorable.

Upon the closing of this offering, provisions of our Articles of Incorporation and bylaws and applicable provisions of Washington law may delay or discourage transactions involving an actual or potential change in our control or change in our management, including transactions in which shareholders might otherwise receive a premium for their shares, or transactions that our shareholders might otherwise deem to be in their best interests. The provisions in our Articles of Incorporation and bylaws:

- authorize our board of directors to issue preferred stock without shareholder approval and to designate the rights, preferences and privileges of each class; if issued, such preferred stock would increase the number of outstanding shares of our capital stock and could include terms that may deter an acquisition of us;
- limit who may call shareholder meetings;
- do not provide for cumulative voting rights; and
-

provide that all vacancies may be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum, unless the vacant office is to be held by a director elected by the holders of one or more classes or series of shares entitled to vote thereon, in which case the vacancy can be filled only by the vote of the holders of such class or series.

In addition, Chapter 23B.19 of the Washington Revised Code generally limits our ability to engage in any business combination with a person who beneficially owns 10% or more of our outstanding voting stock unless certain conditions are satisfied. This restriction lasts for a period of five years following the share acquisition. These provisions may have the effect of entrenching our management team and may deprive you of the opportunity to sell your shares to potential acquirers at a premium over prevailing prices. This potential inability to obtain a control premium could reduce the price of our common stock. See "Anti-Takeover Effects of Certain Provisions of Washington Law and Our Charter Documents" for additional information.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS AND OTHER INFORMATION CONTAINED IN THIS PROSPECTUS

This prospectus contains forward-looking statements. Forward-looking statements give our current expectations or forecasts of future events. You can identify these statements by the fact that they do not relate strictly to historical or current facts. You can find many (but not all) of these statements by looking for words such as “approximates,” “believes,” “hopes,” “expects,” “anticipates,” “estimates,” “projects,” “intends,” “plans,” “would,” “should,” “could,” “may,” “will” or oth expressions in this prospectus. These statements may be found under the sections entitled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Business” included in this prospectus, as well as in this prospectus generally. In particular, these include statements relating to future actions, prospective products, applications, customers, technologies, future performance or results of anticipated products, expenses, and financial results. These forward-looking statements are subject to certain risks and uncertainties that could cause actual results to differ materially from our historical experience and our present expectations or projections. Factors that could cause actual results to differ from those discussed in the forward-looking statements include, but are not limited to:

- Our limited cash and a history of losses;
- Our ability to achieve profitability;
- Our limited operating history;
- Our industry being characterized by emerging competition and rapidly advancing technology;
- Customer demand for the products and services we develop;
- The impact of competitive or alternative products, technologies and pricing;
- Our ability to manufacture any products we develop;
- General economic conditions and events and the impact they may have on us and our potential customers;
- Our ability to obtain adequate financing in the future;
- Our ability to continue as a going concern;
- Our success at managing the risks involved in the foregoing items; and
- Other factors discussed in the “Risk Factors” section of this prospectus.

The forward-looking statements are based upon management’s beliefs and assumptions and are made as of the date of this prospectus. We undertake no obligation to publicly update or revise any forward-looking statements included in this prospectus or to update the reasons why actual results could differ from those contained in such statements, whether as a result of new information, future events or otherwise, except to the extent required by federal securities laws. Actual future results may vary materially as a result of various factors, including, without limitation, the risks outlined under the section entitled “Risk Factors” and matters described in this prospectus generally. In light of these risks and uncertainties, we cannot assure you that the forward-looking statements contained in this prospectus will in fact occur. You should not place undue reliance on these forward-looking statements.

BUSINESS

Introduction

We design and develop technologies that aim to improve key performance characteristics of combustion systems including energy efficiency, emissions control, fuel flexibility and overall cost effectiveness.

While, in principle, our Electrodynamic Combustion Control™ technology can be applied at any scale we believe the potential cost savings and economic benefits to large scale combustion systems, such as those used to provide heat for industrial processes or to generate electric power, may be considerable.

We believe that our technology will allow customers to benefit from substantially reduced costs associated with the construction (including refurbishment and upgrade), operation and maintenance of these systems, as compared to combustion systems that use currently available technology.

We believe that our technology may also substantially reduce the cost of compliance with air quality regulations as compared to the current generation of air pollution control (APC) technologies. In the typical case, legacy APC technologies impose increased capital and operating costs, require substantial energy to operate (parasitic load) and reduce overall energy efficiency. Generally, there is no economic return on the investment in these systems: the primary benefit is compliance with air quality regulations. By contrast, ClearSign's technology is to our knowledge the only technology that exists today that has the capability to improve emissions control performance and meet regulatory standards, while at the same time yielding a significant *increase* in energy efficiency.

Our technology introduces a computer-controlled electric field into the combustion zone to allow for more precise control of flame shape and heat transfer. This same technique can also be used to optimize the complex chemical reactions that occur during combustion in order to minimize harmful emissions while maximizing system efficiency.

We believe our technology can be adapted to various fuel types and multiple system sizes and configurations, and can be deployed on both a retrofit and new-build basis.

Corporate History

We were incorporated in Washington on January 23, 2008 and we are a development stage company. The address of our corporate headquarters is 12870 Interurban Avenue South, Seattle, Washington 98168 and our telephone number is (206) 673-4848. Our website can be accessed at www.clearsigncombustion.com. The information contained on or that may be obtained from our website is not, and shall not be deemed to be, a part of this prospectus. All of our operations are located in the United States.

Our Industry

Nearly two-thirds of the world's total energy consumption is accounted for by combustion of hydrocarbon and other fuels in boilers, furnaces, kilns and turbines. These are used to generate electrical power, to provide heat for all manner of industrial processes and for building heat and produce more than 50 quadrillion British thermal units (Btus) of energy annually in the U.S. In order to maximize energy efficiency while keeping pace with regulatory guidelines for air pollution emissions, operators of these systems are continually installing, maintaining and upgrading a variety of costly process control, air pollution control and monitoring systems. In its December 2010 Air Pollution Management Report, The McIlvaine Company projected that just under $42 billion will be invested globally in equipment to reduce air pollution in 2011. In its August 2011 report, The McIlvaine Company projected the market will grow at an average of 6% per year over the next decade.

Our Technology

Overview of Our Technology. While we have not deployed our technology commercially, if the results we have observed in our testing can be replicated on a commercial scale, we believe our proprietary technology platform may increase energy efficiency and improve fuel flexibility and environmental performance for most types of industrial and commercial combustion systems. We believe our technology will compare favorably with current industry-standard air pollution control and efficiency technologies including electrostatic precipitators, fabric filters, selective catalytic reduction devices, low- and ultra-low NOx burners, excess air systems and other such technologies. Such systems account for the majority of combustion energy utilization globally. These include:

- electrical power generation,
- hydrocarbon and chemical processing industries,
- petroleum refining, and
- all manner of industrial and commercial steam generation and industrial process heat.

Our technology consists, in its simplest form, of four major components: (a) a computer, (b) standard software delivering proprietary algorithms to (c) a power amplifier (resident outside the combustion chamber) and (d) electrode(s) (inside the combustion chamber). The electrodes are optimized in material and shape to best suit the specific geometry of a given installation. Because the system's basic components are available 'off the shelf', or require manufacturing techniques that are well within the current state of the art, ClearSign does not depend on technology external to the Company that has not yet been developed.

We believe our technology can be retrofitted to existing combustion systems to improve their performance and has the potential to provide substantial savings in both capital and operating costs, or, for new-builds, can serve as the basis for fundamental improvements in combustion systems design, cost and operation. We believe the economic gain realized by an operator can be significant in both reduced capital expenditures, and savings in annual operating and maintenance costs (including reductions in those costs associated with fuel consumption and emissions). In some cases, economic gain may also be realized by increasing plant throughput, capacity and/or availability due to a reduced maintenance cycle, and increases in the lifetime of systems - the latter due to improved mechanical reliability as a result of reduced mechanical complexity and/or improved heat transfer.

ClearSign's Electrodynamic Combustion Control™ (ECC™) technology makes use of computer-controlled high-voltage electric fields to manipulate the movement of electrically charged molecules (ions) that are a natural product of the combustion process. The pulsed field creates very powerful electrostatic forces (body forces) within the gas cloud that can be manipulated to precisely control flame shape and the transfer of heat to, through, or away from a surface as desired. At the same time, our technology provides an unprecedented level of precision for optimizing combustion chemistry to suppress formation of pollutants at the flame source.

This approach enables multiple effects to be applied individually or in combination, including the following:

- *Better combustion*: increases the homogeneity and momentum transfer within the flame to reduce peak flame temperatures, nitrogen oxide (NO_X) formation, carbon monoxide (CO), and particulates.
  - *Superior flame quality:* optimizes flame shape and flame stability to maximize energy efficiency throughout the operating range, which is particularly important for gas-fired boilers and furnaces.
- *Precision control of heat transfer:* controls the rate at which heat is transferred through or reflected away from a surface to optimize thermal efficiency in boilers, kilns, furnaces, turbines and waste heat recovery systems.
- *Selectively-controlled reaction chemistry:* selectively promotes, suppresses, retards or accelerates chemical reactions to minimize formation of pollutants, enhance pollution abatement, and improve the combustion process.
- *Agglomeration of fine particulate into large, more easily removed clusters:* agglomerates ultrafine particles into much larger clusters that can be removed efficiently and cost-effectively, thereby enhancing particulate removal and reducing the cost of existing particulate control systems.

The way in which the electrostatic forces are applied varies somewhat by broad equipment category:

- *Gas- and liquid-fired boilers and furnaces:* in boilers and furnaces, the charge is introduced directly to the flame and a controlled vortex is used to minimize the formation of NO_X while improving heat distribution and stabilizing the flame to maximize efficiency. Flame shape and heat transfer are then optimized to improve thermal efficiency and mixing within the flame is enhanced to reduce NO_X, CO, and particulate.
- *Cement kilns:* in systems such as cement kilns, the charge is introduced directly into the flame and heat is directed away from the wall of the kiln and into the product. Heat loss through the wall is minimized, increasing system efficiency and the amount of product produced.
- *Stoked furnaces:* in solid-fired furnaces using stokers and grates (e.g., industrial coal, biomass and municipal solid waste), the charge is introduced into the flame cloud while the grate remains grounded, thus enhancing residence time of solids, increasing the amount of fuel burned and reducing particulate.
- *Petrochemical reaction furnaces* such as ethylene cracking units and hydrogen reformers (among others) are particularly sensitive to flame impingement (direct contact of the flame with the heat exchange surface). By appropriately charging the flame and post-flame regions, the flame is managed and shaped, and heat transfer is supplied to the process tubes without flame impingement.
- *Refinery process heaters* are routinely over-fired (operated beyond their recommended limit) to satisfy demand for refinery fuels as the need steadily increases, taxing the available heater population (the last new refinery was built in 1976, thus plot space for new furnaces remains constrained). When refinery heaters are over-fired, flames become unwieldy and difficult to control, especially in vertical-cylindrical heaters with low- NO_X burners. Appropriate charging of the flame improves mixing and manages the flame shape.
- *Gas turbines:* gas turbine efficiency is limited by the maximum working temperature of the turbine blades. In these systems the cooling film is charged so as to keep it attached to the turbine blade and insulate it, allowing for higher operating efficiency.

The most significant energy efficiency gain provided by our technology in boilers, kilns, furnaces and turbines stems from our ability to precisely control the flow of hot gases within a gas volume. In most cases, efficiency is increased by increasing heat flux onto targeted surfaces and reducing heat loss to other surfaces. However, in the case of gas turbines, thermal efficiency is limited by the ability of the turbine blades to withstand high peak operating temperatures. We have developed, but not yet proven, proprietary concepts for reducing thermal loading on the surface of turbine blades. Because of the potential for dramatic increases in turbine efficiency, we believe that further proof of this concept, if successful, would have significant commercial implications.

Many existing combustion systems, especially large systems that burn coal or other solid or waste fuels, use multiple emissions control systems that remove a range of harmful pollutants after they have already been created in the flame reaction. Operation of these “post-combustion” controls requires a substantial amount of electrical energy, typically drawn from the base system. Because ClearSign’s technology operates at the combustion source to suppress the formation of these pollutants, the load on these downstream systems is reduced, which in turn reduces their power consumption thus improving overall efficiencies up to 10%. For an operator of an average sized, 300 megawatt coal-fired power plant, this would result in fuel savings in the millions of dollars per year.

For gas-fired boilers, a significant increase in energy efficiency can be achieved by increasing flame stability at the low end of the operating range, thereby increasing turndown ratio (the ratio of maximum to minimum firing rate). Operators are often required to equip these systems with Low NO_X or Ultra-Low NO_X burners. These burners operate by creating fuel-air mixing conditions to keep operating temperatures below the threshold at which NO_X is formed. Such conditions make the burner less robust at low-fire conditions. This means that the flame can no longer be turned down to its original minimum thermal output because it can become unstable and either extinguish itself, or risk explosion, causing loss of inventory and production, extremely unsafe operating conditions, and potential life-threatening harm to workers. To minimize this risk, system operators increase their low-fire setting by as much as 600% and simply vent the excess steam. In contrast, ClearSign's technique for reducing NO_X relies on a combination of reduced excess air requirements and rapid dispersion and capture of heat from the flame core to keep average temperatures high while reducing peak temperatures. The electric field enhances mixing, improves flame stability, and reduces excess air requirements. This enhances the turndown ratio and we believe our technique would yield efficiency increases of as much as 30%.

Prototypes and Our Experimental Data. We have designed and built 3 prototype systems: a small bench-top configuration of 5,000 Btu/hour, a larger system of 25,000 Btu/hour with optical access to give direct visual and infra-red observation of flame shape and heat transfer via calorimetry, and a scale reactor of 250,000 to 1,000,000 Btu/hour to demonstrate our technology with both pre-mixed and diffusion flames. This reactor can accommodate a variety of fuel types and can be up-, down-, or side-fired. We have conducted over 400 experiments using a variety of analytical and measurement tools. Examples of the analytical equipment used in our tests include calorimetry to record data relating to heat transfer, thermocouple arrays to map heat distribution, EPA-certified methods and NBS certified calibration gases to measure pollutant formation, videography, and visible and Schlieren photography to measure flame shape. Our technology's ability to control and improve both flame chemistry and heat transfer in configurations for multiple fuels suggests a wide range of potential commercial scale applications.

Our tests with coal, tire-derived-fuel (TDF) and wood, have shown reductions in visible particulate matter (PM) of over 80%, with significant, simultaneous reductions in carbon monoxide (CO) and exit gas temperature, which are indicative of superior heat transfer to the process. In testing we have achieved such reductions in unburned carbon, CO, and particulates without increased NO_X emissions. These effects are particularly valuable in solid fuel systems such as those used in industry to burn wood waste, biomass and other “waste-“ or “opportunity-” fuels, as well as larger-scale coal-fired systems for generating electric power.

We have also demonstrated the ability to selectively and precisely control flame shape, heat transfer and heat distribution. We have demonstrated increased heat transfer to a surface, and have also demonstrated steering of the gas cloud away from a surface to cool it. We believe our test results have powerful implications for increases in energy efficiency and for simplifying and improving designs in combustion systems ranging from boilers and kilns to gas turbines. Improved heat distribution would also simplify the design and operation of post combustion controls such as electrostatic precipitators (ESPs), whose efficiency can be temperature-dependent.

In addition to enhancing control of heat transfer and reducing or eliminating emissions of particulate and ultra-fine particulate (PM2.5), our technology may prove highly effective in suppressing emissions of multiple additional pollutants including NO_X, sulfur (SO_X) and mercury. Precise control of ion drift velocities and heat distribution selectively controls residence time – i.e. the amount of time that a given molecule is exposed to a high temperature region. This promotes or suppresses particular chemical reactions such as those intermediates that lead to the formation of NO_X and SO_X. We believe this novel approach to integrated emissions control technology would result in major cost savings implications for solid fuel systems, and would transform the economics of coal-fired power generation.

Our experiments and designs also suggest improvements in flame stability and that our technology could be retrofitted to or even replace Low and Ultra-Low NO_X burners. We believe this may result in potential efficiency increases in the range of 20% to 30% for a large number of industrial gas-fired boilers.

Our technology has not been tested or verified by any independent third party.

System Results . The following photographic series presents representative aspects of repeated experimentation conducted by our own personnel on our 5,000 Btu and 25,000 Btu scale prototypes. We conducted over 400 experiments and the results occurred with 95% or greater confidence each time the depicted experiment was conducted. In all cases, the reported effects are significant according to scientifically applicable standards and conventions.

- Particulate Abatement: Biomass pellets co-fired with propane shows a greater than 80% reduction in stack gas opacity when ECC is engaged (figure 1b).

1a. System Off 1b. System Engaged

In each of our tests, a stack sample drawn through a vacuum pump for a period of 5 minutes in the “on” condition shows a dramatic reduction in the amount of unburned carbon (figure 2b) as compared to an equivalent sample drawn in the “off” condition (without ECC applied) (figure 2a). The remaining particulate comprised a higher-value ash representing higher efficiency combustion with no visible unburned carbon.

2a. System off 2b. System Engaged

Improved mixing without excess air. In each of our tests using high definition video still frames, the frames viewed down the stack demonstrate dramatically increased flame turbulence and mixing with the system in the “on” condition (figure 3b). This is achieved without the introduction of excess air and with all other parameters unchanged. When the system is deactivated, the flame immediately returns to its previous laminar (undisrupted flow) and sooting state (figure 3a).

21

3a. System off – natural, laminar flame 3b. System engaged – turbulence increases

Heat Transfer . In each of our tests using Schlieren photographs, a laser imaging technique which enables us to view otherwise transparent heat columns, the photographs demonstrate the ability of ECC technology to impact both the flame *and* hot gases. Figure (4a) is the system in the 'off' condition: the heat column (black bar) above the flame is unperturbed. Figure (4b) is the same flame and heat column with the system engaged. Increased turbulence and vorticity, the tendency for fluid elements to 'spin', is observed. Figure (4c) introduces a ground plane (right). Both the flame and heat column are strongly directed toward its surface, suggesting an increase in heat actively directed to the 'load', which is a primary design objective of a combustion system and directly impacts energy efficiency.

4a. System off 4b. System engaged 4c. System engaged with ground

Thermal efficiency. In each of our tests using infrared imagers, the imagers record a significant increase in average furnace temperature and more uniform heat distribution within two minutes of system activation (figure 5b). A reduction in exit gas temperature is also observed, suggesting heat transfer is shifted from the exiting flue gas and into the system. Less waste heat 'up the stack' results in greater system efficiency and lower fuel costs.

22

5a. System off 5b. System activated

We have shared our experimental results and conducted demonstrations for selected prospective customers and prospective distribution partners. We believe that through these interactions, we have gained considerable insight into how our potential customers could apply the various features of our technology to deliver meaningful cost savings, production efficiencies and other economic benefits.

Research and Development Plan

We have tested our technology on our 5,000 Btu and 25,000 Btu bench top scale prototypes and our research and development efforts are now focused on the following sequence of activities:

- *Scale up to commercially relevant sizes.* We have finalized designs and built what we believe to be a commercially relevant furnace and burners. We have assembled a group of technical advisors comprised of subject matter experts in the areas of combustion, pollution control, physics, aeronautics and chemistry. We have identified additional key potential customers with whom we are engaged in discussions. We further plan to have our technical advisors act to inform and guide our research program with the ultimate goal of commercializing our technology. See "Technical Advisors" for additional information. We estimate that it will cost approximately $3 million to complete this phase.

- *Site demonstration at full scale.* We plan to demonstrate our technology at one or more selected commercial sites. If achieved, these early site demonstrations will be aimed at retrofitting or replacing one or two burners in multi-burner systems with an eye toward evaluation of our technology at full scale in one or more operating systems. We estimate that it will cost approximately $1.25 million to complete this phase.

- *First installation.* With the successful demonstration of small numbers of burners in multi-burner systems, if achieved, we plan to retrofit an entire furnace with our technology applied to all burners. We believe that such a demonstration would provide the impetus for commercial adoption within the applicable industry. We plan to expand these installations via commercial offering. We estimate that it will cost approximately $0.75 million to complete this phase.

- *Enhancement of ClearSign's intellectual property portfolio.* ClearSign has generated more than 100 inventions that we believe to be patentable subject matter and has begun the process of systematically filing patent applications. We have filed 22 patent applications to date. We plan to develop additional embodiments of our technology and to file more patent applications. See "Intellectual Property Protection" for additional information. We estimate that it will cost approximately $1 million to $2 million to file patent applications for the inventions for which we have not yet filed applications.

23

Because of the variables that may impact costs associated with the above-referenced activities, the amounts that will actually be spent by us for any specific purpose may vary significantly, and will depend on a number of factors including, but not limited to, the pace of progress of our commercialization and development efforts, actual needs with respect to product testing, development and research results as we progress, our ability to successfully demonstrate our technology to potential customers, and market conditions. In addition, we may use a portion of any net proceeds to acquire complementary products, technologies or businesses; however, we do not have any commitments for any acquisitions of this nature at this time. We will have significant discretion in the use of any net proceeds. Investors will be relying on the judgment of our management regarding the application of the proceeds of any sale of our common stock.

We plan to continue to enlarge our research and development program and establish an intellectual property portfolio with the goal of protecting our proprietary technology and erecting formidable market entry barriers to both new entrants and more established competitors. We intend to develop additional designs to further exploit a variety of effects including flame shaping, efficiency improvements, process throughput enhancements, and emissions reduction.

Our activities will be directed at thoroughly characterizing and exploring the full range of the technology's potential in order to broadly establish and protect our leadership position in Electrodynamic Combustion Control™ technology. We intend to conduct laboratory and benchtop scale experimentation continuously to this end. In parallel we plan to advance the technology rapidly toward commercialization by identifying those market opportunities offering compelling value to our customers while requiring only a limited set of features, and building those systems to a commercial scale.

Product Roadmap and Path to Commercialization

- *Commercial breadth.* ClearSign's Electrodymanic Combustion Control™ technology has a potentially broad range of commercial applications in a wide variety of types and sizes. We believe that our technology may be combined with existing or new pollution controls as part of a complete solution. Controlling flame chemistry to suppress formation of pollutants at the combustion source reduces or eliminates the load on downstream systems and reduces requirements for post-combustion treatment, which we believe would improve the reliability of existing systems while lowering operating costs and energy use.

- *Design Improvements to Combustion Systems.* We believe that, in the longer term, ClearSign's ECC technology may provide the basis for fundamental improvements to the design of existing combustion systems. We believe that a combustion system design based on our technology would not only set new standards for performance and fuel flexibility, but would also feature a reduction in the physical footprint of the system and significantly reduce construction and operating costs. Therefore, in the largest systems, we estimate that savings in construction and land use costs could be significant.

- *Fuel flexibility.* ClearSign's technology may be especially important for the increased use of more challenging fuels such as biomass and other "waste-" or "opportunity-" fuels that vary significantly in quality and in physical and chemical composition. Because ECC is software-based, the resulting changes in combustion chemistry can be addressed in real-time, by varying the software-generated pulsed electrical signals introduced into the combustion region. This reduces or potentially eliminates the need for operators to modify expensive, intricate and 'hard coded' APC equipment, which is generally designed to operate using a single, specific feedstock. System operators have told us that flexibility in the selection of fuels — based on availability, quality and cost — would be highly valued.

- *Waste-to-Energy Plants.* Electric power suppliers have shown increased interest in the use of boilers that burn biomass and other waste fuels to generate electricity and have made significant investments in new facilities in recent years. It is also of note that the trend toward a distributed power grid favors the use of such fuels that can be sourced and delivered cost effectively to smaller waste-to-energy power plants or existing industrial sites that are located nearer to the communities they serve. There has been increased activity in the planning, permitting and commissioning of such facilities.

- *Wood and Other Biomass in Coal Plants.* Operators of coal-fired power plants have shown considerable interest in the co-firing of wood and other forms of biomass to reduce net carbon emissions.

- *Clean Coal.* We believe that ClearSign's ECC technology has the potential to improve the cost-effectiveness and efficiency of carbon capture and sequestration ("Clean Coal"), because it can be used to selectively target the separation and removal of specific pollutant types from an exhaust stream.

- *Design Fuel.* There are significant technical challenges associated with the introduction of new fuel mixes to systems that have been highly tuned to a specific "design fuel". Because our technology makes use of computer-controlled algorithms, we believe that it can respond dynamically and in real time to changing conditions - including fuel chemistry or composition – as it continuously optimizes the combustion process.

Development Objectives. We believe our management team is capable of positioning ClearSign to execute rapidly on its key next-stage development objectives, which are to:

1. Finalize compelling product offerings that meet customer needs.
2. Select and secure design wins for the best-qualified launch opportunities to demonstrate measurable and repeatable results in the field that can be referenced by a broad set of prospective customers.
3. Secure sponsored development funding for technology and product development.
4. Access strategic customers and key influencers.
5. Enter key market segments with channel partners who enjoy prominent market positions and are highly experienced at successfully introducing new technologies into these segments.

Addressable Market

General. Based on our internal estimates, the Company believes our total addressable market for ClearSign ECC technology in the four targeted system types to be between $5.1 billion and $12.2 billion in the United States alone.

	Natural Gas Fired Boilers	Industrial Solid Fuels	Utility Coal	Petrochemical
Firing System	Low- or Ultra Low-NOx Burners	Stoker, Kiln	Suspension, Tangential or "Dry Bottom"	Down-fired or wall-fired
Fuel Types	Natural Gas, Oil	Wood, biomass, TDF, MSW	Anthracite, Subbituminous, Lignite	Methane, Refinery Gas
Industrial Uses	Manufacturing, building heat	Forest Products, Cement	Electric Utilities	Petrochemial Refineries
	Up to $1m	Fuel dependent	$25m - $200m	Fuel dependent

Annual Unit Fuel Use - $				
Primary Benefits	Improved turndown ratio enables up to 30% efficiency gain. NOx remediation.	Up to 10% efficiency gain, NOx, CO and particulate remediation	Up to 10% efficiency gain. Reduction in major criteria HAPs	Improved flame control, increased production, reduced emissions
Customer ROI [1]	9 - 18 mos	12 - 24 mos	12 - 24 mos.	12 - 18 mos.
ClearSign Revenue Unit [1]	$450k - $800k	$5m - $25m	$35m - $80m	$20m - $40m
Inventory Estimate	163,000 (US) [2]	2,500 (US) [3]	1,436 (US) [4]	137 (US) [5]
Estimated Replacement Rate	3%	5%	4%	10%
Addressable Market by Segment [1]	$2.2b - $3.9b	$0.6b - $3.1b	$2.0b - $4.6b	$0.3b - $0.5b
	Total Addressable Market [1]	$5.1b - $12.2b		

25

[1] Assumptions derived from internal Company estimates of Revenue Unit and Annual Replacement Rate.

[2] Council of Industrial Boiler Operators, US EPA: Point Source Emissions Inventory, 2008.

[3] Channel partners market estimates between 2,000 and 3,000 operating US units.

[4] US Energy Information Administration: Existing Generating Capacity by Energy Source, 2010.

[5] US Energy Information Administration: Number and Capacity of US Refineries, 2011

We view our market as divided into two broad segments. The first, *industrial combustion*, includes both solid fuel systems such as cement kilns, wood and biomass furnaces and industrial coal systems as well as gas-fired systems such as down-fired petrochemical reformers and natural gas-fired boilers. The second segment, *power generation*, includes electric power plants fueled by pulverized coal and those utilizing gas-turbines. In each market segment and sub-segment, ClearSign plans to initially market solutions that will enable cost-effective retrofitting of our technology onto existing, standard system designs to simultaneously improve both their energy efficiency and pollution control characteristics. ClearSign also believes that, as a next-stage development effort, our technology will form the basis of completely redesigned, next-generation combustion systems with performance characteristics that could be disruptive, offering benefits to operators which are not possible using conventional system designs.

We intend to stage our entry into these segments initially in the following order:

(1) *Industrial Retrofit.* This segment represents the largest number of smaller, standard systems currently in use by industrial and food manufacturers, as well as institutions that independently produce their own power or industrial heat.

(2) *Power Generation Retrofit.* This segment includes large systems with significant energy efficiency and emissions problems and opportunities. We believe that success in this segment would result in sales channel access, enhanced data pertaining to the operation of our technology on a scale and access to major industry players, which we believe would then facilitate the introduction of the next stage.

(3)

New Designs for Industrial Combustion and Utilities. This segment would involve the design and construction of next-generation industrial combustion systems and power plants based on our ECC technology, from the ground up.

26

Industrial Combustion Systems. Industrial combustion systems are used to provide energy in the form of direct heat or steam for various manufacturing processes or for the generation of electricity. These systems have several different form factors, depending broadly on whether they burn solid fuels or gas. There are many hundreds of thousands of such systems in operation worldwide. Operators are motivated to improve energy efficiency, even those using opportunity fuels such as wood or biomass. Depending on the system and fuel type, emissions profiles and challenges vary greatly, but current regulation of emissions and uncertainty surrounding future regulation is a major business issue facing operators.

Industrial combustion systems fall generally under the following segments:

a. Solid Fuels - including cement kilns, wood and biomass systems, industrial coal boilers and municipal solid waste systems.

b. Gas - including natural gas-fired boilers, natural gas turbines for power generation and gas-fired petrochemical processing systems using methane, hydrogen and refinery gas.

We estimate the total addressable market for industrial combustion systems to be approximately between $3.1 billion and $7.5 billion per year. Our target customers would be:

- Timber companies such as Weyerhaeuser, Simpson Timber and Plum Creek Timber;
- Petrochemical processors such as Shell, Chevron, Total and Valero;
- Cement kiln operators such as Holcim, Lafarge and Cal Portland;
- Major regional institutions such as hospitals and universities; and
- Major food processors such as Safeway and Darigold and manufacturers such as, Intel and Kodak.

While the specifics of each installation type will differ by fuel, combustion system configuration, size and regional clean air requirements, industrial combustion and power generation businesses have a strong incentive to decrease energy costs, which represent a significant percentage of their annual fixed expense. Certain businesses have communicated to us that even very small gains in energy efficiency are meaningful and would warrant investment. Additionally, we believe that these businesses are increasingly concerned about a regulatory environment they perceive to be tightening progressively every year. For example, the "Boiler MACT" regulations proposed by the Environmental Protection Agency (EPA) is causing tremendous concern – with some businesses indicating they will shut down if this rule is imposed before a cost-effective air pollution control solution becomes available. “Boiler MACT,” as it is commonly referred to, consists of four interrelated rules governing emissions of mercury, dioxin, particulate matter, hydrogen chloride, and carbon monoxide from an estimated 200,000 boilers nationwide. These complex rules encompass controls and monitoring standards for 11 subcategories of boilers and process heaters that vary in design and fuel type. Factories, restaurants, schools, churches, and even farms would be required to conduct emissions testing and comply with standards of control that vary by boiler size, feedstock, and available technologies. For most facilities, compliance would require either switching fuels or installation of multiple emissions-control

technologies. In 2010 the EPA estimated the compliance cost of these rules to be $9.5 billion, although private industry estimates are much higher.

Retrofit to existing systems. An industrial retrofit of ClearSign's technology would be implemented to occur during the routine maintenance cycle of a plant operator, generally every 12 – 18 months. In many cases plants operate multiple systems with 'shut downs' occurring on a staggered basis several times per year, during which time ClearSign could install and test each system in multiple phases. Below are two illustrations of how ClearSign's technology could be applied to a solid fuel combustion system (Figure A) and a gas-fired boiler (Figure B).

Figure A: ClearSign technology retrofit to an existing solid fuel combustion system.

Figure B: ClearSign technology retrofit to a gas-fired boiler.

28

Power Generation. In the United States, approximately 45% of the electricity produced for domestic consumption is generated by coal-fired power plants. There are currently 1,436 large-scale coal-fired utility boilers in the US and more than 6,000 worldwide, ranging in size from 50 MW (megawatts) to over 1.5GW (gigawatts, or 1,000 MW). Assuming an average system size of 300MW, a typical air-pollution control (APC) train can cost up to $200 million to install and $50 million annually to operate.

ClearSign's target customers in this space would include major utility operators who are facing significant challenges in multiple areas, including the need for improved fuel efficiency, cost-effective remediation of both visible and ultra-fine particulate (PM 2.5), nitrogen oxide (NO_X), sulfur oxide (SO_X), carbon monoxide (CO) and carbon dioxide (CO_2). Additionally, these operators face an uncertain and changing regulatory environment in which the long-term commitment of capital to new projects is extremely difficult. Current combustion and APC technology is not only very expensive, but it is also inflexible because it is 'hard coded' to a specific fuel type. Making long-term capital deployments under these circumstances has proved extremely challenging to operators and has resulted in the delay and, in many cases, cancelation of major power generation projects.

A retrofit of ClearSign's technology to an existing coal-fired utility boiler would involve placing high-temperature electrodes directly into the combustion chamber in such a manner as to maximize electrical contact with the ongoing reaction. These electrodes would be physically connected to, but electrically isolated from the chamber walls or burner, further connected via high-voltage pass-through electrical cable to a nearby power amplifier. The amplifier, in turn, is connected using low-voltage signal cables to a computer system (redundant, with backup) in the control room of the plant.

Such a retrofit would work via the application high-voltage, pulsed electrical signal applied directly to the evolving combustion reaction, enabling several key benefits:

- control over flame shape and stability,
- more even heat distribution,
- improved heat flux and transfer of energy to the load resulting in improved fuel efficiency,
- ability to respond dynamically to changes in fuel composition, and
- control over flame chemistry, suppressing the formation of certain pollutants.

The most important overall impact of ClearSign's Electrodynamic Combustion Control™ technology is that, for the first time, an air pollution control system has the potential to provide a net positive return on investment for operators. Currently, the primary benefit provided by legacy air pollution control (APC) systems, such as scrubbers, electrostatic precipitators and baghouses (fabric filters), is to allow operators to avoid regulatory sanction – simply a cost of doing business. ClearSign's technology, we believe, disrupts the legacy economics of utility plant operation and will be adopted by customers as a method to increase the profitability of their operations.

New Build. Although ClearSign believes significant benefit will accrue to plant operators who retrofit their existing systems with ClearSign technology, we also believe new-build systems designed and built with ClearSign's ECC technology deeply integrated into the combustion system could offer radically improved performance characteristics, once the legacy design limitations of existing technology are removed. New plant designs could be significantly smaller, enabling much greater energy output from a given plant size, would be optimized to prevent formation of criteria pollutants (pollutants found commonly across the U.S., such as carbon monoxide, sulfur oxides, nitrogen oxides, ozone, lead, and particulate matter) and could also enable high-value end products such as elemental nitrogen, sulfur and high-purity carbon. New-build systems could enable the long-term, clean use of carbon-based fuels, while meeting ever more stringent expectations for energy efficiency and environmental performance.

Market Entry

ClearSign's Electrodynamic Combustion Control™ technology can potentially be applied to virtually any system in which there is a flame. While this implies a vast array of potential market opportunities, it also requires that we exercise a disciplined approach in comparatively evaluating those opportunities in order to select and prioritize those applications that afford the best mix of required development effort (and time and cost) relative to revenue potential. We also aim to select applications in which our technology offers the clearest and most measurable advantages relative to competing technologies or addresses unmet market needs.

Use Case Analysis . In order to support this planning process, we conduct a deep analysis of a variety of representative use cases for industrial combustion systems, and of those combustion systems used for electric power generation. A top level analysis of the combustion systems market readily yields two key parameters that allow us to further focus our efforts. These parameters are system size (which correlates to the number of systems in the operating inventory) and retrofit potential as compared to new system design. For example, while coal-fired systems for electric power generation are enormous (with very high thermal output) and extremely expensive, there are only 1,436 such systems in the United States as compared to the approximate 163,000 gas-fired boilers that are used to generate commercial and industrial steam heat. Not surprisingly, it typically takes months or even years to site, plan, permit and complete the construction and/or retrofit of large coal-fired power plants, while the cycle to design and build (or retrofit) smaller industrial boilers can be completed in weeks. One can reasonably conclude that a larger number of smaller systems with a faster design and build cycle will yield a correspondingly larger list of potential prospects for retrofit and that on average, the sales cycle relating to such system is also expected to be much shorter.

System Size and Retrofit Potential. When we compare the opportunity for retrofitting existing systems to improve their performance against the opportunity for utilizing our technology to enable major improvements in the design of new combustion systems, two factors stand out. First, there are many more systems operating at any given time than are built each year, so the available retrofit market is much larger than the annual market for new systems. Moreover, boiler, kiln, furnace and petrochemical processing plant operators commonly conduct retrofits, refurbishment, upgrades and maintenance. Secondly, integrating our technology into a new product designed by an OEM customer implies many unknowns relative to their own product planning and development processes and priorities and can be a lengthy process. We have therefore concluded, based on our preliminary analyses, that earliest applications of our technology are likely to involve the retrofit and upgrade of industrial scale combustion systems to improve their environmental performance and their energy efficiency, while at the same time making them more adaptable to new fuels and changing operating conditions.

System Configurations. There are a variety of different kinds of combustion systems used for different purposes and in different industries. Gas-fired boilers (much like those used to provide steam heat to homes and many buildings) are among the most common and are used to generate process steam for all manner of industrial production. The forest products industry and the cement industry burn waste wood and other “opportunity fuels” such as tire derived fuel (TDF) in flatbed stoker boilers or in rotary kilns. In some systems used in chemical and petrochemical processing, rows of burners are suspended from the ceiling to provide heat for chemical reactions that occur in rows and rows of tubes that surround them. Each of these systems has its own unique requirements and its own environmental challenges.

Prospective Customer “Use Cases”. In order to clearly define and delineate the value proposition and compelling advantages for our technology in each application, we conduct a thorough analysis of these system types, their mode of operation and their operating challenges.

These use cases are informed by extensive contact with prospective customers, engagement with industry subject matter experts and government regulators and analysis of third-party market data. As we develop the use case for a

particular system type, we initially score the quality, completeness and reliability of the information we receive from these sources to determine how well developed each use case is. Once the use cases are sufficiently well developed, we then prioritize plans for resource allocation, product design and selection of launch market segments.

One goal is to identify the most difficult and costly challenges faced by system designers and operators and to identify specifically how these challenges relate to inherent limitations in conventional combustion systems design and operation. We also analyze and quantify the economic costs imposed by these shortcomings so that we can accurately estimate the economic value that would result if the problem could be mitigated or solved. We then put forth a case in which ClearSign's Electrodynamic Combustion Control™ can be used to mitigate or solve one or more of these problems.

Use Case Criteria. Use case criteria allow us to understand how prospective customers are likely to value (and evaluate) the technology for a particular application in economic terms and gives us valuable data to inform product definition, and to develop pricing, positioning and distribution strategies for our solutions. We also believe this will provide insight into whether prospective customers are likely to view our solution as solving an unmet demand driven by an urgency to comply with new or existing air quality regulations, or as a means for increasing efficiency and profitability, or both. Among the factors that we analyze are the following:

- Available units: number, size and location;
- Retrofit complexity: simpler vs. complex installations;
- Sales cycle: short vs. long sales cycle times;
- Revenue: fewer, larger and longer-term opportunities vs. many smaller and repeatable installations; and
- Benefits to decision makers: Capital expenditure vs. Operating expenses.

Use Case Scoring. We then score the quality of this information using the following criteria:

- Value Proposition, including user benefit, potential competitive advantage to be gained by the user, the user's potential return on investment, the price we can reasonably expect to obtain and regulatory factors; and

- Market landscape and demand, including size of addressable market (in units and dollar volume), demand drivers, channel and partnering potential, retrofit potential and sales cycle and design / build cycle.

Candidate Solutions. While our analysis of market opportunities is ongoing, we have identified several promising and significant opportunities for high-value solutions, each of which we believe represents a major market opportunity in the United States alone. Thus far, the following segments appear to show compelling, unmet demand:

- Refinery and petrochemical fired-heaters and furnaces
  - Petroleum refining
  - Petrochemical reactors
    - Reformers producing hydrogen, ammonia, and methanol
    - Ethylene cracking units

- Rotary Kilns
  - Cement Kilns
  - Fuel-burning kilns

- Solid-fired units
  - Stoker- and grate- based boilers burning
    - Lump coal

§ Municipal solid waste (MSW)
§ Wood and other biomass
o Fluidized beds
o Pulverized coal units

· Heavy oil units
o Utility boilers
o Industrial boilers

· Gas- and light-oil fired boilers
o Water tube
o Fire tube

Once we have a use case that is well-informed by both primary research data and multiple sources of customer and industry group input, we can use the same scoring matrix to compare use cases against one another using the same criteria relating to *value proposition* and *market landscape* and quality of demand. In this instance, the score reflects not the strength of the information, but our interpretation of that data and our most current thinking as to the relative strength of each use case. We can identify which are the most promising given the constraints of available time, and the resources required to develop and gain market entry for the particular product or solution.

Business Cases

While use cases provide a detailed view into how the prospective customer will value the benefits of our technology, a business case analysis will forecast the value of each to us. Use case data is combined with technical, lab and product design data, including:

- Technology risk;
- Development cost;
- Time to production;
- Availability of third party, private or government funding; and
- Product design and bill of materials.

We employ the foregoing process in order to develop a detailed, well-informed product roadmap.

Sales and Marketing Plan

Overview. We believe that both the industrial combustion and power generation segments offer enormous opportunity for us. Each, however, has significantly different design-build and sales cycles. The power generation opportunity is characterized by extremely large individual installations (ranging into the billions of dollars), with longer times to revenue. Industrial combustion systems are generally smaller, much more numerous, and tend to be represented by a manageable number of design variations. For this reason, we intend to target the retrofit of industrial combustion systems as an early market entry point, while referencing the performance of these systems (particularly solid fuel systems) to larger utility boilers.

Key technical challenges. As with any new industrial technology, scaling our technology from lab prototype to a field-operating unit will require deliberate staging from the initial retrofit installation of “meaningful but manageable” systems to progressively larger and more complex systems. We are currently beginning testing a system involving a 1MMBtu/hr burner, which is similar in size to the wall-fired burners used in some configurations of steam methane reformers (SMR) used in the production of hydrogen. Because of the large numbers, wide variety and varying capacities of combustion systems, we believe we will be able to identify and target progressively larger systems without introducing significant ‘step-function’ increases in scale that would introduce significant risk.

Partnership Strategy. The formation of research and development partnerships to develop a new technology is common in both the industrial combustion and power generation segments. While we have commenced seeking such partners and have engaged in discussions with several companies and personnel with government agencies, we have

not entered into any definitive partnership or sponsorship agreements. Among the types of potential partners ClearSign will seek to establish relationships with will be:

- Large OEMs interested in ClearSign's technology;
- Engineering and Construction (E&C) companies interested in differentiating their offerings while increasing profitability;
- Industry research groups, whose mission is the development and testing of new technologies for the eventual benefit of their member companies; and
- Government entities such as the U.S. Department of Energy, who are chartered with the development of longer-range and potentially disruptive energy technologies.

Such partnerships would enable ClearSign to meet several objectives:

- Ability to share the cost and risk associated with adapting and deploying the technology into new applications and markets;
- Access to industry expertise and the reputation of established companies to hasten market acceptance;
- Reduction of design / build cycle times; and
- Opportunity to leverage our capital investments through funded research.

Channel Structure and Path to Market. Since our solution consists largely of off the shelf components, we do not anticipate that we will require a large manufacturing capacity. To the extent we will require production of specific hardware (electrodes, for example), we plan to rely on outside contract manufacturers. Such manufacturing, we believe, is widely available and a competitive market exists. We expect our path to market to involve:

- Ongoing development of algorithms specific to representative combustion systems;
- A small team of expert technicians, initially deployed to install systems at early customer sites to optimize installations, create technical and channel enablement tools; and
- Our expert technicians would then train installation teams within channel partners to deploy the technology more broadly.

Following our early commercial installations, if achieved, we will seek to broaden demand for our technology into additional market channels by referencing such early installations (possibly in risk-sharing, reduced-cost initial installations), demonstrating and cataloguing performance metrics and any return on investment experienced by the systems operators, and then training both such channel sales personnel and design professionals.

Path	Customer Type	Representative Companies	Strategy
Direct	Owner-Operators	AEP, Duke Energy, smaller regional players	Drive early demand: reference system to create channel pull.
Channel	Engineering and Construction (E&C) Contractors	Jacobs, Foster Wheeler, CH2M HILL, Parsons, URS	Integrate into designer's toolkit with return on investment proven at customer site.
OEM	Equipment and Technology suppliers	Babcock & Wilcox, GE, Hitachi	OEM and licensing opportunities with ClearSign technology designed directly into systems.

Licensing. We may also license our technology to others, which could form an additional revenue stream for the Company.

Employees

As of March 31, 2012, we had seven full-time employees and two part-time employees. None of these employees are covered by a collective bargaining agreement, and we believe our relationship with our employees is good. We also employ consultants, including technical advisors, on an as-needed basis to supplement existing staff. Consultants and technical advisors provide us with expertise in physics, chemistry, mechanical engineering, aeronautics and other specialized areas of science. Compensation paid to our consultants and technical advisors is negotiated with each individual. Compensation may include cash, shares of our common stock or options or warrants to purchase shares of

our common stock or any combination thereof. From inception through December 31, 2011, we have paid to our technical advisors a total of $8,085 in cash and we have issued 125,000 shares of our common stock and options or warrants to purchase 42,500 shares of our common stock. When we engage consultants or technical advisors, we typically enter into intellectual property assignment and non-disclosure agreements with them. From time-to-time we enter into written agreements with our technical advisors.

Technical Advisors

We have a group of technical advisors comprised of individuals with expertise which we call upon for assistance and advice in designing, developing, and marketing our technology. Our technical advisors are consultants who are not members of our board of directors and are not vested with any decision-making authority with respect to the Company. The following table sets forth the names and ages of our technical advisors as of March 31, 2012, and biographical information about each of them follows.

Name	Age	Position
Thomas S. Hartwick, Ph.D.	78	Technical Advisor
Robert E. Breidenthal, Ph.D.	60	Technical Advisor
Uri Shumlak, Ph.D.	46	Technical Advisor
John C. Kramlich, Ph.D.	61	Technical Advisor
Swapna Hiray	40	Technical Advisor

Thomas S. Hartwick, Ph.D., Technical Advisor

Dr. Hartwick became an advisor to our Company in January 2008. He has more than 45 years of experience in general management in the US aerospace industry, leading large organizations in research and development, technology transfer/insertion and mainstream business management supporting all segments of the U.S. government. From 1992 to 1995, Dr. Hartwick led the Satellite Payload Program and System Design Group for TRW. Previously, he was Strategic Plan Manager for Hughes Aircraft Company. Dr. Hartwick's general management responsibilities have included electro-optic R&D laboratories, chip R&D and manufacturing, and corporate strategic planning. His areas of published academic research include sensors and imaging, optical communications, magnetic materials, microwave devices, molecular lasers, far-infrared lasers, and laser heterodyne radiometry. Appearing regularly as an expert at various Congressional hearings, Dr. Hartwick currently holds Top Secret (Level III) security clearance with the U.S. Government. Dr. Hartwick serves on a number of academic, government, and industrial boards in a technical management role. He is past Chairman (Emeritus) of the Advisory Group on Electron Devices for the Office of the Secretary of Defense and Chair of National Research Council committees on Aviation Security Research and Development. He is active with the Defense Science Board and General Accounting Office, and has served for more than two decades with the National Technology Transfer Center. Dr. Hartwick serves on three corporate boards and is Vice Chair of the Board on Manufacturing and Engineering Design for the National Academy of Science and Engineering. He served on the board of directors of Aculight Corporation, which was acquired in September 2008 by Lockheed Martin Corporation. Dr. Hartwick received a BSc. in Physics from the University of Illinois, a MSc. in physics from the University of California, Los Angeles and a Ph.D. in electrical engineering from the University of Southern California.

Robert E. Breidenthal, Ph.D., Technical Advisor

Dr. Breidenthal became an advisor to our Company in November 2009. A professor at the University of Washington's Department of Aeronautics and Astronautics since 1980, Dr. Breidenthal is a recognized expert in turbulent entrainment, including the high-speed mixing of fuel and oxidant and the high-velocity fluid flow that power jet engines and turbine generators. He has led projects for companies including The Boeing Company, CH2M Hill, ARCO Alaska and PACCAR, and has received research support from the Air Force Office of Scientific Research, the

National Science Foundation, NASA and ASEA Brown Boveri, Ltd., of Switzerland. Dr. Breidenthal has published numerous papers for major scientific journals on subjects including ignition and flame propagation process, turbulent mixing, flow visualization, mixing and chemical reaction, elements of entrainment, and addressing complexity in laboratory experiments. Journals in which his papers have appeared include the American Institute of Aeronautics and Astronautics, Physics of Fluids, Journal of the Atmospheric Sciences, and the Journal of the Royal Meteorological Society. He has presented papers at the Symposium of Turbulence and Diffusion, the International Conference on Lasers and Applications, and the International Conference on Fluid Mechanics. Among several issued patents, Dr. Breidenthal is the inventor of a method of improving fuel and air mixing in high-pressure combustion systems, which describes an approach to simplify mechanical design while at the same time reducing emissions, improving fuel efficiency and increasing compression ratios (horsepower). His work is also cited in numerous other US and international patents. Dr. Breidenthal received a BSc. in Aeronautical Engineering from Wichita State University, and a MSc. and Ph.D. in Aeronautics from the California Institute of Technology.

Uri Shumlak, Ph.D., Technical Advisor

Dr. Shumlak became an advisor to our Company in January 2010. A professor at the University of Washington's Department of Aeronautics and Astronautics since 1994, Dr. Shumlak's expertise includes plasma physics, innovative magnetic plasma confinement for fusion energy, electric propulsion, and theoretical and computational plasma modeling. Dr. Shumlak was the recipient of the American Institute of Aeronautics and Astronautics Abe Zarem Award of Excellence in 2003, and is a two-time recipient of the University of Washington Aeronautics and Astronautics Professor of the Year Award in 1999 and 2002. His work includes theoretical and experimental investigation of the stabilizing effect of sheared flows in magnetically confined plasmas and he has been invited to speak at numerous international conferences. Dr. Shumlak has published dozens of papers in major scientific journals, including the Journal of Computational Physics, Review of Scientific Instruments, Physical Review Letters, The Journal of Propulsion and Power and Nuclear Fusion. Dr. Shumlak has been awarded several US patents for his invention of a Plasma-Based EUV Light Source. Professor Shumlak received a BSc. from Texas A&M University and a Ph.D. in Nuclear Engineering from the University of California, Berkeley.

John C. Kramlich, Ph.D., Technical Advisor

Dr. Kramlich became an advisor to our Company in January 2010. Dr. Kramlich has been a Professor of Mechanical Engineering and the Associate Chair for Academics at the University of Washington's College of Engineering since 1992. His principal technical interests include combustion, with an emphasis on pollutant formation and control, and the numerical and theoretical analysis of turbulent reacting flows involving combustion. Earlier in his career, he was vice president, process research and development at the Energy and Environmental Research Corporation, where he led research into the development of pollution reduction techniques for large fossil fuel-fired energy systems. Dr. Kramlich has also worked on a number of consulting projects involving energy systems at power plants, oil refineries and biomass conversion plants. Dr. Kramlich's research interests include mechanisms of resperable ash generation from coal and biomass fuels, development of an acoustically-enhanced afterburner for shipboard incineration applications, development of a turbulence / chemistry performance model for natural gas reburning and NO_X control and flame liftoff and stability in microgravity environments. He has published in numerous scientific journals, including *Nature* for an advanced selective reduction process for NO_X control, *Geophysical Research Letters* for an artifact in the measurement of N2O from combustion sources and in *Fuel Processing Technology* for a chemical kinetic model for the homogeneous oxidation of mercury by chlorine species. In 1996, Dr. Kramlich received the Environmental Protection Agency's Scientific and Technological Achievement Award for his work on Nitrous Oxide Behavior in the Atmosphere, and in Combustion and Industrial Systems. Dr. Kramlich's work at the University of Washington has been supported by the Environmental Protection Agency, the Department of Energy, the National Science Foundation, NASA, the Gas Research Institute, and various industrial organizations. Dr. Kramlich received his Ph.D. in Engineering Science from Washington State University.

Swapna Hiray, Technical Advisor

Swapna Hiray became an advisor to our Company in April 2008. Ms. Hiray is Senior Business Development Analyst at Intellectual Ventures in Bellevue, Washington, a position she has held since June 2008. Previously, Ms. Hiray was a member of the technology development group at Pratt & Whitney, a division of United Technologies Corporation from April 2004. Ms. Hiray directed the marketing of Pratt & Whitney's Pulse Detonation Engine (PDE) technology, a new product for the removal of ash deposition from utility and other industrial boilers. In this capacity, she worked extensively with customers including American Electric Power (AEP). Prior to Pratt & Whitney, from 2001 to 2004, Ms. Hiray was responsible for managing and marketing of new innovations at University of Washington Center for Commercialization. There, she collaborated with the faculty and administration to establish the technical merits of new innovations and identify potential applications. Ms. Hiray has an undergraduate degree in Engineering. She obtained her MBA from the University of Washington Foster School of Business.

Competition and Barriers to Entry

The industry in which we operate is global in scope and is populated by large, established suppliers of burners and post-combustion air pollution control systems, all of whom possess substantially greater resources than we do.

Worldwide, suppliers of burners and APC equipment include but are not limited to companies such as Babcock and Wilcox, Westinghouse, Callidus, Eclipse, General Electric, Haldor Topsøe, Hitachi, John Zink (including affiliates Coen, Todd, and Hamworthy Combustion), Linde, Maxon, and Fives North American, among others.

These systems include low NO_X burners, electrostatic precipitators, baghouses, selective catalytic reduction systems and various types of scrubbers. The companies that provide these systems are well established and their combustion and emissions control technologies are based on mature, well-understood technologies that are proven in the market. However, we believe the further development of their technologies is limited largely to marginal performance improvements. As a consequence of this relatively slow pace of innovation, we believe current technology offerings have become largely commoditized, and differentiation between suppliers is very often based on price. We believe another drawback to conventional combustion control and emissions control technologies is that they are only effective over a very narrow range of thermal output, and are often highly intolerant of any variance to the chemical composition of the fuel. These translate to higher costs in the form of reduced fuel efficiency and an inability to adapt to market or regulatory conditions by changing fuel feedstocks.

From a customer's perspective, legacy air pollution control technology is viewed as a cost of doing business, and as a means to operate within regulatory requirements and avoid fines. Unlike most other kinds of capital equipment that provide an economic return through enhanced productivity or efficiency, we believe customers of traditional emissions control equipment do not otherwise expect any positive return on these investments.

We are seeking to enter the combustion and emissions control market and to establish ourselves in a highly competitive industry against companies that have both substantially greater financial resources than we do and established products. Because they have been available in the market for many years, our competitors' product offerings may have several advantages. Among these are:

- *Availability of trained technicians:* The number of technicians who are able to specify, install and operate our competitors' products will be greater than those who have been trained on our technology.
- *Conservative choice:* Because our competitors' technologies are well understood and their performance has been proven over time, customers may perceive their offerings represent a safe, low-risk choice.
- *Business relationships:* Because our competitors have established long-standing personal relationships with their customers, they may prefer to continue to do business with one another.

However, if we are able to successfully bring our technology to market, we believe that our Electrodynamic Combustion Control™ technology would be an attractive alternative to the products and solutions offered by companies with which we seek to compete. In particular, we believe that our technology could offer a unique and powerful ability to improve energy efficiency and enhance operation while reducing many pollutants at the source. We believe our technology could be capable of reducing the requirement for costly legacy equipment, offering customers the prospect of a positive return on their investment in the form of enhanced efficiency and productivity while reducing emissions to the levels of existing air pollution control technologies such as scrubbers, electrostatic precipitators and fabric filters (baghouses). In particular, we believe ClearSign technology could offer the following advantages when compared with the next best alternatives.

Emissions Reduction from Combustion Sources. Current technology reduces emissions by using mechanical mixing aids such as swirlers, staging combustion in two or more zones, or treating emissions such as NO_X after the fact using selective catalytic reduction. In contrast, we believe ClearSign technology could:

- enhance mixing with none of the additional pressure drop or power requirements that swirlers demand; and
- reduce NO_X without reducing turndown or narrowing the burner operating window as staged combustion does or requiring expensive post combustion treatments with chemical additives such as catalytic reduction requires.

Improving flame shape. The main goal of virtually all process combustion is to transfer heat to raise steam or enable a chemical reaction, and to do so as efficiently as possible. Conventional technology uses buoyancy (the natural tendency for a flame and heat to rise opposite to the force of gravity) and momentum (fuel mixed with air and forced through a nozzle, as in a torch) as the only tools to shape flames. Unfortunately, momentum effects die out over distance from their source and buoyancy always operates counter to the gravitational field. Moreover, momentum and buoyancy effects often drive wayward flames into process tubes where they cause overheating and potential failure or worse. In contrast, we believe that ClearSign's technology could allow the use of much stronger body forces that are not limited by orifice diameter and are unaffected by gravitational fields. We believe the result would be better control over flame shape and direction, allowing the process to operate free of the effects of impingement and non-optimal flame structure.

Enhancing heat transfer and process efficiency. The main objective of industrial combustion in furnaces and boilers is to transfer heat to a process fluid. Conventional combustion techniques do their best to optimize flame shape to achieve this end, but we believe conventional combustion techniques have no additional means for enhancing heat transfer. In contrast, we believe that ClearSign's ECC technology could enhance heat transfer to the process tube independent of flame shape using electrical current, and that the result could be an increase in process efficiency or throughput, which is a critical goal in the industrial combustion industry.

Compared to the products and solutions of companies with which we seek to compete, we believe our technology could provide our potential customers with a lower total cost of ownership, providing the prospect of a positive economic return on investment to systems operators. We believe this would be due to a reduction in their capital and operating expenses, and an increase in energy efficiency.

Intellectual Property Protection

ClearSign is pursuing an aggressive intellectual property (IP) strategy including:

- *Aggressive invention and ideation.* Thus far ClearSign has identified more than 100 specific inventions that we believe to be novel and patentable. ClearSign is pursuing a proven ideation process to enhance and continue these discoveries.

- *Development of a strong patent portfolio.* We have filed 22 patent applications to date. We expect to file a significant number of additional patent applications.

We cannot predict when our patent applications may result in issued patents, if at all.

We do not disclose identifying information about our patent applications that is not yet in the public domain. The following patent applications are listed in public databases:

Jurisdiction	Pat. App. Serial No.	Title	Owner
US	12/753,047	System and Apparatus for Applying an Electric Field to a Combustion Volume	ClearSign Combustion Corporation

US	13/006,344	Method and Apparatus for Electrical Control of Heat Transfer	ClearSign Combustion Corporation
PCT	PCT/US11/21194	Method and Apparatus for Electrical Control of Heat Transfer	ClearSign Combustion Corporation

Research and Development Program

Our research and development (R&D) program consists of bench- and pilot-scale research coordinated with future site demonstrations. The contacts of our management, board of directors and advisory board with potential customers in the petroleum, petrochemical, and industrial steam applications inform our research program. These are supported by memoranda of understanding (MOUs) with potential customers and research institutions. Our research and development activities make use of employees and consultants that are respective experts in the areas of industrial combustion, statistical experimental design, gas turbines, fluid mechanics, physics of particles and ions, and electric fields. We spent $463,076 and $0 on research and development in the years ended December 31, 2011 and 2010, respectively.

Government Regulation

Government approval is not required in order for us to sell the principal products or services that we are developing. However, government regulation, particularly environmental regulation, is likely to play a role in shaping ClearSign's product mix and offerings. We believe ClearSign offers major advances in efficiency and emissions reductions. Efficiency improvements include enhanced mixing, lower excess air requirements, and improved heat transfer to the process. We believe such efficiency improvements would generate market demand regardless of the existing regulatory framework because they could result in savings to businesses that adopt ClearSign technology. Moreover, we believe emissions regulations could enhance market demand for ClearSign technology if such regulation requires a reduction in criteria pollutants such as NO_X, SO_X, and CO, or others such as CO_2, or mercury. In such cases, possible legislation on greenhouse gases, Boiler MACT rules, or general reductions in required criteria pollutant levels could serve our business objectives. Although the timing of such regulation is uncertain, the general trend over the last decades continues to be government-mandated reduction in the required level for all emissions and the addition of new emissions to those regulated. Ultimately, it may be possible for ClearSign's technology to achieve EPA BACT (Best Available Control Technology) designation. In this case, the availability of our technology itself could accelerate the government's willingness to adopt more stringent environmental regulations. Accordingly, we are not aware of any current or proposed federal, state or local environmental compliance regulations that would have a material detrimental effect on our business objectives. We do not anticipate any major expenditures to be required in order for our technology to comply with any environmental protection statutes, and we believe our technology as now developed represents a material benefit for compliance with such statutes.

Properties

Our principal office is located at 12870 Interurban Avenue South, Seattle, Washington. We currently lease approximately 6,950 square feet of office and laboratory space under a triple net lease which is due to expire in February 2017. There is no rent due for the period November 2011 through February 2012. Thereafter, monthly rent is $8,709 and increases by approximately 3% annually.

Legal Proceedings

We are not a party to any pending legal proceedings.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION

AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with "Summary Selected Financial Information" and our financial statements and related notes appearing elsewhere in this prospectus. In addition to historical information, this discussion and analysis here and throughout this registration statement contains forward-looking statements that involve risks, uncertainties and assumptions. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of certain factors, including, but not limited, to those set forth under "Risk Factors" and elsewhere in this prospectus.

OVERVIEW

We are a development stage company located in Seattle, Washington. We were formed for the purpose of developing a technology that improves both the energy efficiency and emissions control characteristics of combustion systems.

To date, our operations have been funded through sales of our common stock. We have earned no revenue since inception on January 23, 2008.

Our financial statements contemplate the continuation of our business as a going concern. However, we are subject to the risks and uncertainties associated with a new business, as noted above we have no established source of capital, we do not yet have the ability to earn revenue and we have incurred significant losses from operations since inception. These matters raise substantial doubt about our ability to continue as a going concern.

Plan of Operation

We intend to pursue development of our technology to enable future sales. These activities range from laboratory research to field development. We intend to create co-development collaborations with established manufacturers and other entities, which deploy boilers, furnaces, refineries, or other combustion processes. These collaborations would enable us to work closely with specific industries and operations to apply developed solutions.

We expect to use the net proceeds received from this offering in our efforts related to research and development, protection of our intellectual property, and exploration of market opportunities, as well as for working capital and other general corporate purposes. The net proceeds from this offering are anticipated to be approximately $[____] million which is expected to be sufficient to fund our activities for at least the next two years following the offering. Our anticipated costs include employee salaries and benefits, compensation paid to consultants, capital costs for research and other equipment, costs associated with development activities including travel and administration, legal expenses, sales and marketing costs, general and administrative expenses, and other costs associated with an early stage, publicly-traded technology company. We anticipate increasing the number of employees by up to approximately 20-30 employees; however, this is highly dependent on the nature of our development efforts. We anticipate adding employees in the areas of research and development, sales and marketing, and general and administrative functions required to support our efforts. We expect to incur consulting expenses related to technology development and other efforts as well as legal and related expenses to protect our intellectual property. We expect capital expenditures to be between $0.5 and $1.0 million annually, but these are highly dependent on the nature of the operations where co-development activities are ongoing.

The amounts that we actually spend for any specific purpose may vary significantly, and will depend on a number of factors including, but not limited to, the pace of progress of our commercialization and development efforts, actual needs with respect to product testing, development and research, market conditions, and changes in or revisions to our marketing strategies. In addition, we may use a portion of any net proceeds to acquire complementary products, technologies or businesses; however, we do not have plans for any acquisitions at this time. We will have significant discretion in the use of any net proceeds. Investors will be relying on the judgment of our management regarding the application of the proceeds of any sale of our common stock.

Research and development of new technologies is, by its nature, unpredictable. Although we will undertake development efforts with commercially reasonable diligence, there can be no assurance that the net proceeds from this offering will be sufficient to enable us to develop our technology to the extent needed to create future sales to sustain operations as contemplated herein. If the net proceeds from this offering are insufficient for this purpose, we will consider other options to continue our path to commercialization, including, but not limited to: additional financing through follow-on stock offerings, debt financing, co-development agreements, curtailment of operations, suspension of operations, sale or licensing of developed intellectual or other property, or other alternatives.

If we are unable to raise the net proceeds that we believe are needed to develop our technology and enable future sales, we may be required to scale back our development plans by reducing expenditures for employees, consultants, business development and marketing efforts, and other envisioned expenditures. This could reduce our ability commercialize our technology or require us to seek further funding earlier, or on less favorable terms, than if we had raised the full amount of the proposed offering.

If management is unable to implement its proposed business plan or employ alternative financing strategies, it does not presently have any alternative proposals. In that event, investors should anticipate that their investment may be lost and there may be no ability to profit from this investment.

We cannot assure you that our technology will be accepted, that we will ever earn revenues sufficient to support our operations or that we will ever be profitable. Furthermore, since we have no committed source of financing, we cannot assure you that we will be able to raise money as and when we need it to continue our operations. If we cannot raise funds as and when we need them, we may be required to severely curtail, or even to cease, our operations.

CRITICAL ACCOUNTING POLICIES

The following discussion and analysis of financial condition and results of operations is based upon our financial statements, which have been prepared in conformity with accounting principles generally accepted in the United States of America. Certain accounting policies and estimates are particularly important to the understanding of our financial position and results of operations and require the application of significant judgment by our management or can be materially affected by changes from period to period in economic factors or conditions that are outside of our control. As a result, they are subject to an inherent degree of uncertainty. In applying these policies, our management uses their judgment to determine the appropriate assumptions to be used in the determination of certain estimates. Those estimates are based on our historical operations, our future business plans and projected financial results, the terms of existing contracts, our observance of trends in the industry, information provided by our customers and information available from other outside sources, as appropriate. Please see Note 2 to our financial statements for a more complete description of our significant accounting policies.

Development Stage Enterprise . The Company is a development stage company as defined in Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 915, *Development Stage Entities*. The Company is devoting substantially all of its present efforts to develop and market new technologies in combustion systems, and its planned principal operations have not yet commenced. The Company has not generated any revenues from operations and has no assurance of any future revenues. All losses accumulated since its inception on January 23, 2008 have been considered as part of the Company's development stage activities.

Basis of Presentation. The Company's financial statements have been prepared in conformity with accounting principles generally accepted in the United States which contemplate continuation of the Company as a going concern. However, the Company is subject to the risks and uncertainties associated with a new business, has no established source of revenue, and has incurred significant losses from operations since inception. The Company's operations are dependent upon it raising additional capital. These matters raise substantial doubt about the Company's ability to continue as a going concern. The financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that could result from the outcome of this uncertainty.

Research and Development. The cost of research and development is expensed as incurred.

Income Taxes. The Company accounts for income taxes using an asset and liability approach which allows for the recognition and measurement of deferred tax assets based upon the likelihood of realization of tax benefits in future years. Under the asset and liability approach, deferred taxes are provided for the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. A valuation allowance is provided for deferred tax assets if it is more likely than not these items will either expire before the Company is able to realize their benefits, or that future deductibility is uncertain. Tax benefits from an uncertain tax position are recognized 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.

Stock-Based Compensation. The costs of all employee stock options, as well as other equity-based compensation arrangements, are reflected in the financial statements based on the estimated fair value of the awards on the grant date. That cost is recognized over the period during which an employee is required to provide service in exchange for the award. Stock compensation for stock granted to non-employees is determined as the fair value of the consideration received or the fair value of equity instruments issued, whichever is more reliably measured.

RESULTS OF OPERATIONS

Comparison of Years Ending December 31, 2011 and 2010

Operating Expenses. Operating expenses, consisting of research and development and general and administrative expenses, increased by $2,583,873 during 2011 from $395,587 in 2010 to $2,979,460. The increase resulted primarily from the payment of a $1,000,000 consulting fee in the form of common stock issued at $2.20 per share to MDB Capital Group LLC for services including assistance with building an intellectual property development strategy, retaining appropriate executive personnel, and advising with respect to the development of our business. The Company increased its research and development expenses from $0 for 2010 to $463,076 for 2011. Research and development expenses included increased personnel levels and research activities. The Company also increased its level of personnel for general and administrative purposes to complete its management team thereby increasing compensation expenses by $1,010,803 to $1,299,553 for 2011 as compared to $288,750 for 2010. The remaining increase of $109,994 related to general and administrative expenses for general and corporate functions, such as facility fees, travel, telecommunications, investor relations, insurance, professional fees, consulting fees and other overhead.

Loss from Operations. Due to the increase in operating expenses, our loss from operations increased during 2011 by $2,583,873 to $2,979,460 from $395,587 for 2010.

Net Loss. Primarily as a result of the increase in our operating expenses, our net loss for 2011 was $2,976,295 as compared to a net loss of $395,587 for 2010, resulting in an increase to net loss of $2,580,708.

Liquidity and Capital Resources

We have not generated revenues to date. We have funded our operations through the sale of our common stock. From April 2008 to August 2010, we completed an offering of our common stock from which we raised gross proceeds of approximately $840,000, and from March to May 2011, we completed a second offering of our common stock from which we raised approximately $3,000,000 in gross proceeds. We have no committed sources of financing and we do not expect to earn revenues in the near term.

At December 31, 2011, our current assets were in excess of current liabilities resulting in working capital of $622,661 compared to a working capital deficiency of $373,948 at December 31, 2010. At December 31, 2011, our accumulated deficit increased to $4,490,238 as compared to $1,513,943 at December 31, 2010 and we had stockholders' equity of $874,417 at December 31, 2011 as compared to a stockholders' deficit of $316,806 at December 31, 2010.

Operating activities in 2011 resulted in cash outflows of $1,688,678 which were due primarily to the loss for the year of $2,976,295, offset by common stock issued for services in the amount of $1,021,038, share based compensation from the Company's Equity Incentive Plan of $187,096, and increases in accounts payable and accrued compensation expense of $448,089, offset primarily by $415,394 of prepaid expenses related to this offering. Cash outflows during 2010 of $129,966 were primarily due to the loss for the year of $395,587 offset by an increase in accrued compensation expense of $166,572 and payment of $118,669 of services with common stock.

Investing activities during 2011 resulted in cash outflows of $217,723 for acquisition of fixed assets and development of patents and trademarks. There were no investing activities in 2010.

Financing activities during 2011 generated $2,836,338 in net cash from the issuance of common stock. Gross proceeds of $2,999,374 were offset by issuance costs of $163,036 paid in cash. Financing activities during 2010 generated $129,942 in cash from the issuance of common stock.

Off-Balance Sheet Transactions

We do not have any off-balance sheet transactions.

Claim by Perkins Coie LLP

Our former legal advisors, Perkins Coie LLP, contacted us on March 26, 2012 to advise us that they believe TWB Investment Partnership II, L.P., a party related to Perkins Coie LLP, has the right to acquire 25,250 shares of our common stock at $0.02 per share pursuant to an engagement letter dated December 4, 2007. We have initially denied the claim since, among other defenses, we believe we entered into a full settlement of all amounts owed to Perkins Coie LLP in November 2011, but we continue to review this claim. Perkins Coie LLP currently owns 3,555 shares of our common stock which we issued in conjunction with the November 2011 settlement and is the sole stockholder not subject to a lock-up agreement.

Trends, Events and Uncertainties

Other than as discussed above, we are not aware of any trends, events or uncertainties that are likely to have a material effect on our financial condition.

The 2011 Private Placement

On May 10, 2011 we completed an offering of our common stock through MDB Capital Group LLC acting as our placement agent. We offered a total of 1,363,364 shares at a price of $2.20 per share. In consideration for its services,

the placement agent and its designees received (i) 136,364 shares of our common stock and a five year warrant to purchase 136,368 shares of our common stock at an exercise price of $2.20 per share and (ii) cash in the amount of $30,000 to offset the placement agent's expenses incurred in connection with the offering. The securities offered were not registered under the Securities Act, and may not be offered or sold in the United States absent registration or an applicable exemption from registration requirements.

DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The following table sets forth the names and ages of all of our directors and executive officers. Our officers are appointed by, and serve at the pleasure of, the board of directors.

Name	Age	Position
Richard F. Rutkowski	56	President, Chief Executive Officer and Chairman of the Board of Directors
Joseph Colannino	55	Chief Technology Officer
James N. Harmon	52	Chief Financial Officer and Secretary
Geoffrey D. Osler	46	Chief Marketing Officer
Andrew U. Lee	60	Senior Vice President of Business Development
David B. Goodson	69	Chief Science Officer and Director
Stephen E. Pirnat	60	Director
Scott P. Isaacson	63	Director
Lon E. Bell, Ph.D.	71	Director

Biographical information with respect to our executive officers and directors is provided below. There are no family relationships between any of our executive officers or directors.

Richard F. Rutkowski, President, Chief Executive Officer, and Chairman of the Board of Directors

Mr. Rutkowski became a director of our Company in January 2008 and was appointed as Chairman and Chief Executive Officer in February 2008. Prior to joining ClearSign, Mr. Rutkowski was a co-founder of Microvision, Inc., a leader in optical beam-scanning display and imaging systems and served as the company's Chief Executive Officer and Director from September 1995 until January 2006. In January 2000, Mr. Rutkowski co-founded Lumera Corporation, a leading developer of a broad range of devices used in optical communications, biomedical analysis and broadband imaging that are based on the company's proprietary nano-materials and electro-optic polymers. Mr. Rutkowski served as Vice-Chairman of the Lumera's board from January 2000 until May 2006. In May 2006, Mr. Rutkowski co-founded Ormont, LLC, a management consultancy specializing in advising companies on financing and marketing strategy, where he served as a partner from May 2006 until February, 2008. From November 1992 to May 1994, Mr. Rutkowski served as Executive Vice President of Medialink Technologies Corporation (formerly Lone Wolf Corporation), a developer of high-speed digital networking technology for multimedia applications in audio-video computing, consumer electronics, and telecommunications. From February 1990 to April 1995, Mr. Rutkowski was a principal of Rutkowski, Erickson, Scott, a business development consulting firm. Mr. Rutkowski has acquired substantial domain expertise in electronic displays, information visualization and visual interface design, mobile computing, MEMS technology and optical MEMS technology, nano-materials and electro-optic materials technology, electro-optical component and systems technology and communications network protocols. Mr. Rutkowski has served several times as an invited member of National Technology Transfer Center's Advisory Panel. He has frequently been featured as a speaker or panelist at technology and business conferences, and has appeared on

local and national television numerous times. He was honored as a Technology Pioneer at the World Economic Forum in 2002 and has been acknowledged by the University of Washington for his support of the University's research efforts. Mr. Rutkowski attended the University of Chicago and has extensive experience in starting and building technology businesses. For these reasons our board of directors believes that Mr. Rutkowski's membership on our board of directors is of high value to the Company.

Joseph Colannino, Chief Technology Officer

Mr. Colannino became Chief Technology Officer of our Company in May 2011. Prior to joining ClearSign, from December 2006 to February 2011, Mr. Colannino was director of Research and Development at John Zink Company, LLC, a wholly owned subsidiary of Koch Industries and a worldwide leader in the supply of combustion and air pollution control equipment to the energy industry. During that time his responsibilities were expanded to lead global R&D efforts. As head of global R&D, his responsibilities included management of intellectual property, oversight of John Zink's testing facility and of the John Zink Institute, which trains more than 1,000 students per year in various aspects of combustion. From November, 2005 to November 2006, Mr. Colannino headed knowledge management efforts at John Zink. Mr. Colannino has more than 25 years in the combustion industry and has authored or contributed to several books including *Industrial Combustion Testing*, *The Air Pollution Control Guide*, *The John Zink Combustion Handbook* and *Modeling of Combustion Systems – A Practical Approach*. He is a registered professional engineer and has written and reviewed problems appearing on the NCEES professional engineering exam, given in all 50 states for professional engineering licensure. Mr. Colannino's areas of expertise include R&D management, combustion, pollutant formation and control, and statistical experimental design. Past and present memberships include the American Institute of Chemical Engineers, the American Chemical Society, the Air and Waste Management Association, the American Statistical Association and the National Association of Professional Engineers. Mr. Colannino received a BSc. from the California Polytechnic University in Pomona, and a Masters in Knowledge Management from the University of Oklahoma.

James N. Harmon, Chief Financial Officer and Secretary

Mr. Harmon was appointed as our Chief Financial Officer in June 2011 and as our Secretary in November 2011. Prior to joining ClearSign, Mr. Harmon was Chief Financial Officer of Sahale Snacks, Inc., a highly-differentiated premium snack manufacturer located in Seattle, from September 2010. He was responsible for all financial matters including acquisition of commodities. From November 2008 to September 2010, Mr. Harmon was a financial and real estate consultant for various businesses, including Sahale Snacks. From January 1992 to November 2008, Mr. Harmon held senior management positions and was Treasurer and Secretary of Sabey Corporation, a Seattle-based real estate and investment company that is among the nation's largest data center landlords for tenants such as Microsoft and JP Morgan Chase. Mr. Harmon was Chief Financial Officer from January 1992 to August 2003 and Senior Vice President-Investments from September 2003 to November 2008. Mr. Harmon was responsible for all financial matters including transactions and financings for sizable commercial properties and both publicly and privately traded securities. Prior to his hiring, Mr. Harmon assisted Sabey Corporation in the initial public offering of one of its affiliates, Sun Sportswear, Inc. Previously, Mr. Harmon was a certified public accountant with Price Waterhouse from 1982 to 1989 where he became an Audit Manager specializing in the manufacturing and retail industries, including SEC registrants filing under the 1933 and 1934 Acts. Mr. Harmon received a B.A. in Business Administration/Accounting from Washington State University.

Geoffrey D. Osler, Chief Marketing Officer

Mr. Osler was appointed as our Chief Marketing Officer in February 2008. He also served as a director from February 2008 until February 2011. In May 2006, Mr. Osler co-founded Ormont, LLC, a management consultancy specializing in advising companies on financing and marketing strategy, where he served as a partner from May 2006 until February 2008. From May 2007 until December 2009, he served as Vice President of Marketing and as a Director of Syngence Corporation, a Dallas, Texas based electronic discovery software company. From February 1999 until March 2006, he was Group Marketing Manager, Internet Products, and later Director of Partner Marketing for Adobe Systems, Inc. where he was responsible for worldwide programs with membership in excess of 10,000 developers, service providers, and certified training centers. From 1996 to 1999, Mr. Osler headed marketing and business development for Baseview Products, Inc., a division of Harris Corporation and a major systems integrator in the newspaper industry. Mr. Osler has managed marketing teams in Europe, Asia and the Middle East in addition to the United States and Canada. Mr. Osler was co-founder and marketing director of Crosstree Systems Inc., the developer of Target, one of the world's first daily, industry-specific email news services. In 1994 at Science and Information Technology, Ltd., Mr. Osler was part of the team that created MAPS, one of the first software systems to enable web-based image searching and content management. Mr. Osler concluded agreements placing MAPS at some of the world's leading publications including The Times of London, The Daily Mirror and The Economist. From 1992 to 1994, at the beginning of the shift to a free market, Mr. Osler worked for Apple Computer in Warsaw, Poland with responsibility for product localization and securing exclusive distribution agreements with leading U.S. software and hardware manufacturers. Mr. Osler has a B.A. in Political Science and Journalism from the University of Western Ontario.

44

Andrew U. Lee, Senior Vice President of Business Development

Mr. Lee was appointed as our Senior Vice President, Business Development in May 2011. Prior to joining ClearSign, he was Senior Vice President, Sales and Business Development for Adapx, Inc. from July 2008 to May 2011. At Adapx, Mr. Lee had overall P&L and revenue responsibility, assisted with three product launches, and developed OEM relationships in the medical, commercial and defense industries. From November 2006 to May 2008, Mr. Lee was Senior Vice President, Sales for Zonar Systems, Inc., with overall revenue responsibility. From January 2006 to November 2006, he was a partner with Paladin Partners, an early stage business consulting enterprise. From June 1999 to January 2006, Mr. Lee was Vice President, Sales of Microvision, Inc., where he developed numerous channel partners in the US, Europe and Asia. During his tenure, Microvision was awarded the “Fast 50” designation from Deloitte & Touche for sales growth in Washington State. Mr. Lee has extensive experience in the aerospace, defense, retail, transportation and medical sectors and expertise in sales force leadership, and the formation of strategic alliances and contract negotiation. Mr. Lee has a B.A. in Political Science from the University of California, Berkeley.

David B. Goodson, Chief Science Officer and Director

Mr. Goodson became a director of our Company in January 2008 and was appointed as Chief Science Officer in February 2008. Mr. Goodson is also Executive Director of the Alternative Energy Resources Alliance (AERA), a Washington State non-profit foundation dedicated to the development of new forms of electromechanical conversion technology. Mr. Goodson founded AERA in 2002. During his career, Mr. Goodson has led the development and commercialization of a diverse array of technologies including electro-optic polymer materials, advanced combustion systems and fermentation technologies. He has also been a technology advisor and consultant to several other companies in related areas. As founder of Air Pollution Systems, Inc., Mr. Goodson invented and co-developed with the Electric Power Research Institute a novel pre-charger device to increase the effectiveness of electrostatic precipitators. The company was acquired in 1978 by the Linde division of Union Carbide and the technology remains an industry standard in the reduction of particulate emissions resulting from industrial-scale combustion. Earlier in his career, Mr. Goodson was a senior manager at Boeing Aerospace where he was responsible for development efforts at subcontractors such as Bendix, Sperry and IBM, and was granted the US Government’s highest level of security clearance for his work in the defense arena. Mr. Goodson’s scientific interests began in high school when he collaborated with James Watson and Francis Crick, co-discoverers of the structure of DNA, to place at the top of the International Science Fair. He was also awarded the Patriotic Civilian Service Award by the United States Army for work of value to the Army. Mr. Goodson’s numerous US patents include US 4,110,086, US 4,675,029, US 9/760,214 and US 5,702,244. In light of Mr. Goodson’s extensive science background and his experience in developing and successfully commercializing new technologies, we believe that his membership on our board of directors is of high value to the Company.

Stephen E. Pirnat, Director

Mr. Pirnat became a director of our Company in November 2011. Since September 2009, Mr. Pirnat has held the position of President of Quest Integrated Inc., a technology incubator and boutique private equity firm, and the President & CEO of the newly formed Quest Metrology Group LLC. From February 2000 to September 2009, Mr. Pirnat served as President & CEO of the John Zink Company, LLC, a wholly owned subsidiary of Koch Industries and a worldwide leader in the supply of combustion and air pollution control equipment to the energy industry. In that former capacity, Mr. Pirnat was a Board member of Quest Integrity Group. Mr. Pirnat, a long-time executive with Ingersoll-Rand and Ingersoll-Dresser Corporation, went to John Zink from a previous post as President & CEO of Pangborn Corporation, a leading supplier of surface preparation equipment and associated services to the automotive and aircraft industries. Mr. Pirnat began his career as an applications engineer with the Pump and Condenser Group of Ingersoll-Rand, where he advanced through a variety of sales, marketing, engineering, and operational positions with that company and its successor, Ingersoll-Dresser. These positions included Vice President of Ingersoll-Rand's Standard Products Division, Vice President of Marketing for Ingersoll-Dresser Pumps, President of Ingersoll-Dresser Pumps Canada Ltd., and Vice President & General Manager of Ingersoll-Rand Engineered Equipment Division. Mr. Pirnat holds a BSc. in Mechanical Engineering from the New Jersey Institute of Technology. Mr. Pirnat's technological expertise and business experience in the combustion and air pollution control industry led us to conclude that he would be a valuable addition to our board of directors.

Scott P. Isaacson, Director

Mr. Isaacson became a director of our Company in November 2011. He has over 33 years of experience in advising and representing businesses in managing their programs related to environmental, legal and regulatory risk issues. Since 2000, he has held the position as Vice President with California Portland Cement Company where he oversees the environmental programs for this construction materials manufacturing company with operations located in the Western United States. Mr. Isaacson is an experienced legal expert on a broad scope of environmental compliance requirements for major federal environmental laws and programs as well as related state programs. He has been the principal advising attorney on environmental issues for complex, multi-program projects to include remediation of federal and state cleanup sites, development projects, industrial air emissions, and, more recently, federal and state actions to regulate greenhouse gases. In his prior position as a partner with the Seattle law firm of Bogle and Gates, he advised clients on federal, state and local environmental compliance, land use, government contractor liability and exposure to toxic or hazardous materials as well as issues related to individual and corporate civil and criminal liability under environmental laws. Clients included local governments and a number of large and mid-size businesses and companies involved in manufacturing, production, and service. Previous to that , he was the Chief of the Environmental Law Division at the Department of the Army and the senior attorney responsible for advising commands throughout the United States on environmental policy and compliance issues arising from Army activities, and handled or supervised complex and significant environmental actions that were under the scrutiny of federal, state, and local regulators as well as interested private environmental organizations. Mr. Isaacson holds a BSc. from the U.S. Military Academy at West Point and a Juris Doctor from the University of Washington. He is a member of the bar for United States Supreme Court, the Supreme Court of the State of Washington, and the District of Columbia Court of Appeals. Mr. Isaacson’s business experience and legal expertise in the field of environmental compliance led us to conclude that he would be a valuable addition to our board of directors.

Lon E. Bell, Ph.D., Director

Dr. Bell became a director of our Company in November 2011. He founded Amerigon Inc. in 1991 and has been a Consultant to Amerigon since December 2010. Dr. Bell has served many roles in Amerigon, Inc., including Chief Technology Officer until December 2010, Director of Technology until 2000, Chairman and Chief Executive Officer until 1999, and President until 1997. Dr. Bell served as the Chief Executive Officer and President of BSST LLC, a subsidiary of Amerigon from September 2000 to December 2010. He has served as a Director of Amerigon since 1991. Previously, Dr. Bell co-founded Technar Incorporated, which developed and manufactured automotive components, and served as Technar’s Chairman and President until selling majority ownership to TRW Inc. in 1986. Dr. Bell continued managing Technar, then known as TRW Technar, as its President until 1991. He co-founded Mahindra REVA Electric Vehicle Co Ltd. in 1994 and serves as its Vice Chairman. He has been a Member of Scientific Advisory Board of Nextreme Thermal Solutions, Inc. since 2006. Dr. Bell is a leading expert in the mass production of thermoelectric products. He has authored more than 20 publications in the areas of thermodynamics of thermoelectric systems, automotive crash sensors, and other electronic and electromechanical devices. Five of his inventions have gone into mass production and dominated their target markets. Dr. Bell received a BSc. in Mathematics, an MSc. in Rocket Propulsion, and a Ph.D. in Mechanical Engineering from the California Institute of Technology. Dr. Bell’s recognized technological expertise in the field of thermodynamics and his demonstrated ability to commercialize inventions led us to conclude that he would be a valuable addition to our board of directors.

Director Independence

Our board of directors has unanimously determined that Stephen E. Pirnat, Scott P. Isaacson and Lon E. Bell, Ph.D., comprising a majority of our board of directors, are "independent directors" as such term is defined by Nasdaq Marketplace Rule 5605(a)(2). We have established an Audit Committee, a Compensation Committee and a Nominating and Corporate Governance Committee. Messrs. Pirnat and Isaacson and Dr. Bell serve on all three committees.

Involvement in Certain Legal Proceedings

To the best of our knowledge, none of our directors or executive officers has, during the past ten years, been involved in any legal proceedings described in subparagraph (f) of Item 401 of Regulation S-K, except that on August 25, 2008 Mr. Osler filed for personal bankruptcy under Chapter 11 of the U.S. Bankruptcy Code, and his reorganization plan was confirmed on February 5, 2010 with an effective date of March 15, 2010. Mr. Osler's case was reopened in February 2011 in order to modify the reorganization plan, and the modified plan was confirmed on April 27, 2011. We do not believe the foregoing impacts Mr. Osler's service to the Company.

EXECUTIVE COMPENSATION

The table below summarizes the total compensation paid to or earned by our Chief Executive Officer, who is our principal executive officer, our Chief Marketing Officer, who during 2010 and through June 2011 was also our principal financial officer, our Chief Financial Officer, who was hired in June 2011 and is our current principal financial officer, and our Chief Technology Officer. These individuals are sometimes referred to in this prospectus as the "Named Executive Officers".

Summary Compensation Table

Name and Principal Position	Year	Salary	Bonus	Stock Awards(1)	Option Awards(2)	All Other Compensation(3)	Total
Richard F. Rutkowski	2011	$330,000	$13,750	—	$ 91,801	$ 14,100	$449,651
President, Chief Executive Officer	2010	$179,042 (4)	—	—	—	—	$179,042
Geoffrey D. Osler (5)	2011	$240,000	$10,000	—	$ 5,246	$ 11,434	$266,680
Chief Marketing Officer	2010	$97,842 (6)	—	—	—	—	$97,842
James N. Harmon	2011	$85,417	$8,333	$275,000	—	$ 3,000	$371,750
Chief Financial Officer	2010	—	—	—	—	—	—
Joseph Colannino	2011	$122,500	$7,500	—	$ 6,556	$ 7,620	$144,176
Chief Technology Officer	2010	—	—	—	—	—	—

(1) The amounts included in this column are the aggregate grant date fair value of stock awards computed by us for in accordance with Accounting Standards Codification 718, *Compensation-Stock Compensation*, and includes amounts from stock awards granted in 2011. For information on the valuation assumptions used in calculating these dollar amounts, see Notes 1 and 7 to our audited financial statements included elsewhere in this prospectus. These amounts reflect the aggregate grant date fair value for these awards and do not correspond to the actual value that may be recognized by the individuals upon option exercise.

(2) The amounts included in this column are the aggregate dollar amounts of compensation expense recognized by us for financial statement reporting purposes in accordance with Accounting Standards Codification 718, *Compensation-Stock Compensation*, and includes amounts from option awards granted in 2011. For information on the valuation assumptions used in calculating these dollar amounts, see Notes 1 and 7 to our audited financial statements included elsewhere in this prospectus. These amounts reflect our accounting expense for these awards and do not correspond to the actual value that may be recognized by the individuals upon option exercise.

(3) Relates to healthcare benefits available to all full time employees.

(4)

Of this amount, $54,851 was paid in cash, with the remainder accrued as unpaid compensation. Of the accrued amount, $52,381 was paid in April 2011 and the remainder was paid in September 2011 by issuing 36,250 shares of common stock.

(5) Mr. Osler served as a director on our board, without compensation, from February 2008 through February 2011. Of this amount, $43,441 was paid in cash, with the remainder accrued as unpaid compensation. Of the accrued

(6) amount, $38,095 was paid in April 2011 and the remainder was paid in September 2011 by issuing 16,125 shares of common stock.

Current and Future Compensation Practices

Currently, compensation for our employees consists of base salary, cash bonuses and awards of stock options or restricted stock through the ClearSign Combustion Corporation 2011 Equity Incentive Plan. We believe that a combination of cash, options for the purchase of common stock, or grants of restricted stock will allow us to attract and retain the services of individuals who will help us achieve our business objectives, thereby increasing value for our shareholders. We believe that share ownership by our employees is an effective method to deliver superior shareholder returns by increasing the alignment between the interests of our employees and our shareholders. No employee will be required to own common stock in our Company.

In setting the compensation for our officers, we look primarily at the person's responsibilities, at the person's experience and education and at our ability to replace the individual. We expect the base salaries of our executive officers to remain relatively constant unless the person's responsibilities are materially changed. We also expect that we may pay bonuses in the future to reward exceptional performance or the achievement by the Company or an individual of targets to be agreed upon. During 2009 and 2010, because we had limited cash resources, we periodically accrued salaries for our executive officers. As of September 30, 2011, our executive officers were paid in cash and common stock all accrued wages due to them at December 31, 2010. It is possible that we will again be unable to pay these salaries in a timely manner until we begin to generate cash from sales of our products or we arrange additional financing in the form of equity sales or debt instruments.

Employment Agreements

On December 27, 2011 we entered into an Employment Agreement with Richard Rutkowski, our Chief Executive Officer. The agreement is effective on January 1, 2012 and, unless earlier terminated, will continue for a term of 3 years and for successive 2 year periods as agreed to by Mr. Rutkowski and the Company. Mr. Rutkowski's annual salary will be $350,000 during the term of the agreement. A cost-of-living adjustment will be made to the annual salary each year of the term. The Compensation Committee may grant an annual bonus to Mr. Rutkowski based on performance standards and goals achieved by him. During the term of the agreement, we have agreed to provide, at our sole expense, (i) medical and dental benefits for Mr. Rutkowski, his spouse and children, (ii) disability insurance which, in the event of a disability, will replace 60% of the annual salary paid to Mr. Rutkowski at the time the disability occurred, and (iii) term life insurance in the amount of $1,750,000. No later than 30 days after each annual anniversary of the effective date of the agreement, we will grant to Mr. Rutkowski an option to purchase shares of our common stock in an amount to be recommended by the Compensation Committee. The agreement may be terminated for cause, or without cause due to Mr. Rutkowski's death, disability, his election, our election, or a change of control. If the agreement is terminated as a result of Mr. Rutkowski's death, disability or by his election, Mr. Rutkowski will receive accrued but unpaid annual salary and the value of accrued but unused vacation pay through the effective date of the termination, accrued but unpaid annual bonus, if any and business expenses incurred prior to the effective date of termination. If we terminate the agreement without cause, Mr. Rutkowski will receive accrued but unpaid annual salary and the value of accrued but unused vacation pay through the effective date of the termination, accrued but unpaid annual bonus, if any, business expenses incurred prior to the effective date of termination and the

greater of the salary that would be due to him if his employment had not been terminated or 12 months of annual salary, less legal deductions. Mr. Rutkowski would also be entitled to continue to participate in employee benefit plans for a period of 12 months following termination of his employment. If his employment is terminated as a result of a change of control, Mr. Rutkowski will receive accrued but unpaid annual salary and the value of accrued but unused vacation pay through the effective date of the termination, accrued but unpaid annual bonus, if any, business expenses incurred prior to the effective date of termination and an amount equal to his annual salary for the balance of the term, in a lump sum and without discount to present value, but in no event shall such payment total less than the annual salary.

Outstanding Equity Awards at December 31, 2011

The following table sets forth certain information concerning outstanding equity awards for our Named Executive Officers at December 31, 2011. No options were exercised by our Named Executive Officers during the last two fiscal years.

Name	Option Awards					Stock Awards	
	Number of securities underlying unexercised options	Equity Incentive Plan Awards: Number of securities underlying unexercised unearned options		Option exercise price	Option expiration date	Equity Incentive Plan Awards: Number of unearned shares or other rights that have not vested	Equity Incentive Plan Awards: Market or payout value of unearned shares or other rights that have not vested
Richard F. Rutkowski	125,000	—		$ 2.20	9/30/2021	—	—
Geoffrey D. Osler	—	62,500	(1)	$ 2.20	9/30/2021	—	—
James N. Harmon	—	—		—	—	50,000 (2)	$ 110,000
						75,000 (3)	$ 165,000
Joseph Colannino	—	78,125	(1)	$ 2.20	9/30/2021	—	—

(1) Unearned options vest 40% on July 1, 2012 and 5% on the first day of each calendar quarter thereafter until fully vested on June 30, 2015. In the event of a change in control of the Company, the unvested options become fully vested.

(2) The stock award is subject to a repurchase option by the Company at $0.0001 per share should Mr. Harmon terminate employment, or upon other related circumstances, prior to June 30, 2012. In the event of a change in control of the Company, the repurchase right terminates.

(3) The stock award is subject to a repurchase option by the Company at $0.0001 per share should Mr. Harmon terminate employment, or upon other related circumstances. The repurchase right expires ratably and on a quarterly basis over the period October 1, 2012 to June 30, 2015. In the event of a change in control of the Company, the repurchase right terminates.

Compensation Committee Interlocks and Insider Participation

Our Chief Executive Officer and Chief Science Officer, who are members of our board of directors, participated during the year ended December 31, 2010 in deliberations concerning the compensation of our Named Executive Officers. On December 21, 2011, our board of directors formed a Compensation Committee and appointed our 3 independent directors, Messrs. Pirnat and Isaacson and Dr. Bell, as its members.

Director Compensation

Members of our board of directors do not receive compensation for their service as directors at this time. However, commencing on the effective date of the registration statement of which this prospectus forms a part, each of the independent directors comprising Messrs. Pirnat and Isaacson and Dr. Bell will receive each calendar year $50,000 in cash and $50,000 of stock or stock option grants in accordance with the Company's 2011 Equity Incentive Plan. There was no compensation paid to our directors for their services as directors during the year ended December 31, 2011. All directors are reimbursed ordinary and reasonable expenses incurred in exercising their responsibilities.

Indemnification

See the section of this prospectus titled "Indemnification of Directors and Executive Officers".

DESCRIPTION OF CAPITAL STOCK

The following is a brief description of our capital stock. This summary does not purport to be complete in all respects. This description is subject to and qualified entirely by the terms of our Articles of Incorporation, as amended and our bylaws, copies of which have been filed with the SEC and are also available upon request from us.

Authorized Capitalization

We have 64,500,000 shares of capital stock authorized under our Articles of Incorporation, consisting of 62,500,000 shares of common stock and 2,000,000 shares of preferred stock. As of March 31, 2012, we had 5,157,716 shares of common stock outstanding and no shares of preferred stock outstanding. Our authorized but unissued shares of common stock and preferred stock are available for issuance without further action by our shareholders, unless such action is required by applicable law or the rules of any stock exchange or automated quotation system on which our securities may be listed or traded. If the approval of our shareholders is not so required, our board of directors may determine not to seek shareholder approval.

Common Stock

Holders of our common stock are entitled to such dividends as may be declared by our board of directors out of funds legally available for such purpose, subject to any preferential dividend rights of any then outstanding preferred stock. The shares of common stock are neither redeemable nor convertible. Holders of common stock have no preemptive or subscription rights to purchase any of our securities.

Each holder of our common stock is entitled to one vote for each such share outstanding in the holder’s name. No holder of common stock is entitled to cumulate votes in voting for directors.

In the event of our liquidation, dissolution or winding up, the holders of our common stock are entitled to receive pro rata our assets which are legally available for distribution, after payments of all debts and other liabilities and subject to the prior rights of any holders of preferred stock then outstanding. All of the outstanding shares of our common stock are fully paid and non-assessable. The shares of common stock offered by this prospectus will also be fully paid and non-assessable.

There is no public market for our common stock. We intend to apply for listing of our common stock on the Nasdaq Capital Market, and listing on this exchange is a condition to the consummation of this offering.

Preferred Stock

Our Articles of Incorporation permits us to issue up to 2,000,000 shares of preferred stock in one or more series and with rights and preferences that may be fixed or designated by our board of directors without any further action by our shareholders. We currently have no shares of preferred stock outstanding.

Subject to the limitations prescribed in our Articles of Incorporation and under Washington law, our Articles of Incorporation authorize the board of directors, from time to time by resolution and without further shareholder action, to provide for the issuance of shares of preferred stock, in one or more series, and to fix the designation, powers, preferences and other rights of the shares and to fix the qualifications, limitations and restrictions thereof. The issuance of preferred stock could adversely affect the rights of holders of our common stock, including with respect to voting, dividends and liquidation and, by issuing shares of preferred stock with certain voting, conversion and/or redemption rights. Such issuance of preferred stock may have the effect of delaying, deferring or preventing a change of control. Preferred stock could be issued quickly with terms calculated to delay or prevent a change in control of our Company or to make removal of management more difficult. Additionally, the issuance of preferred stock may decrease the market price of our common stock.

Stock Options and Warrants

As of March 31, 2012, the following awards had been issued:

- 216,368 shares of our common stock are reserved for issuance under various outstanding warrant agreements, at a weighted average exercise price of $2.05 per share;

- 359,375 shares of our common stock issuable upon exercise of stock options under our 2011 Equity Incentive Plan at a weighted average exercise price of $2.20 per share; and

- 125,000 shares of restricted stock granted under the 2011 Equity Incentive Plan that are subject to repurchase by the Company.

We also have 141,180 shares of our common stock reserved for future issuance under our 2011 Equity Incentive Plan.

Voting Agreement

On March 4, 2008, David Goodson, the BD and DBG Living Trust (formerly known as the B. D. and D. G. Goodson Trust), The Alternative Energy Resource Alliance (a former shareholder controlled by David Goodson), Geoffrey Osler, Richard Rutkowski, The Rutkowski Family Trust I (formerly known as Trinity West Trust I) and The Rutkowski Family Trust II (formerly known as Trinity West Trust II) (collectively, the "Rutkowski Family Trusts") entered into a Voting Agreement. Pursuant to the terms of the Voting Agreement, each party to it agrees to vote his or its voting stock for the designee selected by the following:

- the group made up of David Goodson, the BD and DBG Living Trust and Alternative Energy Resource Alliance is entitled to designate one member of the board of directors, so long as in the aggregate they hold 15% of the outstanding capital stock;

- Mr. Osler is entitled to designate one member of the board of directors so long as he holds 5% of the outstanding common stock; and

- Mr. Rutkowski and the Rutkowski Family Trusts is entitled to designate one member of the board of directors so long as in the aggregate they hold 7.5% of the outstanding common stock.

When ownership of the designating person or designating group drops below the required threshold, the right to designate a director terminates. No designated director can be removed unless the removal is directed or approved by the designating person or designating group. Any vacancy on the board of directors caused by the resignation, death,

removal or disqualification of a designated director may be filled by the person or group responsible for his designation. The parties also agreed not to vote to change the number of directors so long as the Voting Agreement is in effect and not to revoke the Voting Agreement. The Voting Agreement will terminate automatically upon the occurrence of certain events, including upon the consummation of the first underwritten public offering of our common stock (other than for a sale of securities to be issued to our employees or to be issued in a transaction which is subject to Rule 145 promulgated under the Securities Act).

Founders Agreement

On April 14, 2008 the Company entered into a Founders Agreement with David Goodson, BD and DBG Living Trust, The Alternative Energy Resource Alliance (a former shareholder controlled by David Goodson), Geoff Osler, Richard Rutkowski, The Rutkowski Family Trust I and The Rutkowski Family Trust II (individually a "Shareholder" and collectively the "Shareholders"). For purposes of this discussion, David Goodson, BD and DBG Living Trust and The Alternative Energy Resource Alliance form a shareholder group and Richard Rutkowski, The Rutkowski Family Trust I and The Rutkowski Family Trust II form a shareholder group. Pursuant to the Founders Agreement, before a Shareholder may voluntarily transfer his or its shares of common stock, or before a Shareholder's shares of common stock can be transferred involuntarily, the non-transferring Shareholders will have a right of first refusal to purchase all or any portion of the transferred shares and the Company will have a right of first refusal to purchase any shares not purchased by the non-transferring Shareholders. The transferring Shareholder must give written notice to the non-transferring Shareholders of the terms of the proposed transfer. The non-transferring Shareholders will have a period of 10 business days to elect to purchase all or any portion of their respective pro rata shares at the same price and subject to the same terms and conditions as described in the notice. If the non-transferring Shareholders fail to purchase all of the shares being transferred, the transferring Shareholder must provide notice to the Company of the number of shares available for purchase. The Company will have a period of 15 business days to exercise its right of first refusal and must complete the purchase within 30 days of receiving the notice. If the transfer is by pledge, gift, in-kind transfer or involuntary transfer, then the non-transferring Shareholders and the Company may purchase the shares at fair market value, which will be determined in good faith by the Company's board of directors. Like the Voting Agreement, the Founders Agreement will terminate upon the consummation of the first underwritten public offering of our common stock (other than for a sale of securities to be issued to our employees or to be issued in a transaction which is subject to Rule 145 promulgated under the Securities Act of 1933), by agreement of the parties (although if a Shareholder or Shareholder group does not own at least 10% of the outstanding common stock, the remaining parties are not required to obtain the consent of that Shareholder or Shareholder group to terminate the Founders Agreement), upon the consummation of a change of control, as that term is defined in the Founders Agreement or when the shares of common stock owned collectively by the Shareholders constitutes less than 20% of the Company's outstanding capital stock.

Anti-Takeover Effects of Certain Provisions of Washington Law and Our Charter Documents

The following is a summary of certain provisions of Washington law, our Articles of Incorporation and our bylaws. This summary does not purport to be complete and is qualified in its entirety by reference to the corporate law of Washington and our Articles of Incorporation and bylaws.

Effect of Washington Anti-Takeover Statute. Assuming that the registration statement of which this prospectus is a part is declared effective, we will be subject to Section 23B.19 of the Washington Revised Statutes, an anti-takeover law (the "Anti-Takeover Statute"). In general, the Anti-Takeover Statute prohibits a target corporation from entering into a significant business transaction with an acquiring person for a period of five years following the acquiring person's share acquisition unless

- the share acquisition is exempt because it was inadvertently made and the acquiring person divests himself of a sufficient amount of the voting shares so that he is no longer the beneficial owner, directly or indirectly, of 10% or more of the outstanding voting shares of the target corporation and would not have, during the five year period prior to the announcement date of the significant business transaction been an acquiring person but for the inadvertent acquisition,

- the significant business transaction or the purchase of shares made by the acquiring person is approved prior to the acquiring person's share acquisition time by a majority of the members of the board of directors of the target corporation; or

- at or subsequent to the acquiring person's share acquisition time, the significant business transaction is approved by a majority of the members of the board of directors of the target corporation and approved at an annual or special meeting of shareholders, and not by written consent, by the affirmative vote of at least two-thirds of the outstanding voting shares, except shares beneficially owned by or under the voting control of the acquiring person.

The Anti-Takeover Statute generally defines an "acquiring person" as a person or group of persons, other than the target corporation or a subsidiary of the target corporation, who beneficially owns 10% or more of the outstanding voting shares of the target corporation. The term "acquiring person" does not include a person who (a) beneficially owned 10% or more of the outstanding voting shares of the target corporation on March 23, 1988; (b) acquires its shares by gift, inheritance, or in a transaction in which no consideration is exchanged; (c) exceeds the 10% threshold as a result of action taken solely by the target corporation, such as redemption of shares, unless that person, by his own action, acquires additional shares of the target corporation; (d) beneficially was the owner of 10% or more of the outstanding voting shares prior to the time the target corporation had a class of voting shares registered with the SEC pursuant to section 12 or 15 of the Securities Exchange Act; or (e) beneficially was the owner of 10% or more of the outstanding voting shares prior to the time the target corporation amended its articles of incorporation to provide that the corporation shall be subject to the provisions of this chapter.

The Anti-Takeover Statute defines a “significant business transaction” as:

(a) A merger, share exchange, or consolidation of a target corporation or a subsidiary of a target corporation with (i) an acquiring person, or (ii) any other domestic or foreign corporation which is, or after the merger, share exchange, or consolidation would be, an affiliate or associate of the acquiring person;

(b) A sale, lease, exchange, mortgage, pledge, transfer, or other disposition or encumbrance, whether in one transaction or a series of transactions, to or with an acquiring person or an affiliate or associate of an acquiring person of assets of a target corporation or a subsidiary of a target corporation (i) having an aggregate market value equal to 5% or more of the aggregate market value of all the assets, determined on a consolidated basis, of the target corporation, (ii) having an aggregate market value equal to 5% or more of the aggregate market value of all the outstanding shares of the target corporation, or (iii) representing 5% or more of the earning power or net income, determined on a consolidated basis, of the target corporation;

(c) The termination, while the corporation has an acquiring person and as a result of the acquiring person's acquisition of 10% or more of the shares of the corporation, of 5% or more of the employees of the target corporation or its subsidiaries employed in this state, whether at one time or over the five-year period following the share acquisition time;

(d) The issuance, transfer, or redemption by a target corporation or a subsidiary of a target corporation, whether in one transaction or a series of transactions, of shares or of options, warrants, or rights to acquire shares of a target corporation or a subsidiary of a target corporation to or beneficially owned by an acquiring person or an affiliate or associate of an acquiring person except pursuant to the exercise of warrants or rights to purchase shares offered, or a dividend, distribution, or redemption paid or made pro rata to, all shareholders or holders of options, warrants, or rights to acquire shares of the target corporation, and except for involuntary redemptions permitted by the target corporation's charter or by the law of this state or the state of incorporation;

(e) The liquidation or dissolution of a target corporation proposed by, or pursuant to an agreement, arrangement, or understanding, whether or not in writing, with an acquiring person or an affiliate or associate of an acquiring person;

(f) A reclassification of securities, including, without limitation, any shares split, shares dividend, or other distribution of shares in respect of stock, or any reverse shares split, or recapitalization of a target corporation, or a merger or consolidation of a target corporation with a subsidiary of the target corporation, or any other transaction, whether or not with or into or otherwise involving an acquiring person, proposed by, or pursuant to an agreement, arrangement, or understanding, whether or not in writing, with an acquiring person or an affiliate or associate of an acquiring person, that has the effect, directly or indirectly, of increasing the proportionate share of the outstanding shares of a class or series of voting shares or securities convertible into voting shares of a target corporation or a subsidiary of the target corporation that is directly or indirectly owned by an acquiring person or an affiliate or associate of an acquiring person, except as a result of immaterial changes due to fractional share adjustments; or

(g) A receipt by an acquiring person or an affiliate or associate of an acquiring person of the benefit, directly or indirectly, except proportionately as a shareholder of a target corporation, of loans, advances, guarantees, pledges,

or other financial assistance or tax credits or other tax advantages provided by or through a target corporation.

Finally, the Anti-Takeover Statute defines a “target corporation” as:

(a) Every domestic corporation, if:

(i) The corporation has a class of voting shares registered with the SEC pursuant to Section 12 or 15 of the Securities Exchange Act; or

(ii) The corporation's articles of incorporation have been amended to provide that such a corporation shall be subject to the provisions of this chapter, if the corporation did not have a class of voting shares registered with the SEC pursuant to section 12 or 15 of the Securities Exchange Act on the effective date of that amendment; and

(b) Every foreign corporation required to have a certificate of authority to transact business in the State of Washington if:

(i) The corporation has a class of voting shares registered with the SEC pursuant to section 12 or 15 of the Securities Exchange Act;

(ii) The corporation's principal executive office is located in the state;

(iii) The corporation has: (A) more than 10% of its shareholders of record resident in the state; or (B) more than 10% of its shares owned of record by state residents; or (C) 1,000 or more shareholders of record resident in the state;

(iv) A majority of the corporation's employees, together with those of its subsidiaries, are residents of the state or the corporation, together with its subsidiaries, employs more than one thousand residents of the state; and

(v) A majority of the corporation's tangible assets, together with those of its subsidiaries, measured by market value, are located in the state or the corporation, together with its subsidiaries, has more than fifty million dollars' worth of tangible assets located in the state.

Our Charter Documents. Our charter documents include provisions that may have the effect of discouraging, delaying or preventing a change in control or an unsolicited acquisition proposal that a shareholder might consider favorable, including a proposal that might result in the payment of a premium over the market price for the shares held by our shareholders. Certain of these provisions are summarized in the following paragraphs.

Effects of authorized but unissued common stock and blank check preferred stock. One of the effects of the existence of authorized but unissued common stock and undesignated preferred stock may be to enable our board of directors to make more difficult or to discourage an attempt to obtain control of our Company by means of a merger, tender offer, proxy contest or otherwise, and thereby to protect the continuity of management. If, in the due exercise of its fiduciary obligations, the board of directors were to determine that a takeover proposal was not in our best interest, such shares could be issued by the board of directors without shareholder approval in one or more transactions that might prevent

or render more difficult or costly the completion of the takeover transaction by diluting the voting or other rights of the proposed acquirer or insurgent shareholder group, by putting a substantial voting block in institutional or other hands that might undertake to support the position of the incumbent board of directors, by effecting an acquisition that might complicate or preclude the takeover, or otherwise.

In addition, our Articles of Incorporation grant our board of directors broad power to establish the rights and preferences of authorized and unissued shares of preferred stock. The issuance of shares of preferred stock could decrease the amount of earnings and assets available for distribution to holders of shares of common stock. The issuance also may adversely affect the rights and powers, including voting rights, of those holders and may have the effect of delaying, deterring or preventing a change in control of our Company.

Cumulative Voting. Our Articles of Incorporation do not provide for cumulative voting in the election of directors which would allow holders of less than a majority of the stock to elect some directors.

Vacancies. Our bylaws provide that all vacancies may be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum.

Special Meeting of Shareholders. A special meeting of shareholders may only be called by our chairman of the board, the president or the board of directors or by holders of at least 25% of all the votes entitled to be cast proposed to be considered at the special meeting.

DIVIDEND POLICY AND OTHER SHAREHOLDER MATTERS

We have never paid cash dividends on our securities and we do not anticipate paying any cash dividends on our shares of common stock in the foreseeable future. We intend to retain any future earnings for reinvestment in our business. Any future determination to pay cash dividends will be at the discretion of our board of directors, and will be dependent upon our financial condition, results of operations, capital requirements and such other factors as our board of directors deems relevant.

We intend to apply for the listing of our common stock on the Nasdaq Capital Market but we cannot assure you that our application will be approved. If our application is not approved, we may not complete the offering.

As of March 31, 2012, we had 5,157,716 shares of common stock outstanding, held of record by approximately 85 shareholders.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

We have set forth in the following table certain information regarding our common stock beneficially owned by (i) each shareholder we know to be the beneficial owner of 5% or more of our outstanding common stock, (ii) each of our directors and named executive officers, and (iii) all executive officers and directors as a group. Generally, a person is deemed to be a “beneficial owner” of a security if that person has or shares the power to dispose or to direct the disposition of such security. A person is also deemed to be a beneficial owner of any securities of which the person has the right to acquire beneficial ownership within 60 days pursuant to options, warrants, conversion privileges or similar rights. Unless otherwise indicated, ownership information is as of March 31, 2012 and is based on 5,157,716 shares of common stock outstanding on that date.

Name and Address of Beneficial Owner (1)	Amount of Beneficial Ownership (2)	Percent of Class
Directors and Officers:		
Richard F. Rutkowski	281,250	5.3 %

Geoffrey D. Osler	491,125		9.5	%
James N. Harmon	125,000	(3)	2.4	%
All Directors and Executive Officers as a Group (3 persons)	897,375		17.0	%
5% Shareholders:				
BD and DBG Living Trust	1,040,000	(4)	20.2	%
Rutkowski Family Trust I and II	480,000	(5)	9.3	%
Integrated Surgical Systems, Inc.	454,545	(6)	8.8	%
MDB Capital Group LLC	363,525	(7)	6.9	%
Christopher A. Marlett	910,052	(8)	17.3	%

(1) The address of each officer and director is 12870 Interurban Avenue South, Seattle, Washington 98168.

Beneficial ownership is determined in accordance with Rule 13d-3 under the Securities Exchange Act of 1934, as amended, and is generally determined by voting powers and/or investment powers with respect to securities.

(2) Unless otherwise noted, the shares of common stock listed above are owned as of September 30, 2011 and are owned of record by each individual named as beneficial owner and such individual has sole voting and dispositive power with respect to the shares of common stock owned by each of them.

These shares were awarded under the 2011 Equity Incentive Plan and are, in whole or in part, subject to repurchase

(3) by the Company at $0.0001 per share should Mr. Harmon terminate employment, or upon other related circumstances, prior to June 30, 2015.

BD and DBG Living Trust is an irrevocable trust established for the benefit of the child of David B. Goodson, a director. Howard Sprouse is the trustee of the BD and DBG Living Trust, and in such capacity he has voting and

(4) investment control over the shares owned by the trust. Mr. Sprouse disclaims beneficial ownership of the shares owned by the trust.

(5) Includes 240,000 shares of common stock held by the Rutkowski Family Trust I, and 240,000 shares of common stock held by the Rutkowski Family Trust II. Rutkowski Family Trust I and Rutkowski Family Trust II are irrevocable trusts established for the benefit of the children of Richard F. Rutkowski. Ronald P. Erickson is the trustee of the foregoing trusts, and in such capacity he has voting and investment control over the 240,000 shares owned by each of these trusts. Mr. Erickson disclaims beneficial ownership of the shares owned by these trusts. The address for Integrated Surgical Systems, Inc. is 401 Wilshire Boulevard, Suite 1020, Santa Monica, California 90401.

(6) Christopher A. Marlett is a CEO/director and Robert M. Levande is a Secretary/director of Integrated Surgical Systems, Inc. Mr. Marlett and Mr. Levande are also CEO and Senior Managing Director, respectively, of MDB Capital Group LLC. The board of directors of Integrated Surgical Systems, Inc., at large, holds voting and investment control over the securities held by the corporation.
The address for MDB Capital Group LLC is 401 Wilshire Boulevard, Suite 1020, Santa Monica, California 90401.

(7) This amount includes 289,207 shares of common stock and a warrant for the purchase of 74,318 shares of common stock. Christopher A. Marlett has sole voting and dispositive power with respect to these shares of common stock. The address for Christopher A. Marlett is 401 Wilshire Boulevard, Suite 1020, Santa Monica, California 90401.

(8) This amount includes 74,573 shares of common stock and a warrant for the purchase of 17,409 shares of common stock owned by Mr. Marlett. This amount also includes 454,545 shares of common stock owned by Integrated Surgical Systems, Inc. and 289,207 shares of common stock and a warrant for the purchase of 74,318 shares of common stock owned by MDB Capital Group LLC, for both of which he is deemed the beneficial owner. Mr. Marlett is the CEO and a director of Integrated Surgical Systems, Inc. The board of directors of Integrated Surgical Systems, Inc., at large, holds voting and investment control over the securities held by the corporation. Mr. Marlett is also CEO of MDB Capital Group LLC and has sole voting and dispositive power with respect to its shares of common stock.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

We intend to apply for the listing of our common stock on the Nasdaq Capital Market. Therefore, our determination of the independence of directors is made using the definition of “independent” contained in the listing standards of the Nasdaq Stock Market. On the basis of information solicited from each director, the board has unanimously determined that each of Mr. Pirnat, Mr. Isaacson and Dr. Bell has no material relationship with the Company and is independent within the meaning of such rules.

SEC regulations define the related person transactions that require disclosure to include any transaction, arrangement or relationship in which the amount involved exceeds the lesser of $120,000 or one percent of the average of the Company’s total assets at year end for the last two completed fiscal years in which we were or are to be a participant and in which a related person had or will have a direct or indirect material interest. A related person is: (i) an executive officer, director or director nominee of the Company, (ii) a beneficial owner of more than 5% of our common stock, (iii) an immediate family member of an executive officer, director or director nominee or beneficial owner of more than 5% of our common stock, or (iv) any entity that is owned or controlled by any of the foregoing persons or in which any of the foregoing persons has a substantial ownership interest or control.

For the period from January 1, 2009 through the date of this prospectus (the “Reporting Period”), described below are certain transactions or series of transactions between us and certain related persons, other than compensation arrangements that are otherwise required to be described under “Executive Compensation.”

Thomas S. Hartwick, David B. Goodson, Richard F. Rutkowski, Geoffrey D. Osler and Christopher A. Wiklof, as joint inventors, executed an assignment dated September 21, 2010 which assigned to the Company the application for United States letters patent titled “System and Apparatus for Applying an Electric Field to a Combustion Volume” and the invention covered that application.

On February 14, 2011 we entered into a Consulting Agreement with MDB Capital Group LLC. In exchange for services that were provided, we issued a total of 454,547 shares of our common stock to MDB Capital Group LLC. On the date of issuance, the common stock was deemed to have a value of $1,000,000.

UNDERWRITING

We are offering the shares of common stock described in this prospectus through the underwriter, MDB Capital Group LLC, which is acting as lead managing underwriter of the offering.

We have agreed to enter into an underwriting agreement with the underwriter prior to the closing of this offering. Subject to the terms and conditions of the underwriting agreement, we will agree to sell to the underwriter, and the underwriter will agree to purchase, at the public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus, as it may be supplemented, shares of common stock.

The underwriter is committed to purchase all the common shares offered by us, other than those covered by the option to purchase additional shares described below, if they purchase any shares. The underwriting agreement provides that the underwriter's obligations to purchase shares of our common stock are subject to conditions contained in the underwriting agreement. A copy of the underwriting agreement has been filed as an exhibit to the registration statement of which this prospectus forms a part.

We have been advised by the underwriter that the underwriter proposes to offer shares of our common stock directly to the public at the public offering prices set forth on the cover page of this prospectus and to certain dealers that are members of the Financial Industry Regulatory Authority (FINRA). Any securities sold by the underwriter to such securities dealers will be sold at the public offering prices less a selling concession not in excess of $_____ per share. Any such dealers may resell shares to certain other brokers or dealers at a discount of up to $_____ per share from the public offering price. After the public offering of the shares, the offering price and other selling terms may be changed by the underwriter.

None of our securities included in this offering may be offered or sold, directly or indirectly, nor may this prospectus and any other offering material or advertisements in connection with the offer and sales of any of our common stock be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons who receive this prospectus are advised to inform themselves about and to observe any restrictions relating to this offering of our common stock and the distribution of this prospectus. This prospectus is neither an offer to sell nor a solicitation of any offer to buy any of our common stock included in this offering in any jurisdiction where that would not be permitted or legal.

The underwriter has advised us that it does not intend to confirm sales to any accounts over which they exercise discretionary authority.

Conflict of Interest

MDB Capital Group LLC and persons who are associated or employed by MDB and an entity that is controlled by a principle and a person affiliated with MDB Capital Group LLC together own an aggregate of 1,042,001 shares of common stock of the Company, representing an aggregate of 19.7% of the actual (non-beneficial basis) issued and outstanding common stock of the Company immediately prior to the offering. Therefore, MDB Capital Group LLC is deemed to be an affiliate of the Company under the rules of the Financial Industry Regulatory Authority, or FINRA, and is deemed to have a "conflict of interest" under Rule 5121(f)(5) of the Conduct Rules of FINRA. Accordingly, this offering will be made in compliance with Rule 5121(a)(2) of the Conduct Rules of FINRA, which requires that a "qualified independent underwriter," as defined by FINRA participate in the preparation of the registration statement and exercise the usual standard of due diligence with respect to the registration statement that an underwriter would exercise on its own behalf. The Company has engaged Chardan Capital Markets, LLC to be the qualified independent underwriter and to participate in the preparation of the registration statement. The Company has agreed to pay a fee of $110,000 in consideration of its services and expenses as the qualified independent underwriter, of which $25,000 has been paid as an advance and the balance will be paid from the proceeds of the offering, only if this offering is completed.

The table below sets forth the actual, direct ownership of our common stock by MDB Capital Group LLC and its affiliates and employees and controlled entity. The table is prepared on the basis of the current, actual ownership of the common stock and not the beneficial ownership of the common stock, although the other holdings of the person or entity are footnoted.

Name	Securities Actually Owned Prior to Offering
George Hugh Brandon (1)	18,040
Gary Alan Schuman (2)	4,500
Robert M. Levande (3)	74,573
Amy En-mei Wang (4)	74,573
Robert Campbell Clifford (5)	25,995
Kevin M. Cotter (6)	13,495
Daniel Nagy (7)	12,500
Christopher A. Marlett (8)	74,573
MDB Capital Group LLC (9)	289,207
Integrated Surgical Systems, Inc. (10)	454,545
Total:	1,042,001

(1) Includes 13,495 shares of common stock and 4,545 shares of common stock issued in connection with the 2011 Private Placement, and excludes 2,882 shares of common stock underlying a warrant issued in the 2011 Private Placement.

(2) Includes 4,500 shares of common stock and excludes 312 shares of common stock underlying a warrant issued in connection with the 2011 Private Placement. Mr. Schuman is the Chief Financial Officer of both MDB Capital Group LLC and Integrated Surgical Systems, Inc. The common stock owned by MDB Capital Group LLC and Integrated Surgical Systems, Inc. is excluded from Mr. Schuman’s ownership in the table above.

(3) Includes 74,573 shares of common stock and excludes 17,409 shares of common stock underlying a warrant issued in connection with the 2011 Private Placement. Mr. Levande is a Senior Managing Director at MDB Capital Group LLC and the Secretary and a director of Integrated Surgical Systems, Inc. that owns 454,545 shares of common stock of the Company, which are excluded from the ownership of Mr. Levande in the table above.

(4) Includes 74,573 shares of common stock and excludes 17,409 shares of common stock underlying a warrant issued in connection with the 2011 Private Placement.

(5) Includes 13,495 shares of common stock owned by Mr. Clifford and 12,500 shares of common stock owned by Mr. Clifford’s individual retirement account and excludes 2,882 shares of common stock underlying a warrant issued in connection with the 2011 Private Placement.

(6) Includes 13,495 shares of common stock and excludes 2,882 shares of common stock underlying a warrant issued in connection with the 2011 Private Placement.

(7) Includes 12,500 shares of common stock owned by the Daniel E. Nagy IRA and excludes 865 shares of common stock underlying a warrant issued in connection with the 2011 Private Placement.

(8) Includes 74,573 shares of common stock and excludes 17,409 shares of common stock underlying a warrant issued in connection with the 2011 Private Placement. Mr. Marlett is the CEO of MDB Capital Group LLC and the CEO and a director of Integrated Surgical Systems, Inc. that owns 454,545 shares of common stock of the Company, which are excluded from the ownership of Mr. Marlett in table above.

(9) Includes 289,207 shares of common stock and excludes 74,318 shares of common stock underlying a warrant issued in connection with the 2011 Private Placement.

(10) Messrs. Marlett, Levande, and Schuman, who are associated with MDB Capital Group LLC, respectively, are the CEO and a director, the Secretary and a director, and the Chief Financial Officer of Integrated Surgical Systems, Inc.

Underwriting Discount and Expenses

The following table summarizes the underwriting discount and commission to be paid to the underwriter by us.

	Without Over-Allotment	With Over-Allotment
Public offering price	$	$
Underwriting discount to be paid to the underwriter		
Non-accountable expense allowance		
Proceeds, before expenses		

We estimate the total expenses payable by us for this offering to be $_____, which amount includes (i) the underwriting discount of $_____ ($_____ if the underwriter's over-allotment option is exercised in full), (ii) reimbursement of the non-accountable expenses of the underwriter equal to $160,000 (of which $30,000 has been paid in advance), including the legal fees of the underwriter being paid by us, and (iii) $110,000 (of which $25,000 has been paid in advance) to be paid to Chardan Capital Markets, LLC, the "qualified independent underwriter" for this offering. In no event will the aggregated expenses reimbursed to MDB Capital Group LLC and Chardan Capital Markets, LLC exceed $270,000.

Over-allotment Option

We have granted to the underwriter an option, exercisable not later than 45 days after the date of this prospectus, to purchase up to an additional 450,000 shares of our common stock (up to 15% of the shares firmly committed in this offering) at the public offering price, less the underwriting discount, set forth on the cover page of this prospectus. The underwriter may exercise the option solely to cover over-allotments, if any, made in connection with this offering. If any additional shares of our common stock are purchased pursuant to the over-allotment option, the underwriter will offer these additional shares of our common stock on the same terms as those on which the other shares of common stock are being offered hereby.

Determination of Offering Price

There is no current market for our common stock. Our underwriter, MDB Capital Group LLC, is not obligated to make a market in our securities, and even if it chooses to make a market, can discontinue at any time without notice. Neither we nor the underwriter can provide any assurance that an active and liquid trading market in our securities will develop or, if developed, that the market will continue.

The public offering price of the shares offered by this prospectus has been determined by negotiation between us and the underwriter. Among the factors considered in determining the public offering price of the shares were:

- our history and our prospects;
- the industry in which we operate;
- our past and present operating results;
- the previous experience of our executive officers; and
- the general condition of the securities markets at the time of this offering.

The offering price stated on the cover page of this prospectus should not be considered an indication of the actual value of the shares. That price is subject to change as a result of market conditions and other factors, and we cannot assure you that the shares can be resold at or above the public offering price.

Underwriter Warrant

We have agreed to issue to MDB Capital Group LLC and its designees a warrant to purchase shares of our common stock (up to 10% of the shares of common stock sold in this offering). This warrant is exercisable at $5.00 per share (125% of the price of the common stock sold in this offering), commencing on the effective date of this offering and expiring five years from the effective date of this offering. The warrant and the shares of common stock underlying the warrant have been deemed compensation by FINRA and are therefore subject to a one year lock-up pursuant to Rule 5110(g)(1) of FINRA. MDB Capital Group LLC (or permitted assignees under the Rule) will not sell, transfer, assign, pledge, or hypothecate this warrant or the securities underlying this warrant, nor will it engage in any hedging, short sale, derivative, put, or call transaction that would result in the effective economic disposition of this warrant or the underlying securities for a period of one year from the effective date of the offering.

This warrant will be valued for financial statement purposes based on the underlying shares of common stock obtainable and valuation factors appropriate at the time it is issued. We currently estimate that value to be approximately $_____, based on the number of shares of common stock subject to this warrant, an offering price of the shares of $_____, the exercise price of the warrant, the five year term of the warrant, a risk-free interest rate of ____% currently commensurate with that term, an expected dividend yield of ___% and estimated volatility of _____%, based on a review of our historical volatility. The initial value of this warrant will be charged to additional paid-in capital as part of this offering costs incurred.

Lock-Up Agreements

With the exception of one stockholder who holds 3,555 shares of our common stock, we have lock-up agreements with our shareholders. All of our officers, directors and shareholders beneficially owning 5% or more of our common stock, with the exception of Integrated Surgical Systems, Inc. (“ISS”), have agreed that for a period of one year from the date of the closing of the offering under this prospectus, they will not sell, contract to sell, grant any option for the sale or otherwise dispose of any of our equity securities, or any securities convertible into or exercisable or exchangeable for our equity securities, without the consent of MDB Capital Group LLC, except for exercise or conversion of currently outstanding warrants, options and convertible debentures, as applicable; and exercise of options under an acceptable stock incentive plan. This lock-up covers 2,960,020 shares of our common stock. Additionally, ISS owns 454,545 shares which are subject to a 180 day lock-up period for sales into the public market. Following the effective date of this registration statement, ISS may distribute its shares to its shareholders. In that case, the shares that would be distributed to Christopher Marlett, Robert Levande and Steven Walker, which we estimate will total 182,000 shares based upon their ownership of ISS shares as of March 31, 2012, would be subject to a lock-up period of one year from

the date of the closing of the offering under this prospectus. ISS's other shareholders would be able to trade their shares immediately upon the expiration of the 180 day lock-up period. Our remaining shareholders will also be subject to a lock-up period of 180 days from the date of the closing of the offering under this prospectus. This lock-up covers 1,738,651 shares of our common stock. With the exception of 1,017,001 shares owned by MDB Capital Group LLC and its associated persons and the 182,000 shares owned by ISS and anticipated to be distributed to Messrs. Marlett, Levande and Walker (collectively, the "MDB shares"), the underwriter may consent to an early release from the lock-up period if, in its opinion, the market for the common stock would not be adversely impacted by sales and in cases of a financial emergency of an officer, director or other shareholder. We are unaware of any officer, director or shareholder who intends to ask for consent to dispose of any of our equity securities during the relevant lock-up periods. With regard to the 1,017,001 MDB shares described above, the Company may consent to an early release from the lock-up period if, in its opinion, the market for the common stock would not be adversely impacted by sales and in cases of a financial emergency of a shareholder. We are unaware of any of the holders of the MDB shares who intend to ask for consent to dispose of any of our equity securities during the relevant lock-up period.

Indemnification

We will agree to indemnify the underwriter against certain liabilities, including certain liabilities arising under the Securities Act, and to contribute to payments that the underwriter may be required to make for these liabilities.

Short Positions and Penalty Bids

The underwriter may engage in over-allotment, syndicate covering transactions, and penalty bids or purchases for the purpose of pegging, fixing or maintaining the price of the common stock, in accordance with Regulation M under the Exchange Act.

- Over-allotment involves sales by the underwriter of shares in excess of the number of shares the underwriter is obligated to purchase, which creates a syndicate short position. The short position may be either a covered short position or a naked short position. In a covered short position, the number of shares over-allotted by an underwriter is not greater than the number of shares that it may purchase in the over-allotment option. In a naked short position, the number of shares involved is greater than the number of shares in the over-allotment option. The underwriter may close out any short position by either exercising its over-allotment option and/or purchasing shares in the open market.

- Syndicate covering transactions involve purchases of the common stock in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source of shares to close out the short position, the underwriter will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which it may purchase shares through the over-allotment option. If an underwriter sells more shares than could be covered by the over-allotment option, a naked short position, the position can only be closed out by buying shares in the open market. A naked short position is more likely to be created if an underwriter is concerned that there could be downward pressure on the price of the shares in the open market after pricing that could adversely affect investors who purchase in the offering.

- Penalty bids permit an underwriter to reclaim a selling concession from a syndicate member when the shares originally sold by the syndicate member are purchased in a stabilizing or syndicate covering transaction to cover syndicate short positions.

These syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of the common stock. As a result, the

price of the common stock may be higher than the price that might otherwise exist in the open market. These transactions may be effected on the NASDAQ Capital Market, and if commenced, they may be discontinued at any time.

Neither we nor the underwriter make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of the common stock. In addition, neither we nor the underwriter make any representation that the underwriter will engage in these transactions or that any transaction, once commenced, will not be discontinued without notice.

Electronic Distribution

A prospectus in electronic format may be made available on the Internet sites or through other online services maintained by the underwriter, or by its affiliates. In those cases, prospective investors may view offering terms online and, depending upon the underwriter, prospective investors may be allowed to place orders online. The underwriter may agree with us to allocate a specific number of shares for sale to online brokerage account holders. Any such allocation for online distributions will be made by the underwriter on the same basis as other allocations.

Other than the prospectus in electronic format, the information on the underwriter’s website and any information contained in any other website maintained by the underwriter is not part of the prospectus or the registration statement of which this prospectus forms a part, has not been approved and/or endorsed by us or the underwriter in its capacity as underwriter and should not be relied upon by investors.

The underwriter's compensation in connection with this offering is limited to the fees and expenses described above under "Underwriting discount and expenses."

United Kingdom

This document is only being distributed to and is only directed at (i) persons who are outside the United Kingdom or (ii) to investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the "Order"), or (iii) high net worth entities, and other persons to whom it may lawfully be communicated, falling within Article 49(2)(a) to (e) of the Order (all such persons together being referred to as "relevant persons"). The shares of common stock are only available to, and any invitation, offer or agreement to subscribe, purchase or otherwise acquire such common stock will be engaged in only with, relevant persons. Any person who is not a relevant person should not act or rely on this document or any of its contents.

The underwriter has represented and agreed that:

(a) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000 or FSMA) received by it in connection with the issue or sale of the shares in circumstances in which Section 21(1) of the FSMA does not apply to us, and

(b) it has complied with, and will comply with all applicable provisions of FSMA with respect to anything done by it in relation to the shares in, from or otherwise involving the United Kingdom.

European Economic Area

To the extent that the offer of the common stock is made in any Member State of the European Economic Area that has implemented the Prospectus Directive before the date of publication of a prospectus in relation to the common stock which has been approved by the competent authority in the Member State in accordance with the Prospectus Directive (or, where appropriate, published in accordance with the Prospectus Directive and notified to the competent authority in the Member State in accordance with the Prospectus Directive), the offer (including any offer pursuant to this document) is only addressed to qualified investors in that Member State within the meaning of the Prospectus Directive or has been or will be made otherwise in circumstances that do not require us to publish a prospectus pursuant to the Prospectus Directive.

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a "Relevant Member State"), the underwriter has represented and agreed that with effect from and including the date on which the Prospectus Directive is implemented in that Relevant Member State (the "Relevant Implementation Date") it has not made and will not make an offer of shares to the public in that Relevant Member State prior to the publication of a prospectus in relation to the shares which has been approved by the competent authority in that Relevant Member State or, where appropriate, approved in another Relevant Member State and notified to the competent authority in that Relevant Member State, all in accordance with the Prospectus Directive, except that it may, with effect from and including the Relevant Implementation Date, make an offer of shares to the public in that Relevant Member State at any time:

(a) to legal entities which are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities,

(b) to any legal entity which has two or more of (1) an average of at least 250 employees during the last financial year; (2) a total balance sheet of more than €43,000,000, and (3) an annual net turnover of more than €50,000,000, as shown in its last annual or consolidated accounts, or in any other circumstances which do not require the publication by us of a prospectus pursuant to Article 3 of the Prospectus Directive. For the purposes of this provision, the expression an "offer of shares to the public" in relation to any shares in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the shares to be offered so as to enable an investor to decide to purchase or subscribe the shares, as the same may be varied in that Relevant Member State by any measure implementing the Prospectus Directive in that Relevant Member State and the expression "Prospectus Directive" means Directive 2003/71/EC and includes any relevant implementing measure in each Relevant Member State.

The EEA selling restriction is in addition to any other selling restrictions set out below. In relation to each Relevant Member State, each purchaser of shares of common stock (other than the underwriters) will be deemed to have represented, acknowledged and agreed that it will not make an offer of shares of common stock to the public in any Relevant Member State, except that it may, with effect from and including the date on which the Prospectus Directive is implemented in the Relevant Member State, make an offer of shares of common stock to the public in that Relevant Member State at any time in any circumstances which do not require the publication by us of a prospectus pursuant to Article 3 of the Prospectus Directive, provided that such purchaser agrees that it has not and will not make an offer of any shares of common stock in reliance or purported reliance on Article 3(2)(b) of the Prospectus Directive. For the purposes of this provision, the expression an "offer of shares to the public" in relation to any shares of common stock in any Relevant Member State has the same meaning as in the preceding paragraph.

USE OF PROCEEDS

Based on an assumed offering price of $_____ per share, we estimate the gross proceeds from the sale of _____ shares of common stock, prior to deducting underwriting discounts and commissions and the estimated offering expenses payable by us, will be approximately $__.0 million (approximately $_____ million if the over-allotment option granted to the underwriter is exercised in full).

We estimate that we will receive net proceeds of $_____ million, after deducting underwriting discounts and commissions and our underwriter's expense allowance, the fees of the qualified independent underwriter, and the estimated expenses of approximately $_____ million, which includes legal, accounting, printing costs and various fees associated with the registration and listing of our shares. If the underwriter exercises its right to purchase an additional _____ shares of common stock to cover over-allotments, we will receive an additional $_____ million, after deducting $____ million for underwriting discounts and commissions.

We currently intend to use the net proceeds of this offering as follows: approximately $5 million for research and development including capital expenditures, $1 million for protection of intellectual property, $1.25 million for exploration of marketing opportunities, and the balance for working capital and general corporate purposes.

The amounts and timing of our actual expenditures will depend on numerous factors, including market conditions, results from our research and development efforts, business developments and opportunities and related rate of growth, sales and marketing activities and competition. Accordingly, our management will have broad discretion in the application of the net proceeds, and investors will be relying on the judgment of our management regarding the application of the proceeds from this offering. We may find it necessary or advisable to use portions of the proceeds from this offering for other purposes. Circumstances that may give rise to a change in the use of proceeds and the alternate purposes for which the proceeds may be used include:

- the existence of unforeseen or other opportunities or the need to take advantage of changes in timing of our existing activities;

- the need or desire on our part to accelerate, increase, reduce or eliminate one or more existing initiatives due to, among other things, changing market conditions and competitive developments or interim results of research and development efforts;

- results from our business development and marketing efforts, including co-development and pilot site installation opportunities that may materialize;

- the effect of federal, state, and local regulation, including those governing emissions, of potential customers in our identified industries;

- our ability to attract development funding or to license or sell our technology to industry sponsors or other interested organizations; and/or

- strategic opportunities of which we are not currently aware present themselves (including acquisitions, joint ventures, licensing and other similar transactions).

From time to time, we evaluate these and other factors and we anticipate continuing to make such evaluations to determine if the existing allocation of resources, including the proceeds of this offering, is being optimized.

CAPITALIZATION

The following table sets forth our actual cash and cash equivalents and capitalization, each as of December 31, 2011:

- on an actual basis; and

- on a pro forma as adjusted basis to give effect to the issuance of the common stock offered hereby and the use of proceeds, as described in the section entitled “Use of Proceeds.”

You should consider this table in conjunction with our financial statements and the notes to those financial statements included in this prospectus.

	As of December 31, 2011	
	Actual	**As Adjusted (1)**
Total debt	$ 47,667	$
Shareholders’ equity:		
Common stock, par value $0.0001 per share: 62,500,000 shares of common stock authorized; 5,153,216 issued as of December 31, 2011	516	
Additional paid in capital	5,364,139	
Accumulated deficit	(4,490,238)	
Total stockholders’ equity	$ 874,417	$
Total capitalization	$ 922,084	$

(1) Assumes that $___ million of our common stock is sold in this offering at $____ per share and that the net proceeds thereof are approximately $____ million after deducting underwriting discounts and commissions and our estimated expenses. If the underwriter's over-allotment option is exercised in full, net proceeds will increase to $_____ million.

DILUTION

Our net tangible book value as of December 31, 2011 was approximately $362,000, or $0.07 per share of our common stock. Our net tangible book value per share represents our total tangible assets less total liabilities divided by the number of shares of our common stock outstanding on December 31, 2011. Assuming that we issue all of the shares of our common stock offered by us at the public offering price of $_____ per share, and after deducting the commissions and estimated offering expenses payable by us, our net tangible book value as of December 31, 2011 would have been approximately $____ million, or $_____ per share of our common stock. This amount represents an immediate increase in net tangible book value of $_____ per share to our existing shareholders and an immediate dilution in net tangible book value of $_____ per share to new investors purchasing shares of our common stock in this offering.

We determine dilution by subtracting the adjusted net tangible book value per share after this offering from the public offering price per share of our common stock. The following table illustrates the dilution in net tangible book value per share to new investors:

Public offering price per share		$
Net tangible book value per share as of December 31, 2011	$0.07	
Increase per share attributable to new investors	$	
Adjusted net tangible book value per share after this offering		$
Dilution in net tangible book value per share to new investors		$

The following shares were not included in the above calculation:

- 216,368 shares of our common stock reserved for issuance under various outstanding warrant agreements at a weighted average exercise price of $2.05 per share;
- 359,375 shares of our common stock issuable upon exercise of stock options under our 2011 Equity Incentive Plan at a weighted exercise price of $2.20 per share;
- 141,180 shares of our common stock reserved for future issuance under our 2011 Equity Incentive Plan; and
- up to 345,000 shares of our common stock issuable upon exercise of the warrant issued to MDB Capital Group LLC.

Unless otherwise specifically stated, information throughout this prospectus assumes that none of our outstanding warrants to purchase shares of our common stock are exercised.

LEGAL MATTERS

Richardson & Patel LLP, with an office at 750 Third Avenue, 9th Floor, New York, New York 10017, will pass upon the validity of the shares of common stock offered by this prospectus. As of March 31, 2012, Richardson & Patel LLP and its principals or entities controlled by its principals own 200,502 shares of our common stock, a portion of which it accepted as payment for certain legal services rendered to us. In addition, management anticipates that we will issue an additional approximate 110,000 shares of common stock to Richardson & LLP or its partners in partial satifaction of accrued legal fees, subject to the approval of our board of directors. Although Richardson & Patel LLP is not under

any obligation to accept shares of our common stock in payment for services, it may do so in the future. Golenbock Eiseman Assor Bell & Peskoe LLP, with an office at 437 Madison Avenue, New York, New York, is legal counsel to MDB Capital Group LLC.

EXPERTS

The financial statements of ClearSign Combustion Corporation as of December 31, 2011 and 2010, and for the years ended December 31, 2011 and 2010, and for the period from inception (January 23, 2008) through December 31, 2011, included in this prospectus and elsewhere in the registration statement have been audited by Gumbiner Savett Inc., independent registered public accounting firm (which contain an explanatory paragraph related to our ability to continue as a going concern as described in Note 2 to our financial statements) as set forth in their report. We have included these financial statements in the prospectus and elsewhere in the registration statement in reliance upon the report of Gumbiner Savett Inc., given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act that registers the shares of our common stock to be sold in this offering. Our SEC filings are and will become available to the public over the Internet at the SEC's web site at www.sec.gov. You may also read and copy any document we file with the SEC at its public reference facilities at 100 F Street N.E., Washington, D.C. 20549. You can also obtain copies of the documents upon the payment of a duplicating fee to the SEC. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference facilities.

This prospectus does not contain all of the information set forth in the registration statement and the exhibits and schedules thereto. Some items are omitted in accordance with the rules and regulations of the SEC. You should review the information and exhibits included in the registration statement for further information about us and the securities we are offering. Statements in this prospectus concerning any document we filed as an exhibit to the registration statement or that we otherwise filed with the SEC are not intended to be comprehensive and are qualified by reference to these filings. You should review the complete document to evaluate these statements.

DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION

FOR SECURITIES ACT LIABILITIES

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling the Company, we have been informed that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is therefore unenforceable.

ClearSign Combustion Corporation

INDEX TO FINANCIAL STATEMENTS

	Page No.
ANNUAL FINANCIAL INFORMATION	
Report of Independent Registered Public Accounting Firm	F-1
Balance Sheets at December 31, 2011 and 2010	F-2
Statements of Operations for the years ended December 31, 2011 and 2010 and for the period from Inception (January 23, 2008) to December 31, 2011	F-3
Statement of Stockholders' Equity (Deficit) from Inception (January 23, 2008) to December 31, 2011	F-4
Statements of Cash Flows for the years ended December 31, 2011 and 2010 and from Inception (January 23, 2008) to December 31, 2011	F-5
Notes to Financial Statements	F-6

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders

of ClearSign Combustion Corporation

We have audited the balance sheets of ClearSign Combustion Corporation (a development stage company) (the "Company") as of December 31, 2011 and 2010, and the related statements of operations, stockholders' equity (deficit), and cash flows for the years ended December 31, 2011 and 2010, and for the period from inception (January 23, 2008) through December 31, 2011. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of ClearSign Combustion Corporation as of December 31, 2011 and 2010, and the results of its operations and its cash flows for the years ended December 31, 2011 and 2010, and for the period from inception (January 23, 2008) through December 31, 2011, in conformity with accounting principles generally accepted in the United States of America.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As more fully discussed in Note 2 to the financial statements, the Company may not have sufficient working capital or outside financing available to meet its planned operating activities over the next twelve months. These conditions raise substantial doubt about the Company's ability to continue as a going concern. Management's plans regarding these matters are described in Note 2. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ GUMBINER SAVETT INC.

January 23, 2012

Santa Monica, California

F-1

ClearSign Combustion Corporation

(a Development Stage Company)

Balance Sheets

	December 31, 2011	2010
ASSETS		
Current Assets:		
Cash	$929,962	$25
Prepaid expenses	436,962	43,355
Total current assets	1,366,924	43,380
Fixed assets, net	162,173	57,142
Patents and trademarks	86,546	—
Other assets	20,512	—
Total Assets	$1,636,155	$100,522
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)		
Current Liabilities:		
Accounts payable	$442,697	$147,022
Promissory note	47,667	—
Accrued compensation	253,899	270,306
Total current liabilities	744,263	417,328
Deferred rent	17,475	—
Total liabilities	761,738	417,328
Commitments		
Stockholders' Equity (Deficit):		
Preferred stock, $0.0001 par value, zero shares issued and outstanding at December 31, 2011 and 2010, respectively	—	—
Common stock, $0.0001 par value, 5,153,216 and 1,695,919 shares issued and outstanding at December 31, 2011 and 2010, respectively	516	168
Common stock Class B, $0.0001 par value, zero and 860,000 shares issued and outstanding at December 31, 2011 and 2010, respectively	—	86
Common stock to be issued	—	199,346
Additional paid-in capital	5,364,139	997,537
Deficit accumulated in the development stage	(4,490,238)	(1,513,943)
Total stockholders' equity (deficit)	874,417	(316,806)

Total Liabilities and Stockholders' Equity (Deficit)	$1,636,155	$100,522

The accompanying notes are an integral part of these financial statements

ClearSign Combustion Corporation

(a Development Stage Company)

Statements of Operations

	For the Year Ended December 31,		For the Period from Inception (January 23, 2008) to December 31,
	2011	2010	2011
Operating expenses:			
Research and development	$463,076	$—	$ 523,957
General and administrative	2,516,384	395,587	3,969,916
Total operating expenses	2,979,460	395,587	4,493,873
Loss from operations	(2,979,460)	(395,587)	(4,493,873)
Other income (expense):			
Interest income	3,323	—	3,793
Interest expense	(158)	—	(158)
Total other income (expense)	3,165	—	3,635
Net Loss	$(2,976,295)	$(395,587)	$ (4,490,238)
Net Loss per share - basic and fully diluted	$(0.67)	$(0.15)	$ (1.60)
Weighted average number of shares outstanding - basic and fully diluted	4,435,763	2,580,885	2,801,506

The accompanying notes are an integral part of these financial statements

ClearSign Combustion Corporation

(a Development Stage Company)

Statement of Stockholders' Equity (Deficit)

From Inception (January 23, 2008) to December 31, 2011

	Common Shares Issuable		Common Stock		Common Stock Class B		Additional Paid In	Deficit Accumulated in the Development	Total Stockholders' Equity
	Shares	Amount	Shares	Amount	Shares	Amount	Capital	Stage	(Deficit)
Shares issued to founders, at no cost	—	$—	1,065,000	$107	476,000	$48	$33,045	$—	$33,200
Shares issued for services ($0.02 per share)	—	—	125,000	13	—	—	2,487	—	2,500
Shares issued for cash ($0.02 per share)	—	—	—	—	384,000	38	9,562	—	9,600
Shares issued for cash ($1.80 per share)	—	—	395,119	39	—	—	711,170	—	711,209
Issuance costs	—	—	—	—	—	—	(5,958)	—	(5,958)
Share based payments of warrants	—	—	—	—	—	—	47,802	—	47,802
Common stock issuable for services	72,594	130,672	—	—	—	—	—	—	130,672
Net loss	—	—	—	—	—	—	—	(1,118,356)	(1,118,356)
Balances at December 31, 2009	72,594	130,672	1,585,119	159	860,000	86	798,108	(1,118,356)	(189,331)
Shares issued for cash ($1.80 per	—	—	72,191	6	—	—	129,936	—	129,942

share)									
Shares issued for services ($1.80 per share)	—	—	38,609	3	—	—	69,493	—	69,496
Common stock issuable for services	38,152	68,674	—	—	—	—	—	—	68,674
Net loss	—	—	—	—	—	—	—	(395,587)	(395,587)
Balances at December 31, 2010	110,746	199,346	1,695,919	168	860,000	86	997,537	(1,513,943)	(316,806)
Conversion of shares	—	—	1,075,000	108	(860,000)	(86)	(22)	—	—
Shares issued for services ($1.80 per share)	(104,921)	(188,856)	108,035	11	—	—	194,450	—	5,605
Canceled common shares issuable previously for services ($1.80 per share)	(5,825)	(10,490)	—	—	—	—	—	—	(10,490)
Shares issued for services ($2.20 per share)	—	—	733,523	73	—	—	1,613,671	—	1,613,744
Shares issued for cash ($2.20 per share)	—	—	1,363,364	137	—	—	2,999,237	—	2,999,374
Issuance costs	—	—	—	—	—	—	(807,210)	—	(807,210)
Share based payments of warrants	—	—	—	—	—	—	64,174	—	64,174
Share based compensation	—	—	177,375	19	—	—	302,302	—	302,321
Net loss	—	—	—	—	—	—	—	(2,976,295)	(2,976,295)
Balances at December 31, 2011	—	$—	5,153,216	$516	—	$—	$5,364,139	$(4,490,238)	$874,417

The accompanying notes are an integral part of these financial statements

F-4

ClearSign Combustion Corporation

(a Development Stage Company)

Statements of Cash Flows

	For the Year Ended December 31,		For the Period from Inception (January 23, 2008) to December 31,
	2011	2010	2011
Cash flows from operating activities:			
Net loss	$(2,976,295)	$(395,587)	$ (4,490,238)
Adjustments to reconcile net loss to net cash used in operating activities:			
Common stock issued for services	1,021,038	118,669	1,353,881
Share based compensation	187,096	—	187,096
Depreciation	27,880	19,034	58,249
Deferred rent	17,475	—	17,475
Increases in operating assets and liabilities:			
Prepaid expenses	(393,607)	(43,355)	(436,962)
Other assets	(20,512)	—	(20,512)
Accounts payable	349,271	4,701	496,293
Accrued compensation	98,818	166,572	369,124
Accrued interest	158	—	158
Net cash used in operating activities	(1,688,678)	(129,966)	(2,465,436)
Cash flows from investing activities:			
Acquisition of fixed assets	(131,177)	—	(199,187)
Disbursements for patents and trademarks	(86,546)	—	(86,546)
Net cash used in investing activities	(217,723)	—	(285,733)
Cash flows from financing activities:			
Proceeds from issuance of common stock for cash, net of offering costs	2,836,338	129,942	3,681,131
Net increase (decrease) in cash	929,937	(24)	929,962
Cash, beginning of period	25	49	—
Cash, end of period	$929,962	$25	$ 929,962

Supplemental disclosure of non-cash operating, investing, and financing activities:

During the year ended December 31, 2011, the Company:

- issued common stock valued at $580,000 and warrants valued at $64,174 for issuance costs related to a common stock offering,

- issued common stock valued at $115,225 to certain employees to partially satisfy compensation accrued at December 31, 2010,

- issued 104,921 shares of common stock valued at $188,856 and canceled 5,825 shares valued at $10,490 in order to discharge the common stock to be issued at December31, 2010,

- made a $275,000 stock grant to an employee which is to be earned from July 2011 to June 2015,

- converted a $45,775 account payable to a vendor and acquired a fixed asset valued at $1,734 through a $47,509 interest-bearing promissory note due in 2012,

- issued common stock valued at $7,821 in partial satisfaction of an account payable,

- issued common stock valued at $4,400 to a vendor for services rendered in 2011,

- swapped 860,000 shares of Class B common stock held by its founding shareholders for 1,075,000 shares of common stock.

During the year ended December 31, 2010, the Company issued common stock valued at $19,501 in exchange for equipment.

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

ClearSign Combustion Corporation

(a Development Stage Company)

Notes to Financial Statements

Note 1 – Organization and Description of Business

ClearSign Combustion Corporation (ClearSign or the Company) is a development stage company located in Seattle, Washington and incorporated in the state of Washington on January 23, 2008. The Company was formed to design, develop and market technologies that improve both the energy efficiency and emission control characteristics of combustion systems. The Company's technology introduces a computer-controlled electric field into the combustion region which may better control gas-phase chemical reactions and improve system performance and cost-effectiveness.

Note 2 – Summary of Significant Accounting Policies

Basis of Presentation and Going Concern

The accompanying financial statements have been prepared in conformity with accounting principles generally accepted in the United States (US GAAP) which contemplate continuation of the Company as a going concern. However, the Company is subject to the risks and uncertainties associated with a new business, has no established source of revenue, and has incurred significant losses from operations since inception. The Company's operations are dependent upon it raising additional capital. These matters raise substantial doubt about the Company's ability to continue as a going concern. The financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that could result from the outcome of this uncertainty.

Development Stage Enterprise

The Company is a development stage company as defined in Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 915, *Development Stage Entities*. The Company is devoting substantially all of its present efforts to design and develop new technologies in combustion systems and its planned principal operations have not yet commenced. The Company has not generated any revenues from operations and has no

assurance of any future revenues. All losses accumulated since January 23, 2008 have been considered as part of the Company's development stage activities.

Use of Estimates

The preparation of financial statements in conformity with US GAAP requires management to make certain 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 revenues and expenses during the reporting period. Actual results could differ from those estimates.

Reclassifications

Certain 2010 amounts have been reclassified to conform with 2011 presentation.

Cash and Cash Equivalents

Highly liquid investments purchased with an original maturity of three months or less are considered cash equivalents. Cash is maintained with a commercial bank where accounts are generally guaranteed by the Federal Deposit Insurance Corporation up to $250,000. The Company’s deposits exceed this limit.

Fixed Assets

Fixed assets are recorded at cost. Depreciation is computed using the straight-line method over the estimated lives of the respective assets. Leasehold improvements are depreciated over the life of the lease or their useful life, whichever is shorter. All other fixed assets are depreciated over three to four years. Maintenance and repairs are expensed as incurred.

Patents and Trademarks

Patents and trademarks are recorded at cost. Amortization is computed using the straight-line method over the estimated useful lives of the assets once they are awarded, which has not yet occurred.

Impairment of Long-Lived Assets

The Company tests long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable through the estimated undiscounted cash flows expected to result from the use and eventual disposition of the assets. In that event, a loss is recognized based on the amount by which the carrying amount exceeds the fair value of the long-lived assets. Loss on long-lived assets to be disposed of is determined in a similar manner, except that fair market values are reduced for the cost of disposal. As of December 31, 2011 and 2010, the Company determined that there was no impairment.

Fair Value of Financial Instruments

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Assets and liabilities measured at fair value are categorized based on whether or not the inputs are observable in the market and the degree that the inputs are observable. The categorization of financial assets and liabilities within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement.

The Company's financial instruments primarily consist of cash, accounts payable and accrued expenses. As of the balance sheet dates, the estimated fair values of the financial instruments were not materially different from their carrying values as presented on the balance sheets. This is primarily attributed to the short maturities of these instruments. The Company did not identify any other non-recurring assets and liabilities that are required to be presented in the balance sheets at fair value.

Research and Development

The cost of research and development is expensed as incurred.

Deferred Rent

Operating lease agreements which contain provisions for future rent increases or periods in which rent payments are reduced or abated are recorded in monthly rent expense in the amount of the total payments over the lease term divided by the number of months of the lease term. The difference between rent expense recorded and the amount paid is credited or charged to deferred rent which is reflected on the accompanying balance sheet.

Income Taxes

The Company accounts for income taxes using an asset and liability approach which allows for the recognition and measurement of deferred tax assets based upon the likelihood of realization of tax benefits in future years. Under the asset and liability approach, deferred taxes are provided for the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. A valuation allowance is provided for deferred tax assets if it is more likely than not these items will either expire before the Company is able to realize their benefits, or that future deductibility is uncertain.

Tax benefits from an uncertain tax position are recognized 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. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than 50 percent likelihood of being realized upon ultimate resolution.

Stock-Based Compensation

The costs of all employee stock options, as well as other equity-based compensation arrangements, are reflected in the financial statements based on the estimated fair value of the awards on the grant date. That cost is recognized over the period during which an employee is required to provide service in exchange for the award. Stock compensation for stock granted to non-employees is determined as the fair value of the consideration received or the fair value of equity instruments issued, whichever is more reliably measured.

Stock Issuance Costs

Stock issuance costs are recorded as a reduction of the related proceeds through a charge to stockholders' equity.

Common Stock

The Company records common stock issuances when all of the legal requirements for the issuance of such common stock have been satisfied.

Net Loss per Common Share

Basic loss per share is computed by dividing loss available to common stockholders by the weighted-average number of common shares outstanding. Diluted loss per share is computed similar to basic loss per share except that the denominator is increased to include additional common shares available upon exercise of stock options and warrants using the treasury stock method, except for periods for which no common share equivalents are included because their effect would be anti-dilutive. Potentially dilutive shares outstanding amounted to 575,743 and 80,000 at December 31, 2011 and 2010, respectively.

Recently Issued Accounting Pronouncements

Management does not believe that any recently issued, but not yet effective standards, if adopted, will have a material effect on the financial statements.

Note 3 – Fixed Assets

Fixed assets are summarized as follows:

	December 31,	
	2011	2010
Machinery and equipment	$142,045	$87,511
Office furniture and equipment	25,195	—
Leasehold improvements	7,917	—
Accumulated depreciation	(58,249)	(30,369)
	116,908	57,142
Construction in progress	45,265	—
	$162,173	$57,142

Note 4 – Promissory Note

In December 2011, the Company executed a $47,509 promissory note with a vendor to extend the terms of an account payable. The fully amortizing note bears interest at 8% per annum and is payable in equal monthly payments of $4,491 through its maturity in November 2012. The note is unsecured and may be prepaid at any time without penalty. Accrued interest at December 31, 2011 totaled $158.

Note 5 – Income Taxes

Through December 31, 2011, the Company incurred net operating losses for tax purposes of approximately $4,100,000. The net operating loss carry forward for federal purposes may be used to reduce taxable income through the year 2031. The availability of the Company's net operating loss carry forward is subject to limitation if there is a 50% or more change in the ownership of the Company's stock.

A reconciliation of the expected tax computed at the statutory federal income tax rate to the provision for income taxes is as follows:

	2011	2010
Expected tax benefit at 34%	$(1,012,000)	$(135,000)
Change in valuation allowance	900,000	120,000
Other	112,000	15,000
Provision for income taxes	$—	$—

The deferred tax asset at December 31, 2011 and 2010 was approximately $1,400,000 and $500,000, respectively. A 100% valuation allowance has been established against the deferred tax assets as the utilization of the loss carry forward cannot reasonably be assured. Significant components of the deferred tax assets (liabilities), computed at the federal tax rate of 34%, are approximately as follows:

	2011	2010
Net operating loss carry forwards	$1,525,000	$500,000
Accrued liabilities	(115,000)	—
Stock compensation	(30,000)	—
Depreciation	25,000	—
Deferred rent	(5,000)	—
Deferred tax assets, net	1,400,000	500,000
Valuation allowance	(1,400,000)	(500,000)
Net deferred tax asset	$—	$—

Although the Company is not under examination, the tax years for 2008 and forward are subject to examination by United States tax authorities. The Company’s practice is to recognize interest and penalties related to income tax matters in income tax expense. As of December 31, 2011 and 2010, there was no accrued interest or penalties related to uncertain tax positions.

Note 6 – Stockholders' Equity (Deficit)

Common Stock

In December 2011, the Company affected a 1.25-for-one common stock split to shareholders of record as of December 22, 2011 and correspondingly increased the amount of authorized common shares. All share and per share information has been retroactively adjusted to reflect the stock split.

In February 2011, the Company amended its articles of incorporation. Previously, the Company was authorized to issue 8,000,000 shares of common stock and 4,000,000 shares of Class B common stock. By amendment, authorized common stock was increased to 50,000,000 shares and Class B common stock was eliminated. Prior to the amendment, the holders of the Class B common stock voluntarily converted the 860,000 outstanding shares to 1,075,000 common stock shares. In December 2011, the Company amended its articles of incorporation to increase the authorized common stock to 62,500,000 shares as part of the 1.25-for-one stock split.

From March to May 2011, the Company completed the sale of 1,363,364 shares of common stock at $2.20 per share to raise $2,999,374. In conjunction with this sale, the placement agent, MDB Capital Group LLC (MDB), earned a fee of $300,000 which it elected to receive in the form of 136,364 common stock shares valued at $2.20 per share. MDB also received warrants to purchase 136,368 common stock shares at $2.20 per share with a weighted average grant-date fair value of these warrants of approximately $64,174. The Company's legal counsel and others were paid with 127,273 common stock shares at $2.20 per share. The Company incurred $807,210 of issuance costs which is recorded against additional paid-in capital in 2011, of which $644,173 was paid with common stock. In addition, MDB provided consulting services to the Company in 2011 where it earned a fee of $1,000,000 which MDB elected to receive in the form of 454,547 common stock shares valued at $2.20 per share. This fee is included in general and administrative expense. The grants of common stock are reflected in the Statement of Stockholders' Equity (Deficit) under shares issued for services at $2.20 per share. MDB is a related party due to its significant ownership of the Company's common stock and warrants.

Preferred Stock

The Company is authorized to issue 2,000,000 shares of preferred stock. Preferences, limitations, voting powers and relative rights of any preferred stock to be issued may be determined by the Company's Board of Directors. The Company has not issued any shares of preferred stock.

Equity Incentive Plan

In January 2011, the Company adopted an Equity Incentive Plan (the Plan) providing for the granting of options to purchase shares of common stock, stock awards to purchase shares at no less than 85% of the value of the shares, and stock bonuses to officers, employees, board members, consultants, and advisors. The Company originally reserved 625,000 shares of common stock for issuance under the Plan. The Plan provides for periodic increases in the number of authorized shares available for issuance under the Plan on the first day of each of the Company's fiscal quarters beginning October 1, 2011. The quarterly increases are equal to the lesser of 10% of any new shares subsequently issued by the Company or such lesser amount as the Board of Directors shall determine. The Compensation Committee of the Board of Directors is authorized to administer the Plan and establish the grant terms, including the grant price, vesting period and exercise date.

Stock Options

Effective July 1, 2011, the Company made its first grants of stock options under the Equity Incentive Plan to certain key employees. The fair value of each option award was estimated on the date of grant using the Black-Scholes option valuation model. All options granted have a term of ten years. As permitted by SAB 107, due to the Company's insufficient history of option activity, management utilized the simplified approach to estimate the options' expected term, which represents the period of time that options granted are expected to be outstanding. Expected volatility was determined through the average of a peer group of public companies. The Company estimated the forfeiture rate at the time of grant and will revise it, if necessary, in subsequent periods if actual forfeitures differ from those estimates. The Company recognizes compensation costs only for those equity awards expected to vest. The risk-free rate for periods within the contractual life of the option is based on the U.S. Treasury yield in effect at the time of grant. The Company has never declared or paid dividends and has no plans to do so in the foreseeable future. The following weighted-average assumptions were utilized for the calculations:

Expected life	5.00 - 6.25 years	
Weighted average volatility	32	%
Forfeiture rate	14	%
Weighted average risk-free interest rate	2.99	%

Expected dividend rate	—

A summary of our stock option activity and related information is as follows:

	Common Stock	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in years)
Outstanding at January 1, 2011	—	$ —	—
Granted	362,500	$ 2.20	9.75
Exercised	—	$ —	—
Forfeited/Expired/Exchanged	(3,125)	$ 2.20	—
Outstanding at December 31, 2011	359,375	$ 2.20	9.75
Exercisable at December 31, 2011	125,000	$ 2.20	9.75

The weighted-average grant-date fair value of options granted in 2011 was $0.80.

A summary of the status of the Company's nonvested options at December 31, 2011 and changes during the year ended December 31, 2011 is presented below:

	Number of Options	Weighted Average Grant Date Fair Value
Nonvested options at January 1, 2011	—	—
Granted	362,500	$ 2.20
Vested	(125,000)	$ 2.20
Exercised	—	—
Forfeited/Expired/Exchanged	(3,125)	$ 2.20
Nonvested options at December 31, 2011	234,375	$ 2.20

At December 31, 2011, there was $137,687 of total unrecognized compensation cost related to nonvested option-based compensation arrangements granted under the Plan. That cost is expected to be recognized in future years as follows:

2012	$39,340
2013	39,340
2014	39,340
2015	19,667

$137,687

The recognized compensation cost for the year ended December 31, 2011was as follows:

Research and development	$7,868
General and administrative	103,603
Effect on net loss	$111,471
Effect on net loss per share	$0.03

Stock Grants

In 2011, the Company granted 127,000 shares of stock under the Plan. A key employee was granted 125,000 shares of the shares which are subject to declining repurchase rights by the Company at $0.0001 per share should the employee terminate employment or upon other related circumstances prior to June 30, 2015. The fair value of the stock at the time of grant was $2.20 per share for a total value of $275,000. The Company recognized general and administrative compensation expense of $75,625 or $0.02 per share for the year ended December 31, 2011. The remaining cost is reflected as a contra-equity balance against additional paid in capital and is expected to be recognized in future years as follows:

2012	$96,250
2013	41,250
2014	41,250
2015	20,625
	$199,375

Warrants

In conjunction with the issuance of common stock from March to May 2011, the Company granted warrants to MDB to purchase 136,368 common stock shares at the fair value of $2.20 per share. In 2009, the Company granted warrants to purchase a total of 80,000 shares of common stock of the Company to technical advisors. The warrants were issued in 2011 and are exercisable at the fair value of $1.80 per share. The fair value of these warrants was estimated on the date of the grant using the Black-Scholes option-pricing model. Expected volatility was determined through the average of a peer group of public companies. The risk-free rate for periods within the contractual life of the warrants is based on the U.S. Treasury yield in effect at the time of grant. The Company has never declared or paid dividends and has no plans to do so in the foreseeable future. The following weighted-average assumptions were utilized for the calculations:

	2011		2009	
Expected life (in years)	2.5		5	
Weighted average volatility	33	%	34	%
Weighted average risk-free interest rate	0.81	%	2.01	%
	—		—	

Expected
dividend rate

A summary of the Company's warrant activity and related information is as follows:

	2011		2010	
	Warrants	Weighted Average Exercise Price	Warrants	Weighted Average Exercise Price
Outstanding at beginning of year	80,000	$ 1.80	80,000	$ 1.80
Granted	136,368	$ 2.20	—	—
Exercised	—	—	—	—
Forfeited/Expired	—	—	—	—
Outstanding at end of year	216,368	$ 2.05	80,000	$ 1.80

The following table summarizes the number of warrants, the weighted average exercise price, and weighted average life (in years) by price for both total outstanding warrants and total exercisable warrants at December 31, 2011:

	Total Outstanding Warrants		
Exercise Price	Warrants	Weighted Average Exercise Price	Life (in years)
$ 1.80	80,000	$ 1.80	9.14
$ 2.20	136,368	$ 2.20	4.36
	216,368		

Note 7 – Commitments

The Company has a triple net lease for office and laboratory space for the period November 2011 to February 2017. Under the terms of the lease, the Company pays no rent for the period November 2011 to February 2012. Rent payments will commence in March 2012 and will escalate annually by 3%. The Company records monthly rent expense equal to the total of the payments over the lease term divided by the number of months of the lease term. Therefore, rent expense of approximately $17,475 was accrued during the period of November 2011 to December 2011. Under the terms of the lease, the Company will also pay monthly triple net operating costs which are initially $1,946 per month. Minimum future payments under these leases at December 31, 2011 are as follows:

2012	$ 88,000
2013	108,000
2014	111,000
2015	115,000
2016	118,000
Thereafter	20,000
	$ 560,000

For the years ended December 31, 2011 and 2010, rent expense amounted to $57,465 and $47,453, respectively.

In December 2011, the Company entered into an Employment Agreement (the Agreement) with Richard Rutkowski, its Chief Executive Officer, effective on January 1, 2012. Unless earlier terminated, the Agreement will continue for a term of three years. Compensation includes an annual salary of $350,000 with annual cost-of-living adjustments, annual cash and equity bonuses based on performance standards established by the Compensation Committee of the Board of Directors, medical and dental benefits for Mr. Rutkowski and his family, disability insurance, and term life insurance for the benefit of his dependents. The Agreement may be terminated by the Company without cause under certain circumstances, as defined in the Agreement whereby a severance payment would be due in the amount of compensation that would have been due had employment not been terminated or one year of the current annual compensation, whichever is greater.

The Company has agreements with its three independent directors to compensate them annually after the Company’s common stock commences trading publicly. The obligation totals $300,000 per year of which $150,000 is to be paid with the Company’s common stock at fair value.

The Company has retained an investment bank, MDB Capital Group LLC, as its underwriter to raise funds from the sale of common stock. Although this agreement is cancelable with thirty days’ notice, the Company intends to pursue this offering through MDB. If successful, the fee for the underwriter is expected to be 10% of the value of shares sold, all expenses associated with the offering, and warrants to purchase common stock shares at the issuance price equal to

10% of the shares sold. At MDB's election, the fee is payable in cash or common stock priced at the issuance price. The warrants would be exercisable for 5 years, and would contain weighted average, price-based anti-dilution provisions, demand and piggyback registration rights, and cashless exercise provisions. If earned, the Company intends to set aside a reserve of the shares necessary for the issuance of these warrants.

3,000,000 Shares of Common Stock

ClearSign Combustion Corporation

PROSPECTUS

MDB Capital Group LLC

Until , 2012, all dealers that effect transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

68

[Alternate Page for Security Holder Prospectus]

The information in this prospectus is not complete and may be changed. The security holder named herein may not sell these securities until after the registration statement filed with the Securities and Exchange Commission is declared effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

PRELIMINARY PROSPECTUS SUBJECT TO COMPLETION, DATED _____, 2012

CLEARSIGN COMBUSTION CORPORATION

454,545 Shares

This prospectus relates to the distribution of 454,545 shares of common stock, par value $0.0001 per share, by Integrated Surgical Systems, Inc., referred to as the “Security Holder” throughout this prospectus. The Security Holder has agreed to a 180 day lock-up for sales into the public market with respect to all of these shares.

The shares, if sold, will be sold at a price of $4.00 per share until our common stock is quoted on the OTC Bulletin Board or listed on The Nasdaq Capital Market, at which time the shares, if sold, will be sold at prevailing market prices or privately negotiated prices. We will not receive any of the proceeds from the sale of shares to be offered. Usual and customary or specifically negotiated brokerage fees or commissions may be paid by the seller upon the sale of the shares being registered. No sales of the shares covered by this prospectus shall occur until the shares of common stock sold in our initial public offering begin trading on The Nasdaq Capital Market.

The Security Holder and intermediaries through whom the securities are sold may be deemed “underwriters” within the meaning of the Securities Act of 1933, as amended (the "Securities Act"), with respect to the securities offered hereby, and any profits realized or commissions received may be deemed underwriting compensation.

On [_____], 2012, a registration statement under the Securities Act with respect to our initial public offering underwritten by MDB Capital Group LLC, of $[_____] of shares of common stock was declared effective by

the Securities and Exchange Commission. We received approximately $[____] million in net proceeds from the offering after payment of underwriting discounts and commissions and estimated expenses of the offering.

Investing in our common stock involves a high degree of risk. You should carefully consider the matters discussed under the section entitled “Risk Factors” beginning on page 8 of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is [ ], 2012.

69

[Alternate Page for Security Holder Prospectus]

CLEARSIGN COMBUSTION CORPORATION

TABLE OF CONTENTS

	Page
PROSPECTUS SUMMARY	1
SUMMARY SELECTED FINANCIAL INFORMATION	8
RISK FACTORS	9
BUSINESS	17
PROPERTIES	38
MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS	39
DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE	43
EXECUTIVE COMPENSATION	47
DESCRIPTION OF CAPITAL STOCK	50
DIVIDEND POLICY AND OTHER SHAREHOLDER MATTERS	55
SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED SHAREHOLDER MATTERS	55
CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE	56
USE OF PROCEEDS	63
CAPITALIZATION	64
DILUTION	64
SHARES REGISTERED FOR DISTRIBUTION	72
PLAN OF DISTRIBUTION	75
LEGAL MATTERS	77
EXPERTS	77
WHERE YOU CAN FIND MORE INFORMATION	77
DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES	77
INDEX TO FINANCIAL STATEMENTS	67

Unless otherwise stated or the context otherwise requires, the terms "ClearSign," "we," "us," "our" and the "Company" refer to ClearSign Combustion Corporation.

You should rely only on the information contained in this prospectus. We have not authorized anyone to provide you with additional or different information. The information contained in this prospectus is accurate only as of the date on the front cover of this prospectus, regardless of the time of delivery of this prospectus or of any sale of our common stock.

No dealer, salesperson or any other person is authorized in connection with this offering to give any information or make any representations about us, the securities offered hereby or any matter discussed in this prospectus, other than those contained in this prospectus and, if given or made, the information or representations must not be relied upon as having been authorized by us. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any security other than the securities offered by this prospectus, or an offer to sell or a solicitation of an offer to buy any securities by anyone in any circumstance in which the offer or solicitation is not authorized or is unlawful.

[Alternate Page for Security Holder Prospectus]

SHARES REGISTERED FOR DISTRIBUTION

As part of this prospectus, we are registering 454,545 shares of common stock for resale, which are subject to a 180 day lock-up for sales into the public market. The shares described in the following table consist of shares of common stock that were issued in connection with the 2011 Private Placement. A discussion of the material terms of this offering is included in the subsection of this prospectus titled “The 2011 Private Placement” under the heading “Management’s Discussion and Analysis of Financial Condition and Results of Operations.” The Company, by agreement, granted the security holder the right to have the holder’s common stock registered in the event that the Company filed an initial registration statement for the sale of its securities to the public.

On November 14, 2011, we filed a registration statement for an initial public offering of our common stock. As a result, we became obligated to register the Security Holder’s shares for distribution under the same registration statement.

The Security Holder, Integrated Surgical Systems, Inc. (“ISS” or the “Security Holder”) does not have, nor within the past three years has it had, any position, office or other material relationship with us or any of our predecessors or affiliates other than as a result of the ownership of our securities.

The following table provides certain information with respect to the Security Holder’s ownership of our securities as of March 31, 2012, the total number of securities it may distribute under this prospectus from time to time, and the number of securities it will own thereafter assuming no other acquisitions or dispositions of our securities. The Security Holder may distribute all, some or none of its securities, thus we have no way of determining the number it will hold after this offering. Therefore, we have prepared the table below on the assumption that the Security Holder will sell all shares covered by this prospectus.

The Security Holder may dividend or distribute its shares from time to time to its shareholders. Shares distributed from the Security Holder to Christopher A. Marlett, Robert Levande and Steven Walker, which we estimate will total 182,000 shares based upon their ownership of ISS common stock as of March 31, 2012, would be subject to a lock-up period of one year from the date of the closing of the offering under this prospectus. ISS’s remaining shareholders would be able to sell their shares immediately upon expiration of the 180 day lock-up period. The Security Holder may also transfer shares owned by it by gift, and upon any such transfer the donee would have the same right of sale as the Security Holder.

See our discussion titled “Plan of Distribution” for further information regarding the Security Holder’s method of distribution of these shares.

Security Holder Table

Name	Securities Beneficially Owned Prior to Offering (1)	Securities Being Offered	Securities Beneficially Owned After Offering (2)	% Beneficial Ownership After Offering	
Integrated Surgical Systems, Inc. (3) (4)	454,545	454,545	0	0	%
Total:	454,545	454,545	0	0	%

(1) The Security Holder listed in the table above acquired the securities being offered in the 2011 Private Placement, in which the Company issued its common stock at $2.20 per share. Percentages stated in the above table are based on a total of 5,157,716 shares of common stock outstanding as of March 31, 2012.

(2) Assumes that all of the shares offered hereby are distributed and that shares owned before the offering but not offered hereby are not sold.

(3) This Security Holder is an associated person of a broker-dealer. The broker-dealer associated person has represented to the Company that such person (a) acquired the securities in the ordinary course of business, and (b) had no agreements or understandings, directly or indirectly, with any person to distribute the securities at the time of their acquisition.

(4) The address of this security holder is 401 Wilshire Blvd., Suite 1020, Santa Monica, CA, 90401. Christopher Marlett is the Chief Executive Officer and a director, Robert Levande is the Secretary and a director and Gary Schuman is the Chief Financial Officer of the Security Holder, and as such it is deemed to be affiliated with MDB Capital Group LLC. The board of directors of Integrated Surgical Systems, Inc., at large, holds voting and investment control over the securities hold by the corporation.

[Alternate Page for Security Holder Prospectus]

USE OF PROCEEDS

There will not be any proceeds from the distribution of the common stock by the Security Holder. All proceeds from the sale of the common stock after the distribution will be paid directly to the selling security holders.

[Alternate Page for Security Holder Prospectus]

PLAN OF DISTRIBUTION

The Security Holder and any of its pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their shares of common stock on the Nasdaq Capital Market or any other stock exchange, market or trading facility on which the shares are traded or in private transactions. These sales may be at fixed or negotiated prices. These individuals may use any one or more of the following methods when selling shares:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- settlement of short sales entered into after the effective date of the registration statement of which this prospectus is a part;
- broker-dealers may agree with the selling security holder to sell a specified number of such shares at a stipulated price per share;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

The Security Holder may distribute the shares of which it is the owner by means of a dividend or other form of distribution, including in connection with a declaration of a dividend or distribution, reorganization, combination, consolidation and dissolution.

The Security Holder may also sell shares under Rule 144 under the Securities Act, if available, rather than under this prospectus.

Broker-dealers engaged by any selling security holder may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling security holders (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated, but the maximum amount of compensation to be received by any participating FINRA member may not exceed 8%.

We are required to pay certain fees and expenses incurred by us incident to the registration of the shares.

Since the Security Holder may be deemed to be an “underwriter” within the meaning of the Securities Act, it will be subject to the prospectus delivery requirements of the Securities Act including Rule 172 thereunder. In addition, any securities covered by this prospectus which qualify for sale pursuant to Rule 144 under the Securities Act may be sold under Rule 144 rather than under this prospectus. There is no underwriter or single coordinating broker acting in connection with the proposed distribution of the shares by the Security Holder.

We agreed to keep this prospectus and the registration statement which this prospectus forms a part effective until the earlier to occur of (i) such time as Rule 144 or another similar exemption under the Securities Act is available for the sale of all the shares, to the extent the Security Holder has distributed the shares to its shareholders, by its shareholders, without volume or manner of sale restrictions during a three month period without registration or (ii) all of the shares have been sold pursuant to this prospectus or Rule 144 under the Securities Act or any other rule of similar effect. The resale shares will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the resale shares may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale shares may not simultaneously engage in market making activities with respect to the common stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the Security Holder will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of shares of the common stock by any person. We will make copies of this prospectus available to the Security Holder and have informed the Security Holder of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

[Alternate Page for Security Holder Prospectus]

LEGAL MATTERS

Richardson & Patel, LLP, with an office at 750 Third Avenue, 9th Floor, New York, New York 10017, will pass upon the validity of the securities offered in this prospectus. As of March 31, 2012, Richardson & Patel LLP and its principals or entities controlled by its principals own 200,502 shares of our common stock, a portion of which it accepted as payment for certain legal services rendered to us. In addition, management anticipates that we will issue an additional approximate 110,000 shares of common stock to Richardson & LLP or its partners in partial satifaction of accrued legal fees, subject to the approval of our board of directors. Although Richardson & Patel LLP is not under any obligation to accept shares of our common stock in payment for services, it may do so in the future.

EXPERTS

The financial statements of ClearSign Combustion Corporation as of December 31, 2011 and 2010, and for the years ended December 31, 2011 and 2010, and for the period from inception (January 23, 2008) through December 31, 2011, included in this prospectus and elsewhere in the registration statement have been audited by Gumbiner Savett Inc., independent registered public accounting firm (which contain an explanatory paragraph related to our ability to continue as a going concern as described in Note 2 to our financial statements) as set forth in their report. We have included these financial statements in the prospectus and elsewhere in the registration statement in reliance upon the report of Gumbiner Savett Inc., given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act that registers the shares of our common stock to be sold in this offering. Our SEC filings are and will become available to the public over the Internet at the SEC's web site at www.sec.gov. You may also read and copy any document we file with the SEC at its public reference facilities at 100 F Street N.E., Washington, D.C. 20549. You can also obtain copies of the documents upon the payment of a duplicating fee to the SEC. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference facilities.

This prospectus does not contain all of the information set forth in the registration statement and the exhibits and schedules thereto. Some items are omitted in accordance with the rules and regulations of the SEC. You should review the information and exhibits included in the registration statement for further information about us and the securities

we are offering. Statements in this prospectus concerning any document we filed as an exhibit to the registration statement or that we otherwise filed with the SEC are not intended to be comprehensive and are qualified by reference to these filings. You should review the complete document to evaluate these statements.

DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers or persons controlling the Company, we have been informed that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is therefore unenforceable.

[Alternate Page for Security Holder Prospectus]

Until , 2012, all dealers that effect transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

CLEARSIGN COMBUSTION CORPORATION

454,545 Shares

Common Stock

_____, 2012

78

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 13. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

The following table sets forth the various expenses to be incurred in connection with the sale and distribution of our common stock being registered hereby, all of which will be borne by us (except any underwriting discounts and commissions and expenses incurred for brokerage, accounting, tax or legal services or any other expenses incurred in disposing of the shares). All amounts shown are estimates except the SEC registration fee.

SEC Filing Fee	$ 3,332
FINRA Fee*	$ 3,398
Fee to Qualified Independent Underwriter	$ 110,000
Nasdaq Fee*	$ 50,000
Printing Expenses*	$ 60,000
Accounting Fees and Expenses*	$ 100,000
Legal Fees and Expenses*	$ 850,000
Transfer Agent and Registrar Expenses*	$ 10,000
Miscellaneous*	$ 150,000
Total	$ 1,336,720

*Estimated.

ITEM 14. INDEMNIFICATION OF DIRECTORS AND OFFICERS

The following summary is qualified in its entirety by reference to the complete text of any statutes referred to below and the amended Articles of Incorporation of ClearSign Combustion Corporation, a Washington corporation.

The Company’s Articles of Incorporation provide that, to the fullest extent permitted by Washington law, the Company’s directors will not be liable to the Company or its shareholders for monetary damages. This provision, however, does not eliminate or limit liability for acts or omissions that involve intentional misconduct or a knowing violation of law by a director, for conduct violating Revised Code of Washington section 23B.08.310 (approval of an unlawful distribution) or for any transaction from which the director will personally receive a benefit in money,

property, or services to which the director is not legally entitled. Pursuant to section 23B.08.52 of the Revised Code of Washington, because the Company's Articles of Incorporation do not limit the obligation, the Company must indemnify a director who was wholly successful, on the merits or otherwise, in the defense of any proceeding to which the director was a party because of being a director against reasonable expenses incurred by the director in connection with the proceeding.

The Company's Bylaws further provide that each person who was, is or is threatened to be made a party to or is otherwise involved in any threatened, pending or completed action, suit, claim or proceeding, whether civil, criminal, administrative or investigative and whether formal or informal, by reason of the fact that he or she is or was a director or officer of the Company or was serving at the Company's request as a director, officer, partner, trustee, employee or agent of another entity, shall be indemnified and held harmless against all losses, claims, damages, liabilities and expenses actually and reasonably incurred or suffered in connection with the proceeding. This indemnification right continues even after the individual has ceased to be a director or officer or to serve at the Company's request as a director, officer, partner, trustee, employee or agent of another entity. However, if the person indemnified initiates the proceeding, he or she shall be entitled to indemnification only if the proceeding was authorized or ratified by the Company's board of directors. No indemnification will be provided for acts or omissions finally adjudged to be intentional misconduct or a knowing violation of law, for conduct finally adjudged to be in violation of Revised Code of Washington section 23B.08.310, for any transaction with respect to which it was finally adjudged that the indemnitee personally received a benefit in money, property or services to which the indemnitee was not legally entitled or if the Company is otherwise prohibited by applicable law from paying indemnification. The Company must advance expenses to an indemnitee for an indemnification obligation so long as the Company receives an undertaking by or on behalf of the indemnitee to repay all amounts so advanced if it is determined by a final judicial decision from which there is no further right to appeal that the indemnitee is not entitled to be indemnified.

Under our Director and Officer Insurance Policy, our directors and officers are provided liability coverage of $5 million subject to retention. The policy has a one year term with annual renewal possible. The policy can be terminated by the insured if there is a merger or acquisition which includes a change in ownership of 50% of the voting shares. Upon such an occurrence the insurer may elect to cancel the policy. We may elect to then obtain “run off” insurance for a period of between one and six years at a cost of between 125% and 225% of the initial policy premium. The policy is a claim made policy. It covers only those claims made during the policy term. If an act giving rise to a claim occurs during the policy term, but the claim is not reported within 60 days of the termination or expiration policy, the claim will not be covered.

We have entered into, and will enter into in the future, indemnification agreements with the individuals who serve as our officers and directors. Pursuant to these agreements, we will indemnify officers and directors who are made parties to, or threatened to be made parties to, any proceeding by reason of the fact that they are or were officers or directors, or are or were serving at our request as a director, officer, employee, or agent of another entity. The agreements require us to indemnify our officers and directors against all expenses, judgments, fines and penalties actually and reasonably incurred by them in connection with the defense or settlement of any such proceeding, subject to the terms and conditions of the agreements.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Company pursuant to the foregoing provisions, or otherwise, the Company has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Company of expenses incurred or paid by a director, officer or controlling person of the Company in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Company will, unless in the opinion of its counsel that the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

ITEM 15. RECENT SALES OF UNREGISTERED SECURITIES

During the past three years, we issued the following securities without registration under the Securities Act of 1933, as amended (the “Securities Act”). The following information gives effect to the stock split that became effective on December 22, 2011.

Beginning in April 2008 and continuing until August 2010, the Company raised a total of $860,652 in value from an offering of shares of common stock to 22 accredited investors. The price per share was $1.80 and the Company issued a total of 478,144 shares of common stock. The Company relied on Rule 506 of Regulation D to make the offering. In the offering there were no more than 35 purchasers of the common stock, appropriate financial and business

information was provided to the purchasers in accordance with Rule 502(b), there was no form of general solicitation or general advertising relating to the offer and the Company exercised reasonable care to assure that the purchasers of the common stock were not underwriters within the meaning of section 2(a)(11) of the Securities Act.

In January 2011, Geoffrey Osler, Richard Rutkowski and the Rutkowski Family Trust (formerly known as Trinity West Trust I and Trinity West Trust II) converted their shares of Class B common stock into 1,075,000 shares of common stock. The Company subsequently amended its Articles of Incorporation to eliminate the Class B common stock. The Company relied on section 3(a)(9) of the Securities Act to issue the securities. The securities were exchanged by the Company with its existing security holders exclusively and there were no commissions or other remuneration paid or given directly or indirectly for soliciting the exchange.

In February 2011 the Company issued five warrants for the purchase of up to a total of 80,000 shares of common stock to five consultants. Each warrant has a term of 10 years and an exercise price of $1.80 per share. The warrants were issued in reliance on Rule 701 promulgated under the Securities Act. The consultants rendered valuable services to the Company relating to the development of its product and the Company is not subject to the reporting requirements of section 13 or 15(d) of the Securities Exchange Act of 1934 and is not an investment company registered or required to be registered under the Investment Company Act of 1940. Each of the consultants is a natural person and none of the services provided by the consultants were made in connection with the offer or sale of the Company's securities. The aggregate sales price of the securities offered in reliance on Rule 701 did not exceed the parameters set forth in Rule 701(d).

In April 2011 we issued 7,039 shares of common stock to Paul Rusyn, the Company's attorney, in exchange for legal services having a value of $12,670 and we issued 42,689 shares of common stock to Chris Wiklof, the Company's patent agent, in exchange for services having a value of $76,840 relating to preparing and filing patent applications on the Company's behalf. The Company relied on Section 4(2) of the Securities Act of 1933 (the "Act") in issuing the common stock inasmuch as there was no form of general solicitation or general advertising in the offer and sale of the securities and these individuals had access to the information that registration would otherwise provide.

Beginning in March 2011 and continuing until May 10, 2011, the Company raised approximately $3 million from an offering of shares of common stock to investors. The price per share was $2.20 and the Company issued a total of 1,363,364 shares of common stock. The Company relied on an exemption under Rule 506 of Regulation D to make the offering. There were no more than 35 purchasers of the common stock, appropriate financial and business information was provided to the purchasers in accordance with Rule 502(b), there was no form of general solicitation or general advertising relating to the offer and the Company exercised reasonable care to assure that the purchasers of the common stock were not underwriters within the meaning of section 2(a)(11) of the Securities Act. In conjunction with the offering, the Company issued to MDB Capital Group LLC 136,364 shares of common stock valued at $300,000 and a warrant for the purchase of 136,368 shares of common stock. The warrant has a term of 5 years and an exercise price of $2.20 per share. The Company relied on an exemption under section 4(2) of the Securities Act to issue the warrant. The warrant was offered and sold without any form of general solicitation or general advertising, MDB Capital Group LLC represented that it was an accredited investor and, as our placement agent, it was provided with access to the information that registration would otherwise provide.

In April 2011 the Company issued 454,547 shares of common stock having a value of approximately $1,000,000 to MDB Capital Group LLC in exchange for consulting services that had been rendered. The Company relied on an exemption under section 4(2) of the Securities Act to issue the common stock. The common stock was offered and sold without any form of general solicitation or general advertising, MDB Capital Group LLC represented that it was an accredited investor and, as our placement agent, it was provided with access to the information that registration would otherwise provide.

In November 2010 and June 2011 the Company issued 27,775 shares of common stock and 125,000 shares of common stock, respectively, having a value of $49,995 and $275,000, respectively, to Richardson & Patel LLP as

payment for legal services rendered. The Company relied on Section 4(2) of the Securities Act of 1933 (the "Act") in issuing the common stock inasmuch as there was no form of general solicitation or general advertising in the offer and sale of the securities and Richardson & Patel LLP, as our current corporate and securities counsel, does not require the safeguards of the Act.

In June 2011 the Company issued 52,375 shares of common stock to the Company's Chief Executive Officer and Chief Marketing Officer in payment of accrued compensation. The shares had a value of $115,225. The Company relied on Section 4(2) of the Securities Act of 1933 (the "Act") in issuing the common stock inasmuch as there was no form of general solicitation or general advertising in the offer and sale of the securities and the officers had access to the information that registration would otherwise provide.

In February 2011 and June 2011 the Company issued a total of 68,091 shares of common stock having a value of $126,476 to Sabey Data Center Properties LLC ("Sabey") in payment of rent for the period from February through June 2011. Sabey was an existing stockholder on the date that the shares were issued. The Company relied on Section 4(2) of the Securities Act of 1933 (the "Act") in issuing the common stock inasmuch as there was no form of general solicitation or general advertising in the offer and sale of the securities and we provided to Sabey access to the information that registration would otherwise provide.

In June 2011 the Company issued 2,273 shares of common stock having a value of $5,000 to an accounting consultant in exchange for services rendered. The Company relied on Section 4(2) of the Securities Act of 1933 (the "Act") in issuing the common stock inasmuch as there was no form of general solicitation or general advertising in the offer and sale of the securities and we provided to the consultant access to the information that registration would otherwise provide.

In reliance on Rule 701 of Regulation C promulgated under the Securities Act of 1933, as amended, in January 2011 the Company adopted the ClearSign Combustion Corporation 2011 Equity Incentive Plan (the "Plan"). Pursuant to the terms of the Plan, the Company may grant common stock or options to purchase common stock to employees, officers, directors, consultants, independent contractors and advisors of the Company so long as such individuals provide bona fide services to the Company not in connection with capital raising or stock promotion activities. As of March 31, 2012, the Company has reserved a total of 625,555 shares of common stock for issuance under the Plan. Of that amount, the Company has issued options covering 359,375 shares of common stock.

In September 2011 we issued 125,000 shares of common stock from the Plan to James Harmon, our Chief Financial Officer. The shares had a value of $275,000. All of the shares are subject to a right of repurchase at a price of $0.0001 per share upon the occurrence of certain events, including Mr. Harmon's termination of his employment. The right of repurchase as to 50,000 shares expires on June 30, 2012. The right of repurchase over the remaining 75,000 shares expires ratably and on a quarterly basis over the period beginning on October 1, 2012 and ending on June 30, 2015. The Company relied on Section 4(2) of the Securities Act of 1933 (the "Act") in issuing the common stock inasmuch as there was no form of general solicitation or general advertising in the offer and sale of the securities and the officer had access to the information that registration would otherwise provide.

In November 2011 the Company issued 3,555 shares of common stock to Perkins Coie LLP in partial payment of an invoice for legal services. The shares were valued at $7,818. The Company relied on Section 4(2) of the Securities Act of 1933 (the "Act") in issuing the common stock inasmuch as there was no form of general solicitation or general advertising in the offer and sale of the securities and Perkins Coie LLP, as our former corporate and securities counsel, does not require the safeguards of the Act.

In December 2011 and again in March 2012 we issued a total of 6,500 shares of common stock having a value of $22,400 to John McFarland, an investor relations consultant in exchange for services rendered and to be rendered. The Company relied on Section 4(2) of the Securities Act of 1933 (the "Act") in issuing the common stock inasmuch as there was no form of general solicitation or general advertising in the offer and sale of the securities and we provided to Mr. McFarland access to the information that registration would otherwise provide.

ITEM 16. EXHIBITS

Description of Document

Exhibit No.	
1.1	Form of Underwriting Agreement***
3.1	Articles of Incorporation of ClearSign Combustion Corporation, amended on February 2, 2011**
3.1.1	Articles of Amendment to Articles of Incorporation of ClearSign Combustion Corporation filed on December 22, 2011**
3.2	Bylaws of ClearSign Combustion Corporation**
4.1	Underwriter's Warrant*
4.2	Form of Common Stock Purchase Warrant issued on February 16, 2011 to various consultants**
5.1	Opinion of Richardson & Patel LLP regarding the validity of the common stock being registered**
10.1	Consulting Agreement dated February 14, 2011 between the registrant and MDB Capital Group LLC**
10.2	Engagement Agreement**
10.3.1	Form of Lock-Up Agreement**
10.3.2	Form of Lock-Up Agreement executed by MDB Capital Group, LLC**
10.3.3	Form of Lock-Up Agreement executed by Integrated Surgical Systems, Inc.**
10.4	Subscription Agreement between the registrant and various investors for an offering completed on April 20, 2011**

10.5	Office Lease Agreement**
10.6	Form of Employee Intellectual Property Assignment and Nondisclosure Agreement**
10.7	ClearSign Combustion Corporation 2011 Equity Incentive Plan**
10.8	Advisory Board Agreement dated April 14, 2008 between the registrant and Dr. Thomas Hartwick* *
10.9	Assignment dated October 18, 2010 between the registrant and Thomas S. Hartwick, David Goodson, Richard Rutkowski, Geoffrey Osler and Christopher A. Wiklof**
10.10	Founders Agreement dated April 14, 2008 between the registrant and David Goodson, B.D. and D.G. Goodson Trust, The Alternative Energy Resource Alliance, Geoff Osler, Richard Rutkowski, Trinity West Trust I and Trinity West Trust II**
10.11	Subscription and Contribution Agreement dated March 4, 2008 between the registrant and David Goodson and The Alternative Energy Resource Alliance**
10.12	Subscription and Contribution Agreement dated March 4, 2008 between the registrant and Geoff Osler**
10.13	Subscription and Contribution Agreement dated March 4, 2008 between the registrant and David Goodson and the B. D. and D. G. Goodson Trust**
10.14	Subscription and Contribution Agreement dated April 14, 2008 between the registrant and Richard Rutkowski, Trinity West Trust I and Trinity West Trust II**
10.15	Restricted Stock Purchase Agreement dated April 14, 2008 between the registrant and Dr. Thomas Hartwick**
10.16	Restricted Stock Purchase Agreement dated April 14, 2008 between the registrant and Chris Wiklof**
10.17	Form of Subscription Agreement between the registrant and various investors in an offering completed in October 2009**
10.18	Form of Director and Officer Indemnification Agreement**
10.19	Settlement Agreement and Bill of Sale dated December 13, 2011 between the registrant and Trek, Inc.**
10.20	Promissory Note dated December 15, 2011 made by the registrant in favor of Trek, Inc.**
10.21	Employment Agreement dated December 27, 2011 between the registrant and Richard Rutkowski**
10.22	Amended and Restated Consulting Agreement dated December 22, 2011 between the registrant and John McFarland*
14.1	Code of Business Conduct and Ethics**
23.1	Consent of Gumbiner Savett Inc., Independent Registered Public Accounting Firm*
23.2	Consent of Richardson & Patel LLP (included in Exhibit 5.1)**
99.1	Audit Committee Charter**
99.2	Compensation Committee Charter**
99.3	Nominating and Corporate Governance Committee Charter**

*Filed herewith.

**Previously filed.

***To be filed by amendment.

ITEM 17. UNDERTAKINGS

Insofar as indemnification for liabilities arising under the Securities Act may be permitted as to directors, officers and controlling persons of the registrant pursuant to the provisions described in Item 14, or otherwise, we have been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, we will, unless in the opinion of our counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increases or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability of the registrant under the Securities Act to any purchaser in the initial distribution of the securities: The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser: (i) any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424; (ii) any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant; (iii) the portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and (iv) any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(5) To provide to the underwriter at the closing specified in the underwriting agreements, certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

(6) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus as filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(7) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Seattle, State of Washington, on this 6th day of April, 2012.

CLEARSIGN COMBUSTION CORPORATION

By: /s/ Richard Rutkowski
Richard Rutkowski
Chief Executive Officer

Each person whose signature appears below constitutes and appoints Richard Rutkowski as his or her true and lawful attorneys-in-fact and agents, each acting alone, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any or all amendments (including post-effective amendments) to the Registration Statement, and to sign any registration statement for the same offering covered by this Registration Statement that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and all post-effective amendments thereto, and to file the same, with all exhibits thereto, and all documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, each acting alone, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Dated: April 6, 2012 /s/ Richard F. Rutkowski
Richard F. Rutkowski
Chief Executive Officer and
Director
(Principal Executive Officer)

Dated: April 6, 2012 /s/ James N. Harmon
James N. Harmon
Chief Financial Officer
(Principal Financial and
Accounting

Officer)

Dated: April 6, 2012	/s/ David B. Goodson David B. Goodson Chief Science Officer and Director
Dated: April 6, 2012	/s/ Stephen E. Pirnat Stephen E. Pirnat, Director
Dated: April 6, 2012	/s/ Scott P. Isaacson Scott P. Isaacson, Director
Dated: April 6, 2012	/s/ Lon E. Bell Lon E. Bell, Ph.D., Director