

CLEARSIGN COMBUSTION CORP
Form 424B5
February 05, 2015

Filed pursuant to Rule 424(b)(5)

Registration No. 333-188381

PROSPECTUS SUPPLEMENT

(To the Prospectus Dated May 30, 2013)

2,600,000 Shares of Common Stock

We are offering up to 2,600,000 shares of our common stock.

Our common stock is currently traded on the NASDAQ Capital Market under the symbol "CLIR". On February 4, 2015, the closing price of our common stock was \$6.11 per share.

We are an "emerging growth company" within the meaning of the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, and are subject to reduced public company reporting requirements. See "Prospectus Summary—Implications of Being an Emerging Growth Company."

Investing in our common stock involves significant risks. Before buying any shares, you should read the discussion of material risks of investing in our common stock in "Risk Factors" beginning on page S-7 of this prospectus supplement and page 6 of the accompanying prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus supplement or the prospectus to which it relates. Any representation to the contrary is a criminal offense.

Certain of our officers and directors intend to participate in this offering. For a discussion of the extent of their participation, please see the section of this prospectus titled "Underwriting".

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MDB Capital Group, LLC is the underwriter in connection with this offering. If we sell all of the common stock we are offering, we will pay to MDB Capital Group, LLC approximately \$912,600, or 6%, of the gross proceeds of this offering and a non-accountable expense allowance of \$55,000. For a more complete discussion of the compensation we will pay to the underwriter, please see the section of this prospectus titled

	Per Share	Total
Public offering price	\$5.850	\$15,210,000
Underwriting discounts and commissions	\$0.351	\$912,600
Proceeds to us (before expenses)	\$5.499	\$14,297,400

The underwriter also may purchase an additional 390,000 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 supplement, to cover over-allotments, if any, on the same terms set forth above.

We anticipate delivery of the shares will be made on or about February 10, 2015, subject to customary closing conditions.

This prospectus supplement is dated February 5, 2015

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ABOUT THIS PROSPECTUS SUPPLEMENT

This document is in two parts. The first part is the prospectus supplement, including the documents incorporated by reference, which describes the specific terms of this offering. The second part, the accompanying prospectus, including the documents incorporated by reference, provides more general information. Generally, when we refer to this prospectus, we are referring to both parts of this document combined together and incorporated by reference. We urge you to carefully read this prospectus supplement and the accompanying prospectus, and the documents incorporated herein and therein, before buying any of the securities being offered under this prospectus supplement. This prospectus supplement may add, update or change information contained in the accompanying prospectus. To the extent that any statement that we make in this prospectus supplement is inconsistent with statements made in the accompanying prospectus or any documents incorporated by reference therein, the statements made in this prospectus supplement will be deemed to modify or supersede those made in the accompanying prospectus and such documents incorporated by reference therein.

You should rely only on the information contained or incorporated herein by reference in this prospectus supplement and contained or incorporated therein by reference in the accompanying prospectus. We have not authorized anyone to provide you with different or additional information. If anyone provides you with different, additional or inconsistent information, you should not rely on it.

We are offering to sell, and are seeking offers to buy, the shares only in jurisdictions where such offers and sales are permitted. The distribution of this prospectus supplement and the accompanying prospectus and the offering of the shares in certain jurisdictions or to certain persons within such jurisdictions may be restricted by law. Persons outside the United States who come into possession of this prospectus supplement and the accompanying prospectus must inform themselves about and observe any restrictions relating to the offering of the shares and the distribution of this prospectus supplement and the accompanying prospectus outside the United States. This prospectus supplement and the accompanying prospectus do not constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, any securities offered by this prospectus supplement and the accompanying prospectus by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation.

You should assume that the information in this prospectus supplement and the accompanying prospectus is accurate only as of the date on the front of the applicable document and that any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus supplement or the accompanying prospectus, or any sale of a security. Our business, financial condition, results of operations and prospects may have changed since those dates. You should read this prospectus supplement, the accompanying prospectus and the documents incorporated by reference in this prospectus supplement and the accompanying prospectus when making your investment decision. You should also read and consider the information in the documents we have referred you to in the section of the accompanying prospectus entitled “Where You Can Find More Information” and “Incorporation of Certain Documents by Reference.”

This prospectus supplement, the accompanying prospectus, and the information incorporated herein and therein by reference includes trademarks, service marks and trade names owned by us or other companies. All trademarks, service marks and trade names included or incorporated by reference into this prospectus supplement or the accompanying prospectus are the property of their respective owners.

In this prospectus, unless otherwise specified or the context requires otherwise, we use the terms “ClearSign,” the “Company,” “we,” “us” and “our” to refer to ClearSign Combustion Corporation.

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DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). These statements relate to future events or to our future financial performance and involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed or implied by the forward-looking statements.

Forward-looking statements include, without limitation, statements related to our plans, strategies, objectives, expectations, intentions and adequacy of resources. Investors are cautioned that such forward-looking statements involve risks and uncertainties. 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 our history of losses;
- the successful development of our products;
- the acceptance of our products in our markets;
- our ability to achieve profitability;
- our limited operating history;
- emerging competition and rapidly advancing technology in our industry that may outpace our technologies;
- 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 this prospectus supplement and the accompanying prospectus.

In some cases, you can identify forward-looking statements by terminology such as “may,” “will,” “should,” “could,” “expect,” “plans,” “intends,” “anticipates,” “believes,” “estimates,” “predicts,” “potential,” or “continue” or the negative of such comparable terminology. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof. We do not undertake any obligation to publicly update or review any forward-looking statement.

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights certain information about us, this offering and information appearing elsewhere in this prospectus supplement, in the accompanying prospectus and in the documents we incorporate by reference. This summary is not complete and does not contain all of the information that you should consider before investing in our securities. To fully understand this offering and its consequences to you, you should read this entire prospectus supplement and the accompanying prospectus carefully, including the information referred to under the heading “Risk Factors” in this prospectus supplement beginning on page S-7, the financial statements and other information incorporated by reference in this prospectus supplement and the accompanying prospectus when making an investment decision.

OUR BUSINESS

This is only a summary and may not contain all the information that is important to you. You should carefully read both this prospectus supplement and the accompanying prospectus carefully, including the section entitled “Risk Factors,” and our consolidated financial statements together with the additional information described under the heading “Where You Can Find More Information” in this prospectus supplement.

About ClearSign Combustion Corporation

We design and develop technologies that aim to improve both the emission control characteristics and operational efficiency of combustion systems. Our core technologies include our Duplex™ and Electrodynamic Combustion Control™ (ECC™) technologies. Our Duplex technology uses a porous ceramic tile above a standard burner to significantly reduce flame length and achieve very low emissions without the need for external flue gas recirculation, selective catalytic reduction, or excess air systems. Our ECC technology introduces a computer-controlled high voltage electric field into a combustion volume in order to better control gas-phase chemical reactions and improve system performance and cost-effectiveness. To date, our operations have been funded primarily through sales of our common stock. We have earned no significant revenue since inception on January 23, 2008.

While we have not yet commercialized our Duplex or ECC technologies and our technologies have not been tested or verified by any independent third party, we believe that our proprietary technology platforms may improve emissions control performance and operational efficiency for many types of industrial and commercial combustion systems. As a result, we also believe that our technologies may substantially reduce costs associated with the construction (including refurbishment and upgrade), operation and maintenance of these combustion systems as compared to combustion systems that use no or alternative technology to enhance combustion and control emissions through control of the flame.

Based on the results of our testing, we believe our technologies compare favorably with current industry-standard air pollution control technologies, such as electrostatic precipitators, fabric filters, selective catalytic reduction devices, low- and ultra-low NO_x burners (which address nitrogen oxides), excess air systems and other similar technologies. Such systems are used in our current target market segments of petroleum refining and petrochemical process heaters, package boilers and large-scale once through steam generators (OTSGs).

Our Industry

The combustion and emissions control markets are significant, both in the wide array of industries in which the systems are used and in the amount of money spent in installing and upgrading systems. Nearly two-thirds of the world's total energy consumption is accounted for by the 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. Although the potential markets for our technologies are vast, our current target market segments for introduction of our technologies involve petroleum refining and petrochemical process heaters, package boilers and OTSGs.

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Our Technologies

Field Testing of our Duplex Technology

After performing testing on our Duplex technology in our laboratory furnace with thermal output up to 5 million BTUs per hour (BTU/hr), we commenced field development work in the fourth quarter of 2014.

Our first field project is with Southern California-based Aera Energy LLC (Aera Energy) to demonstrate and test the Duplex technology in an OTSG with thermal output capabilities of up to 40 to 62.5 million BTU/hr used to facilitate the production of heavy oil in California's San Joaquin Valley. Under the terms of our agreement with Aera Energy, we have retrofitted an OTSG unit to attempt to achieve certain performance criteria and continue to conduct testing. Our results to date have been favorable in comparison to the customer criteria, but are not yet completed.

In December 2014, we executed agreements regarding two further field tests with prospective customers at two separate petroleum refineries in the San Joaquin Valley related to process heaters with a thermal output ranging from 12 to 15 million BTU/hr. Each agreement has a term of four months, but may be extended by agreement of the parties. Pursuant to each agreement, if we are able to retrofit the prospective customer's process heater in accordance with the specifications set forth in the agreement, the prospective customer will purchase a Duplex system from us. These prospective customers have no other financial obligations under the agreements.

Technical Components of our Duplex and ECC Technologies

Our Duplex burner technology typically consists of a traditional industrial burner and a porous ceramic tile. When the uncombusted mix of gaseous fuel and air is directed at the tile, hot gas combusts within the tile itself. Because the fuel and air have more time to mix, the NO_x-forming hot spots that are typically produced in an open flame are eliminated and a dramatically shorter flame is produced. NO_x, a regulated pollutant comprised largely of nitrogen oxide and nitrogen dioxide, is greatly reduced without any external fans or associated power, thereby minimizing harmful emissions while improving system efficiency. A shorter flame allows for improved heat transfer and operation of the furnace at a higher capacity since it reduces the possibility of flame impingement and coking in a combustion chamber.

Our ECC 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) electrodes inside the combustion chamber. ECC introduces a high voltage electric field into the combustion process to

control the resulting flames electrically through the naturally forming ions. The electrodes are optimized in material and shape to best suit the specific geometry of a given installation. We have also demonstrated a technique to apply ECC to a combustion system without requiring an electrode to have physical contact with the flame. ECC appears ideally applied to solid fuel combustion.

Because the basic components of both systems are either available 'off the shelf' or require manufacturing techniques that are well within the current state of the art, we do not depend on unavailable external technology.

We believe our technologies can be retrofitted to existing combustion systems to improve their performance and have 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 the design, cost and operation of combustion systems.

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Research and Development Plan

We have tested aspects of our Duplex and ECC technologies in our laboratory on our 1 million and 5 million BTU/hr research furnaces, our 1 million BTU/hr boiler simulator, and our 1 million BTU/hr solid fuel furnace. We have installed our Duplex technology in field test sites with thermal output up to 55 million BTU/hr on an OTSG and continue such testing. We continue to conduct solid fuel laboratory testing utilizing our ECC technology in conjunction with six parties who have collectively contributed \$110,000 in 2014 to our research. Our technologies have not been tested or verified by any independent third party. Our research and development efforts are now focused on the following sequence of activities:

Scale up to commercially relevant sizes. With regard to our ECC technology, we have finalized designs and built furnaces and burners at what we believe to be a commercially relevant scale. We have identified key potential development partners and customers with whom we are engaged in discussions to apply our ECC technology to their particular uses at commercially relevant scales, which can be 1 million BTUs or greater. Our laboratory testing is ongoing in conjunction with the six parties that are offering their field know-how.

Site demonstration at full scale. We have begun to demonstrate our Duplex technology at a commercial site with an OTSG firing at up to 55 million BTU/hr and have reached agreements for two further field site deployments associated with petroleum refinery process heaters. These process heater applications involve the retrofit of a single-burner, 15 million BTU/hr vertical cylindrical heater and a three burner, 12 million BTU/hr process heater. These early site demonstrations are aimed at retrofitting existing burners in single or multi-burner systems in order to evaluate our Duplex technology at full scale in several operating systems.

First installation. After initial completion of site demonstrations in various applications of our Duplex technology, we anticipate that these demonstrations will transition to validation and documentary phases with extended operation periods in the field. This would include validation from prospective customer users and environmental regulatory bodies. We believe that such a demonstration would provide the impetus for commercial adoption within the applicable industry.

Enhancement of our intellectual property portfolio. We have generated inventions that we believe to be patentable subject matter and for which we have been seeking protection through patent application filings. As of December 31, 2014, we have filed 154 patent applications with the U.S. Patent and Trademark Office (USPTO) and certain foreign regulatory bodies related to our Duplex and ECC technologies, which remain pending. We have been granted 3 patents by the USPTO related to our ECC technology. We cannot predict when our patent applications may result in issued patents, if at all. Further, we may modify a patent application in the future as we develop additional information. As a result, we may create additional patent applications from an existing application, consolidate existing patent applications, abandon applications, or otherwise modify applications based upon our judgment in order to protect our intellectual property in a reasonably cost beneficial manner.

The Combustion Markets

Overview

We are seeking to enter the combustion and emissions control markets and to establish ourselves in highly competitive industries against companies that have both substantially greater financial resources than we do and established products. However, we believe that our technologies could offer a unique and powerful ability to improve energy efficiency and enhance operation while reducing many pollutants at the source. We intend to target the following segments of the combustion market:

- process heaters for petroleum refining and petrochemical processing,
- heating systems in package boilers, and

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larger-scale steam generation systems.

In each segment, we plan to market solutions with our Duplex technology that we believe could simultaneously improve both pollution control and operational efficiency characteristics through (a) cost-effective retrofitting of our Duplex technology onto existing standard system designs, and (b) new system designs.

Partnership Strategy

We believe that our technologies have the potential to transform industries that rely upon combustion, and are broadly applicable in large, scalable, global markets.

In addition to our existing agreements with three prospective customers for whom we are field testing our Duplex technology, we intend to form research and development partnerships to further develop our technologies within targeted market segments. Among the types of potential partners we will seek to establish relationships with both in the U.S. and globally, will be:

end users of original equipment manufacturers (OEMs) products and services interested in advancing the development of our technologies in order to address their operational needs;

large OEMs interested in our technologies;

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.

Implications of Being an Emerging Growth Company

We are an “emerging growth company” as defined in the JOBS Act. As an emerging growth company, we can take advantage of specified reduced disclosure and other requirements that are otherwise applicable generally to public companies. These provisions include:

a requirement to provide only two years of audited financial statements in addition to any required unaudited interim financial statements with correspondingly reduced “Management’s Discussion and Analysis of Financial Condition and Results of Operations” disclosure;

reduced disclosure about our executive compensation arrangements;

no non-binding advisory votes on executive compensation or golden parachute arrangements; and

exemption from the auditor attestation requirement in the assessment of our internal control over financial reporting.

We have elected to use the extended transition period for complying with new or revised accounting standards under Section 102(b)(1) of the JOBS Act. This election allows us to delay the adoption of new or revised accounting standards that have different effective dates for public and private companies until those standards apply to private companies. As a result of this election, our financial statements may not be comparable to companies that comply with public company effective dates.

We may take advantage of these provisions for up to five years from the date of our initial public offering which we consummated in 2012 or such earlier time that we are no longer an emerging growth company. We would cease to be an emerging growth company on the date that is the earliest of (i) the last day of the fiscal year in which we have total annual gross revenues of \$1 billion or more; (ii) the last day of our fiscal year ending December 31, 2017; (iii) the date on which we have issued more than \$1 billion in nonconvertible debt during the previous three years; or (iv) the date on which we are deemed to be a “large accelerated filer” under the rules of the Securities and Exchange Commission.

To the extent that we continue to qualify as a “smaller reporting company,” as such term is defined in Rule 12b-2 under the Securities Exchange Act of 1934, as amended, after we cease to qualify as an emerging growth company, certain of the exemptions available to us as an emerging growth company may continue to be available to us as a smaller reporting company, including: (1) not being required to comply with the auditor attestation requirements of Section 404(b) of the Sarbanes Oxley Act; (2) scaled executive compensation disclosures; and (3) the requirement to provide only two years of audited financial statements, instead of three years.

Corporate Information

We were incorporated in Washington on January 23, 2008 under the name “ClearSign Combustion Corporation.” Our facilities and executive offices are located at 12870 Interurban Avenue South, Seattle, Washington 98168, and our telephone number is (206) 673-4848. Additional information about us is available on our website at www.clearsign.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 supplement and the accompanying prospectus. Our common stock, par value \$0.0001 per share, is currently traded on The NASDAQ Capital Market under the ticker symbol “CLIR.”

For a description of our business, financial condition, results of operations and other important information regarding us, we refer you to our filings with the SEC incorporated by reference in this prospectus supplement. For instructions on how to find copies of these documents, see “*Where You Can Find More Information.*”

The Offering

Common stock offered
by us pursuant to this
prospectus supplement 2,600,000 shares

Common stock to be
outstanding
immediately after the
offering 12,281,476 shares

Price per share \$5.85

Over-allotment option We have granted the underwriter an option to purchase from us within 45 days of the date of this prospectus supplement up to an additional 390,000 shares of common stock to cover over-allotments, if any.

Use of proceeds We currently intend to use the net proceeds from this offering as follows: approximately \$6 million for research and development, including capital expenditures, \$3 million for protection of intellectual property, \$2 million for business development and marketing, and the balance for working capital and general corporate purposes. For a more complete discussion of the ways in which the proceeds from this offering may be used, see the section of this prospectus supplement titled "Use of Proceeds" at page S-9.

NASDAQ Capital
Market symbol CLIR

Risk factors Investing in our common stock involves a high degree of risk. See "Risk Factors" beginning on page S-7 of this prospectus supplement and page 6 of the accompanying base prospectus.

Participation of
officers and directors Certain of our officers and directors intend to participate in this offering. For further information relating to their participation, please see the section of this prospectus supplement titled "Underwriting" at page S-12.

The number of shares of common stock to be outstanding immediately after this offering as shown above is based on 9,681,476 shares of common stock outstanding as of December 31, 2014. The number of outstanding shares excludes, as of December 31, 2014:

643,817 shares of common stock reserved for issuance upon the exercise of outstanding stock options granted pursuant to various employee and consultant incentive plans, including our 2011 Equity Incentive Plan, at exercise prices ranging from \$2.20 to \$9.90;

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- 564,272 shares of common stock reserved for issuance pursuant to our warrant purchase agreements at exercise prices ranging from \$1.80 to \$10.00, which have not yet been issued;
- 243,305 shares of our common stock reserved for future issuance under our 2011 Equity Incentive Plan;
- 65,662 shares of our common stock reserved for future issuance under our 2013 Consultant Stock Plan; and
- 390,000 shares of our common stock in respect of the underwriter's over-allotment option.

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RISK FACTORS

Investing in our common stock involves a high degree of risk. Please see the risk factors set forth in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2013, which are incorporated by reference in this prospectus, and those additional risk factors set forth below. Before making an investment decision, you should carefully consider these risks as well as other information we include or incorporate by reference in this prospectus. The risks and uncertainties we have described are not the only ones we face. Additional risks and uncertainties not presently known to us may also affect our business operations. These risks could materially affect our business, results of operations or financial condition and cause the value of our securities to decline.

Risks Related to Our Business

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. Of particular note, the loss of services of Stephen Pirnat, 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

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 and substantial dilution in the net tangible book value per share of the common stock you purchase.

Since the price per share of our common stock being offered is substantially higher than the net tangible book value per share of our common stock, you will suffer immediate dilution in the net tangible book value of the common stock you purchase in this offering. After giving effect to the sale of 2,600,000 shares of our common stock in this offering at the offering price of \$5.85 per share, and after deducting the underwriting commissions and estimated offering expenses payable by us, you will experience immediate dilution of \$4.46 per share, representing the difference between our as adjusted net tangible book value per share as of September 30, 2014 after giving effect to this offering and the offering price. See the section entitled "Dilution" for a more detailed discussion of the dilution you will incur if you purchase common stock in this offering.

You may experience future dilution as a result of future equity offerings.

In order to raise additional capital, we may in the future offer additional shares of our common stock or other securities convertible into or exchangeable for our common stock. We cannot assure you that we will be able to sell shares or other securities in any other offering at a price per share that is equal to or greater than the price per share paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders. The price per share at which we sell additional shares of our common stock or other securities convertible into or exchangeable for our common stock in future transactions may be higher or lower than the price per share in this offering.

Sales of additional shares of our common stock, including by us or our directors and officers following expiration or early release of the three month lock-up, could cause the price of our common stock to decline.

Sales of substantial amounts of our common stock in the public market, or the availability of such shares for sale, by us or others, including the issuance of common stock upon exercise of outstanding options, could adversely affect the price of our common stock. In connection with this offering and with certain exceptions, we and our directors and officers have entered into lock-up agreements for a period of six months following this offering (which period may be extended under certain circumstances). Under the terms of the lock-up agreement, we and our directors and officers may be released from lock-up prior to the expiration of the lock-up period at the sole discretion of MDB Capital Group, LLC. See “Plan of Distribution”. Upon expiration or earlier release of the lock-up, we and our directors and officers may sell shares into the market, which could adversely affect the market price of shares of our common stock.

PRICE RANGE OF OUR COMMON STOCK

Our common stock is traded under the symbol CLIR on the NASDAQ Capital Market. Trading of our common stock on the NASDAQ Capital Market began on April 25, 2012. The table below presents the range of high and low sales prices of our common stock since January 1, 2013.

	High	Low
	2015	
First quarter through February 4, 2015	\$7.24	\$5.78
	2014	
Fourth quarter ended December 31, 2014	\$8.13	\$5.27
Third quarter ended September 30, 2014	\$9.11	\$6.11
Second quarter ended June 30, 2014	\$10.90	\$7.65
First quarter ended March 31, 2014	\$11.75	\$8.77
	2013	
Fourth quarter ended December 31, 2013	\$11.45	\$5.92
Third quarter ended September 30, 2013	\$9.67	\$6.95
Second quarter ended June 30, 2013	\$10.78	\$6.80
First quarter ended March 31, 2013	\$7.13	\$4.29

The last reported sale price of our common stock on the NASDAQ Capital Market on February 4, 2015 was \$6.11 per share.

Holdings

As of February 4, 2015, there were approximately 252 holders of record of our common stock. Additionally, shares of common stock are held by financial institutions as nominees for beneficial owners that are deposited into participant accounts at DTC, which are considered to be held of record by Cede & Co. and are included in the holders of record as one stockholder. Our stock transfer agent is VStock Transfer, LLC, 18 Lafayette Place, Woodmere, New York 11598 and their phone number is (212) 828-8436.

Dividends

We have not paid any cash dividends on our common stock since our inception and do not anticipate paying any cash dividends in the foreseeable future. We plan to retain our earnings, if any, to provide funds for the expansion of our business.

USE OF PROCEEDS

We estimate that the net proceeds from the sale of the shares of common stock that we are offering hereby will be approximately \$14.2 million, after deducting the estimated underwriting commissions and estimated offering expenses payable by us (approximately \$16.3 million if the over-allotment option granted to the underwriter is exercised in full). We do not expect that a change in the offering price or the number of shares by these amounts would have a material effect on our use of the proceeds from this offering, although it may impact the amount of time prior to which we will need to seek additional capital.

We currently intend to use the net proceeds from this offering as follows: approximately \$6 million for research and development including capital expenditures, \$3 million for protection of intellectual property, \$2 million for business development and marketing, and the balance for working capital and general corporate

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 from this offering, and investors will be relying on the judgment of our management with regard to the use of these net proceeds. 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 technologies 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.

Pending the use of the net proceeds from this offering as described above, we intend to invest in investment-grade, interest-bearing instruments.

CAPITALIZATION

The following table sets forth our capitalization as of September 30, 2014 on an actual basis and on an as-adjusted basis after giving effect to the completion of this offering with a sale by us of 2,600,000 shares of common stock and net proceeds of approximately \$14.2 million (2,990,000 shares of common stock and net proceeds of approximately \$16.3 million if the over-allotment option granted to the underwriter is exercised in full).

This table should be read in conjunction with our audited and unaudited financial statements.

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	September 30, 2014	
	As reported (unaudited)	As adjusted (unaudited)
Cash and cash equivalents	\$3,277,000	\$17,439,000
Stockholders' Equity:		
Common stock, \$0.0001 par value, 62,500,000 shares authorized, 9,667,731 shares issued and outstanding, actual; 12,267,731 shares issued and outstanding, as adjusted	\$1,000	\$1,000
Additional paid-in capital	24,003,000	38,165,000
Accumulated deficit	(18,958,000)	(18,958,000)
Total stockholders' equity	\$5,046,000	\$19,208,000

DILUTION

Our net tangible book value as of September 30, 2014 was approximately \$2,774,000, or \$0.29 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 September 30, 2014. Assuming that we issue all of the shares of our common stock offered by us at the offering price of \$5.85 per share, and after deducting the underwriting commissions and estimated offering expenses payable by us, our net tangible book value as of September 30, 2014 would have been approximately \$17.0 million, or \$1.39 per share of our common stock. This amount represents an immediate increase in net tangible book value of \$1.10 per share to our existing shareholders and an immediate dilution in net tangible book value of \$4.46 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 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	\$5.85
Net tangible book value per share as of September 30, 2014	\$0.29
Increase per share attributable to new investors	\$1.10
Adjusted net book value per share after this offering	\$1.39
Dilution in net tangible book value per share to new investors	\$4.46

The following shares were not included in the above calculation as of September 30, 2014:

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676,843 shares of our common stock issuable upon exercise of stock options under our 2011 Equity Incentive Plan at a weighted average exercise price of \$4.46 per share;

564,272 shares of our common stock reserved for issuance under various outstanding warrant agreements at a weighted exercise price of \$4.14 per share;

207,779 shares of our common stock reserved for future issuance under our 2011 Equity Incentive Plan; and

65,412 shares of our common stock reserved for future issuance under our 2013 Consultant Stock Plan.

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Unless otherwise specifically stated, information throughout this prospectus supplement assumes that none of our outstanding options and warrants to purchase shares of our common stock are exercised. To the extent that the above issued options and warrants were exercised, the pro forma net tangible book value per share of our common stock after giving effect to this offering would be \$1.34 per share, and the dilution in net tangible book value per share to investors in this offering would be \$4.51 per share.

In conjunction with this offering, we have agreed not to undertake an offering of our securities for a period of 12 months following the date of this prospectus supplement without the written consent of MDB Capital Group, LLC. However, after expiration of that period, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

UNDERWRITING

We are offering the shares of common stock described in this prospectus supplement through the underwriter, MDB Capital Group, LLC.

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 supplement, shares of our common stock.

The underwriter is committed to purchase all the shares of common stock 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 Current Report on Form 8-K that we filed on February 5, 2015 and is incorporated by reference to the registration statement of which this prospectus is 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 price set forth on the cover page of this prospectus supplement 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 price less a selling concession not in excess of \$0.351 per share. 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 supplement 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 supplement 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 supplement. This prospectus supplement 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.

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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	\$ 15,210,000	\$ 17,491,500
Underwriting discount to be paid to the underwriter	\$ 912,600	\$ 1,049,490
Non-accountable expense allowance	\$ 55,000	\$ 55,000
Net proceeds, before other expenses	\$ 14,242,400	\$ 16,387,010

We estimate the total expenses payable by us for this offering to be \$1,047,600, which amount includes (i) the underwriting discount of \$912,600 (\$1,049,490 if the underwriter's over-allotment option is exercised in full), (ii) a non-accountable expense allowance of \$55,000, and (iii) other estimated expenses of the Company of approximately \$80,000, which includes legal, accounting, printing costs and various fees associated with the registration and listing of our shares.

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 390,000 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 supplement. 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.

Purchase by a Director

The underwriter has agreed with the Company to sell an aggregate of \$500,000 in value of the shares of common stock sold in this offering to Dr. Lon E. Bell, Ph.D., a director, at the public offering price set forth on the cover page of this prospectus supplement.

Lock-Up Agreements

Certain of our officers and directors have agreed that, for a period of six months from the date of this prospectus supplement, 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 277,231 shares of our common stock and 244,818 shares of common stock issuable upon exercise of warrants held by the underwriter. The underwriter has agreed that for a six month period after the date of this prospectus supplement it will not sell, contract to sell, grant any option for the sale or otherwise dispose of an aggregate of 522,049 shares of our common stock issued or issuable to the underwriter, including 244,818 shares subject to outstanding warrants held by the underwriter, which may only be sold with the consent of the Company.

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

LEGAL MATTERS

Richardson & Patel, LLP, with an office at 1100 Glendon Avenue, Suite 800, Los Angeles, California 90024, will pass upon the validity of the securities offered in this prospectus supplement. As of the date of this prospectus supplement, the principals of Richardson & Patel, LLP or entities controlled by its principals own 10,000 shares of our common stock. Although Richardson & Patel, LLP is not under any obligation to accept shares of our common stock in payment for services, it has done so in the past and may do so in the future. Certain legal matters relating to the offering will be passed upon for the underwriter by Golenbock Eiseman Assor Bell & Peskoe, 437 Madison Avenue, 40th Floor, New York, New York 10022.

EXPERTS

Gumbiner Savett Inc., independent registered public accounting firm, has audited our financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2013, as set forth in their report, which is incorporated by reference in this prospectus supplement. Our financial statements are incorporated by reference in reliance on 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-3 under the Securities Act of 1933, as amended (the "Securities Act"), with respect to the securities offered by this prospectus supplement and the accompanying prospectus. This prospectus supplement and the accompanying prospectus, which form a part of the registration statement, do not contain all of the information set forth in the registration statement and its exhibits and schedules, certain parts of which are omitted in accordance with the SEC's rules and regulations. For further information about us and the securities being offered, we refer you to the registration statement and to such exhibits and schedules. You may review a copy of the registration statement, without charge, at the SEC's public reference room located at 100 F. Street, N.E., Washington, D.C. 20549 as well as through the SEC's website at <http://www.sec.gov>. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the Public Reference Room. Please be aware that statements in this prospectus supplement and the accompanying prospectus referring to a contract or other document are summaries and you should refer to the exhibits that are part of the registration statement for a copy of the contract or other document.

We are subject to the information and periodic reporting requirements of the Exchange Act and, in accordance therewith, we file periodic reports, proxy statements and other information with the SEC. Such periodic reports, proxy statements and other information are available for inspection and copying at the Public Reference Room and website

of the SEC referred to above. We maintain a website at <http://www.clearsign.com>. You may access our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed pursuant to Sections 13(a) or 15(d) of the Exchange Act with the SEC free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. Our website and the information contained on that site, or connected to that site, are not incorporated into and are not a part of this prospectus supplement.

INFORMATION INCORPORATED BY REFERENCE

The SEC and applicable law permits us to “incorporate by reference” into this prospectus information that we have or may in the future file with or furnish to the SEC. This means that we can disclose important information by referring you to those documents. You should read carefully the information incorporated herein by reference because it is an important part of this prospectus supplement. We hereby incorporate by reference the following documents into this prospectus supplement and the accompanying prospectus:

· Our Annual Report on Form 10-K for the fiscal year ended December 31, 2013, as filed with the SEC on March 11, 2014;

· Our Quarterly Report on Form 10-Q for the quarter ended March 31, 2014, as filed with the SEC on May 8, 2014;

· Our Quarterly Report on Form 10-Q for the quarter ended June 30, 2014, as filed with the SEC on August 12, 2014;

· Our Quarterly Report on Form 10-Q for the quarter ended September 30, 2014, as filed with the SEC on November 13, 2014;

· All information in our proxy statement filed with the SEC on March 18, 2014 to the extent incorporated by reference in our Annual Report on Form 10-K for the year ended December 31, 2013; and

· Our Current Reports on Form 8-K filed with the SEC on February 28, 2014, May 8, 2014, December 12, 2014 and February 5, 2015; and

· The description of our common stock included in our Form 8-A filed with the SEC on April 23, 2012.

Additionally, all documents filed by us with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, (other than any portions of filings that are furnished rather than filed pursuant to Items 2.02 and 7.01 of a Current Report on Form 8-K, unless otherwise stated therein), after the date of this prospectus supplement and before the termination or completion of this offering shall be deemed to be incorporated by reference into this prospectus supplement from the respective dates of filing of such documents. Any information that we subsequently file with the SEC that is incorporated by reference as described above will automatically update and supersede any previous information that is part of this prospectus supplement and the accompanying prospectus.

Upon written or oral request, we will provide you without charge, a copy of any or all of the documents incorporated by reference, other than exhibits to those documents unless the exhibits are specifically incorporated by reference in the documents. Please send requests to ClearSign Combustion Corporation, 12870 Interurban Avenue South, Seattle, Washington 98168, Attn: Chief Financial Officer, Telephone: (206) 673-4848.

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.

PROSPECTUS

\$30,000,000

Common Stock, Preferred Stock and Warrants Offered

by ClearSign Combustion Corporation

and

147,618 Shares of Common Stock Offered by Selling Shareholders

By this prospectus and an accompanying prospectus supplement, we may from time to time offer and sell, in one or more offerings, up to \$30,000,000 in any combination of common stock, preferred stock and warrants. Also, the selling shareholders identified in this prospectus may, from time to time, offer and sell up to 147,618 shares of common stock. See the section of this prospectus titled "Selling Shareholders."

We will provide you with more specific terms of these securities in one or more supplements to this prospectus. You should read this prospectus and the applicable prospectus supplement carefully before you invest.

We or any selling stockholder may offer these securities from time to time in amounts, at prices and on other terms to be determined at the time of offering. We or any selling stockholder may offer and sell these securities to or through underwriters, dealers or agents, or directly to investors, on a continuous or delayed basis. The supplements to this prospectus will provide the specific terms of the plan of distribution. The price to the public of such securities and the net proceeds we expect to receive from such sale will also be set forth in a prospectus supplement. We will not receive any proceeds from the sale of our common stock by the selling shareholders.

Our common stock is listed on the NASDAQ Capital Market under the symbol "CLIR". On May 3, 2013, the closing price of our common stock as reported by the NASDAQ Capital Market was \$8.81 per share. The aggregate market value of our outstanding voting common stock held by non-affiliates, based upon a closing sale price of our common stock on May 3, 2013 was \$60,417,000. During the 12 calendar month period that ends on, and includes, the date of this prospectus, we have not offered any securities pursuant to General Instruction I.B.6. of Form S-3.

We are an “emerging growth company” under the federal securities laws and will be subject to reduced public company reporting requirements. An investment in our securities may be considered speculative and involves a high degree of risk, including the risk of a substantial loss of your investment. See “Risk Factors” on page 6 for more information on the risks you should consider before buying our securities. An investment in our securities is not suitable for all investors. We intend to continue to issue our securities in this offering and, as a result, your ownership in us is subject to dilution.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities, or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is May 30, 2013.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement filed with the Securities and Exchange Commission (the “SEC”) using a “shelf” registration process. Under this shelf process, we may sell the securities described in this prospectus in one or more offerings. This prospectus provides you with a general description of the securities which may be offered. Each time we offer securities for sale, we will provide a prospectus supplement that contains specific information about the terms of that offering. Any prospectus supplement may also add or update information contained in this prospectus. You should read both this prospectus and any prospectus supplement together with additional information described below under “Where You Can Find More Information” and “Information Incorporated by Reference.”

The registration statement that contains this prospectus (including the exhibits thereto) contains additional important information about us and the securities we may offer under this prospectus. Specifically, we have filed certain legal documents that establish the terms of the securities offered by this prospectus as exhibits to the registration statement. We will file certain other legal documents that establish the terms of the securities offered by this prospectus as exhibits to reports we file with the SEC. You may obtain copies of that registration statement and the other reports and documents referenced herein as described below under the heading “Where You Can Find More Information.”

You should rely only on the information contained or incorporated by reference in this prospectus and in any prospectus supplement. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not making offers to sell or solicitations to buy the securities in any jurisdiction in which an offer or solicitation is not authorized or in which the person making that offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make an offer or solicitation. You should not assume that the information in this prospectus or any prospectus supplement, as well as the information we file or previously filed with the SEC that we incorporate by reference in this prospectus or any prospectus supplement, is accurate as of any date other than its respective date. Our business, financial condition, results of operations and prospects may have changed since those dates.

In this prospectus, unless the context otherwise requires, references to “ClearSign,” “we,” “us,” “our” or the “Company” refer to ClearSign Combustion Corporation.

DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and any accompanying prospectus supplement, including the documents that we incorporate by reference, may contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”).

Forward-looking statements in this prospectus and any accompanying prospectus supplement include, without limitation, statements related to our plans, strategies, objectives, expectations, intentions and adequacy of resources. Investors are cautioned that such forward-looking statements involve risks and uncertainties. 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 our history of losses;
- our ability to achieve profitability;
- our limited operating history;
- emerging competition and rapidly advancing technology in our industry that may outpace our 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 this prospectus.

In some cases, you can identify forward-looking statements by terminology such as “may,” “will,” “should,” “could,” “expect,” “plans,” “intends,” “anticipates,” “believes,” “estimates,” “predicts,” “potential,” or “continue” or the negative of such comparable terminology. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof. We do not undertake any obligation to publicly update or review any forward-looking statement.

OUR BUSINESS

This is only a summary and may not contain all the information that is important to you. You should carefully read both this prospectus and any accompanying prospectus supplement and any other offering materials, together with the additional information described under the heading “Where You Can Find More Information.”

About ClearSign Combustion Corporation

We are a development stage company that designs and develops technologies that aim to improve key performance characteristics of combustion systems including energy efficiency, emissions control, fuel flexibility and overall cost effectiveness.

We believe that our Electrodynamic Combustion Control™ (ECC™) technology could 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 also believe that our technology could improve emissions control performance and meet regulatory standards while at the same time yielding a significant increase in energy efficiency, thereby substantially reducing the cost of compliance with air quality regulations. 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 modify 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.

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 2012 analysis, The McIlvaine Company projected that \$44 billion will be invested globally in 2013 in equipment, instrumentation, and consumables to reduce air pollution, representing a 26% increase over the 2012 total of \$35 billion.

Our Technology

Overview. While our technology has not been deployed commercially, nor has it been tested or verified by any independent third party, if the results we have observed in our laboratory 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 could 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 NO_x burners (which address nitrogen oxides), 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,

· gas utility turbines and turbines used in commercial and military aviation, 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) 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. We have also demonstrated a technique to apply ECC to a combustion system without requiring an electrode to have physical contact with the flame. 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, we do 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 the design, cost and operation of combustion systems. We believe the economic gain realized by an operator could 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).

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.

Research and Development Plan. We have tested aspects of our technology on our 5,000 BTU and 25,000 BTU bench top scale prototypes and our 1 million BTU research furnace. Our technology has not been tested or verified by any independent third party. 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 key potential development partners and customers with whom we are engaged in discussions to apply our technology to their particular use at commercially relevant scale, which can be 1 million BTUs or greater.

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.

First installation. Assuming the successful demonstration of small numbers of burners in multi-burner systems, 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.

Enhancement of our intellectual property portfolio. We have generated more than 150 inventions that we believe to be patentable subject matter which we have been and will continue to protect through patent application filings. As of March 31, 2013, we have filed 104 patent applications.

The Combustion Markets

Overview. 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. However, 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 view our market as divided into two broad segments:

- *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.

- *Power generation* includes electric power plants fueled by pulverized coal and those utilizing gas-turbines.

In each market segment and sub-segment, we plan to initially market solutions that we believe could be cost-effective retrofitting of our technology onto existing, standard system designs to simultaneously improve both their energy efficiency and pollution control characteristics.

Partnership Strategy. 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.

We intend to form research and development partnerships to develop our technology within the industrial combustion and power generation segments. Among the types of potential partners we will seek to establish relationships with will be:

- Large OEMs interested in ECC technology;
- Engineering and construction 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.

In April 2013, we announced our intention to enter into a development agreement with Grandeg, a European manufacturer of commercial wood pellet boiler systems. Under the agreement, we will develop solutions based on our ECC technology for both retrofit into existing Grandeg biomass boilers as well as for integration into new product designs. Grandeg has indicated its intent to provide up to \$500,000 in funding to support a phased initial project that is expected to begin upon execution of a definitive agreement, with the goal of releasing a first commercial solution to the market during 2014. While a definitive agreement is expected to be executed by June 2013, there is no assurance that terms will be reached or a final agreement executed.

Corporate Information

Our facilities and executive offices are located at 12870 Interurban Avenue South, Seattle, Washington 98168, and our telephone number is (206) 673-4848. We were incorporated in Washington on January 23, 2008. Additional information about us is available on our website at www.clearsign.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. Our common stock, par value \$0.0001 per share, is currently traded on The NASDAQ Capital Market under the ticker symbol "CLIR."

For a description of our business, financial condition, results of operations and other important information regarding us, we refer you to our filings with the SEC incorporated by reference in this prospectus. For instructions on how to find copies of these documents, see "Where You Can Find More Information."

RISK FACTORS

Investing in our common stock involves a high degree of risk. Please see the risk factors set forth in Part I, Item 1A of our Annual Report on Form 10-K and other filings we make with the SEC, which are incorporated by reference in this prospectus. Additional risk factors may be included in a prospectus supplement relating to a particular offering of securities. Before making an investment decision, you should carefully consider these risks as well as other information we include or incorporate by reference in this prospectus. The risks and uncertainties we have described are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our business operations. These risks could materially affect our business, results of operations or financial condition and cause the value of our securities to decline.

USE OF PROCEEDS

Unless we state otherwise in an accompanying prospectus supplement, we intend to use the net proceeds from the sale of the securities offered by us under this prospectus and any related prospectus supplement for general corporate purposes. These purposes may include capital expenditures and additions to working capital. When a particular offering of securities is made, the prospectus supplement relating to that offering will set forth our intended use of the net proceeds we receive from the sale of the securities. Pending the application of the net proceeds, we may invest the proceeds in short-term, interest-bearing instruments or other investment-grade securities. We will not receive any proceeds from the sales, if any, of the shares of common stock being offered and sold by the selling shareholders or their pledgees, donees, transferees or other successors in interest.

DILUTION

We will set forth in a prospectus supplement the following information regarding any material dilution of the equity interests of investors purchasing securities sold by ClearSign in an offering under this prospectus:

- the net tangible book value per share of our equity securities before and after the offering;
- the amount of the increase in such net tangible book value per share attributable to the cash payments made by purchasers in the offering; and
- the amount of the immediate dilution from the public offering price which will be absorbed by such purchasers.

DESCRIPTION OF THE SECURITIES THAT MAY BE OFFERED

Description of Common Stock

The following summary of the rights of our common stock is not complete and is subject to and qualified in its entirety by reference to our articles of incorporation and bylaws, copies of which are incorporated by reference to our registration statement on Form S-1. See “Where You Can Find More Information.”

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 May 6, 2013 we had 8,793,265 shares of common stock issued and outstanding. Our authorized but unissued shares of common stock are available for issuance without further action by our shareholders, unless such action is required by applicable law or the rules of the NASDAQ Capital Market or any other stock exchange or automated quotation system on which our securities may become listed or traded. If the approval of our shareholders is not so required, our board of directors may determine not to seek stockholder approval.

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.

Our common stock is listed on the NASDAQ Capital Market under the symbol "CLIR". On May 3, 2013, the last sale price of our common stock was \$8.81 per share. The transfer agent and registrar for our common stock is VStock Transfer, LLC. Its address is 77 Spruce Street, Suite 201, Cedarhurst, New York 11516, and its telephone number is (212) 828-8436.

Description of Preferred Stock

Our articles of incorporation permit 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 stockholder action, to provide for the issuance of shares of preferred stock, in one or more series, and to fix the designation, limitations, voting powers, preferences and relative rights of the shares and to fix the qualifications, limitations and restrictions thereof.

Description of Warrants to Purchase Common Stock or Preferred Stock

We may issue warrants for the purchase of our preferred stock or common stock, which we refer to in this prospectus as "equity warrants". As explained below, each equity warrant will entitle its holder to purchase our equity securities at an exercise price set forth in, or to be determined as set forth in, the related prospectus supplement. Equity warrants may be issued separately or together with equity securities. The equity warrants are to be issued under equity warrant agreements.

The particular terms of each issue of equity warrants and the equity warrant agreement relating to the equity warrants will be described in the applicable prospectus supplement, including, as applicable:

- the title of the equity warrants;

- the initial offering price;

- the aggregate number of equity warrants and the aggregate number of shares of the equity security purchasable upon exercise of the equity warrants;

- if applicable, the designation and terms of the equity securities with which the equity warrants are issued, and the number of equity warrants issued with each equity security;

- the date on which the right to exercise the equity warrants will commence and the date on which the right will expire;

- if applicable, the minimum or maximum number of the equity warrants that may be exercised at any one time;

- anti-dilution provisions of the equity warrants, if any;

- redemption or call provisions, if any, applicable to the equity warrants;
 - any additional terms of the equity warrants, including terms, procedures and limitations relating to the exchange and exercise of the equity warrants; and
- the exercise price.

Holders of equity warrants will not be entitled, solely by virtue of being holders, to vote, to consent, to receive dividends, to receive notice as shareholders with respect to any meeting of shareholders for the election of directors or any other matter, or to exercise any rights whatsoever as a holder of the equity securities purchasable upon exercise of the equity warrants.

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. We are 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 any vacancy occurring on our board of directors may be filled by the shareholders, by the board of directors or, if the directors in office constitute less than a quorum, by the affirmative vote of a majority of the remaining directors.

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 on any issue proposed to be considered at the special meeting.

SELLING SHAREHOLDERS

We have prepared this prospectus to allow the selling shareholders named in the Selling Shareholder Table below to sell, from time to time, up to 147,618 shares of our common stock. All of the common stock included in that table may be offered by the selling shareholders for their own account by means of this prospectus. We will receive no proceeds from the sale of the shares held by the selling shareholders although, if the warrants are exercised, we would receive \$300,010 from the exercise of the warrants if a cashless exercise does not occur.

Registration of Warrants held by the MDB Selling Shareholders - As part of this prospectus, we are registering for resale 136,368 shares of common stock underlying warrants. The shares described in the table below under the heading “MDB Selling Shareholders” consist of shares of common stock that will be issued if these selling shareholders exercise their warrants. The warrants were originally issued to MDB Capital Group, LLC (“MDB”) in partial compensation for services rendered to us by MDB in connection with a private offering we undertook in April 2011. MDB subsequently transferred warrants covering 62,050 shares of our common stock to its employees. The warrants include piggy-back registration rights, which the MDB Selling Shareholders have exercised. Within the past three years, MDB has provided underwriting and investment banking services, consulting services, and intellectual property services described in previously filed periodic reports, proxy statements and other information with the SEC.

Registration of Other Shares - As part of this prospectus, we are registering for resale 11,250 shares of common stock issued to John McFarland pursuant to the ClearSign Combustion Corporation 2013 Consultant Stock Plan approved by the Company’s shareholders on May 2, 2013 for consulting services provided or to be provided in 2013. Since September 2011, Mr. McFarland has provided investor relations services to the Company.

The following table sets forth information with respect to the common stock known to us to be beneficially owned by the selling shareholders as of May 6, 2013, including the total number of securities the selling shareholders may sell under this prospectus from time to time, and the number of securities the selling shareholders will own thereafter assuming no other acquisitions or dispositions of our securities. However, we have no way of determining the number of shares of common stock each will hold after this offering. Therefore, we have prepared the table below on the assumption that the selling shareholders will sell all of the shares of common stock covered by this prospectus.

We may amend or supplement this prospectus from time to time to update the disclosure set forth herein, however, if a selling shareholder transfers his or her interest in the common stock warrants prior to the effective date of the registration statement of which this prospectus is a part, we will be required to file a post-effective amendment to the registration statement to provide the information concerning the transferee. Alternatively, if a selling shareholder transfers his or her interest in the common stock warrants after the effective date of the registration statement of which this prospectus is a part, we may use a supplement to update this prospectus. See our discussion titled “Plan of Distribution” for further information regarding the selling shareholders’ method of distribution of these shares.

Selling Shareholder Table

Name	Securities Beneficially Owned Prior to Offering (1)	Securities Being Offered	Securities Beneficially Owned After Offering (2)	% Beneficial Ownership After Offering	
MDB Selling Shareholders:					
MDB Capital Group, LLC (3)(4)	534,025	74,318	459,707	5.1	%
Amy En-Mei Wang (4)(5)(6)	116,132	17,409	98,723	1.1	%
Christopher A. Marlett (4)(6)(7)	810,967	91,727	719,240	8.0	%
Daniel E. Nagy (4)(6)(8)	13,365	865	12,500	0.1	%
Gary A. Schuman (4)(6)(9)	6,812	312	6,500	0.1	%
George H. Brandon (4)(10)(11)	41,052	2,882	38,170	0.4	%
Kevin M. Cotter (4)(6)(12)	30,867	2,882	27,985	0.3	%
Robert C. Clifford (4)(6)(13)	66,507	2,882	63,625	0.7	%
Robert M. Levande (4)(6)(14)	134,708	17,409	117,299	1.3	%
Total of MDB Selling Shareholders	1,220,410	136,368	1,084,042	11.9	%
John McFarland (15)	24,750	11,250	13,500	0.2	%
Total of Selling Shareholders	1,245,160	147,618	1,097,542	11.9	%

- (1) Percentages stated in the above table are based on a total of 8,793,265 shares of common stock outstanding as of May 6, 2013.
- (2) Assumes that all of the shares offered hereby are sold and that shares owned before the offering but not offered hereby are not sold.
Includes 289,207 shares of common stock and 244,818 shares of common stock underlying two warrants.
- (3) Christopher A. Marlett is CEO of MDB Capital Group, LLC, a broker-dealer, and has sole voting and dispositive power with respect to its shares of common stock.
- (4) The address of the security holder is 401 Wilshire Boulevard, Suite 1020, Santa Monica, California 90401.
- (5) Includes 74,573 shares of common stock and 41,559 shares of common stock underlying two warrants.
This security holder is an associated person of a broker-dealer. This person has represented to the Company that
- (6) he or she received a portion of the securities as compensation, and he had no agreements or understanding, directly or indirectly, with any person to distribute the securities at the time of their acquisition.
Includes 183,490 shares of common stock and 89,859 shares of common stock underlying two warrants owned by Mr. Marlett. This amount also includes 3,593 shares of common stock owned by Integrated Surgical Systems, Inc. and 289,207 shares of common stock and 244,818 shares of common stock underlying two warrants owned
- (7) by MDB Capital Group, LLC, for both of which Mr. Marlett 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.
- (8) Includes 12,500 shares of common stock and 865 shares of common stock underlying a warrant.
- (9) Includes 4,500 shares of common stock and 312 shares of common stock underlying a warrant.

- (10) Includes 18,040 shares of common stock and 21,512 shares of common stock underlying two warrants.
This security holder is an associated person of a broker-dealer. This person has represented to the Company that he acquired a portion of the securities as an investment and received a portion of the securities as compensation,
- (11) and he had no agreements or understanding, directly or indirectly, with any person to distribute the securities at the time of their acquisition.
- (12) Includes 13,495 shares of common stock and 17,372 shares of common stock underlying two warrants.
- (13) Includes 25,995 shares of common stock and 21,512 shares of common stock underlying two warrants.
- (14) Includes 93,149 shares of common stock and 41,559 shares of common stock underlying two warrants.
- (15) Includes 11,250 shares of common stock held in escrow pending performance of consulting services in 2013.
The address of the security holder is 2854 Johnson Ferry Road, Suite 200, Marietta, Georgia 30062.

PLAN OF DISTRIBUTION

We or the selling shareholders may offer and sell the securities in any one or more of the following ways:

· to or through underwriters, brokers or dealers;

· directly to one or more other purchasers;

· through a block trade in which the broker or dealer engaged to handle the block trade will attempt to sell the securities as agent, but may position and resell a portion of the block as principal to facilitate the transaction;

· through agents on a best-efforts basis;

· in “at the market” offerings, as defined in Rule 415 under the Securities Act, at negotiated prices, at prices prevailing at the time of sale or at prices related to such prevailing market prices, including sales made directly on NASDAQ or sales made through a market maker other than on an exchange or other similar offerings through sales agents; or

· otherwise through any other method permitted by applicable law or a combination of any of the above methods of sale.

In addition, we may enter into option, share lending or other types of transactions that require us to deliver shares of common stock to an underwriter, broker or dealer, who will then resell or transfer the shares of common stock under this prospectus. We may also enter into hedging transactions with respect to our securities. For example,

we may:

- enter into transactions involving short sales of the shares of common stock by underwriters, brokers or dealers;
- sell shares of common stock short and deliver the shares to close out short positions;
- enter into option or other types of transactions that require the delivery shares of common stock to an underwriter, broker or dealer, who will then resell or transfer the shares of common stock under this prospectus; or
- loan or pledge the shares of common stock to an underwriter, broker or dealer, who may sell the loaned shares or, in the event of default, sell the pledged shares.

We may enter into derivative transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement indicates, in connection with those derivatives, the third parties may sell securities covered by this prospectus and the applicable prospectus supplement, including in short sale transactions. If so, the third party may use securities pledged by or borrowed from us or others to settle those sales or to close out any related open borrowings of stock, and may use securities received from us in settlement of those derivatives to close out any related open borrowings of stock. The third party in such sale transactions will be an underwriter and, if not identified in this prospectus, will be identified in the applicable prospectus supplement (or a post-effective amendment). In addition, we may otherwise loan or pledge securities to a financial institution or other third party that in turn may sell the securities short using this prospectus. Such financial institution or other third party may transfer its economic short position to investors in our securities or in connection with a concurrent offering of other securities.

Each time we or the selling shareholders sell securities, we or the selling shareholders will provide a prospectus supplement that will name any underwriter, dealer or agent involved in the offer and sale of the securities. Any prospectus supplement will also set forth the terms of the offering, including:

- the purchase price of the securities and the proceeds we or the selling shareholders will receive from the sale of the securities;
- any underwriting discounts and other items constituting underwriters' compensation;

- any public offering or purchase price and any discounts or commissions allowed or re-allowed or paid to dealers;
- any commissions allowed or paid to agents;
- any other offering expenses;
- any securities exchanges on which the securities may be listed;
- the method of distribution of the securities;
- the terms of any agreement, arrangement or understanding entered into with the underwriters, brokers or dealers; and
- any other information we think is important.

If underwriters or dealers are used in the sale, the securities will be acquired by the underwriters or dealers for their own account. The securities may be sold from time to time by us or the selling shareholders in one or more transactions:

- at a fixed price or prices, which may be changed;
- at market prices prevailing at the time of sale;
 - at prices related to such prevailing market prices;
- at varying prices determined at the time of sale; or
- at negotiated prices.

Such sales may be effected:

- in transactions on any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale;
- in transactions in the over-the-counter market;
 - in block transactions in which the broker or dealer so engaged will attempt to sell the securities as agent
 - but may position and resell a portion of the block as principal to facilitate the transaction, or in crosses, in which the same broker acts as an agent on both sides of the trade;
- through the writing of options; or
- through other types of transactions.

Any shares of common stock covered by this prospectus that qualify for sale pursuant to Rule 144 under the Securities Act may be sold under Rule 144 rather than pursuant to this prospectus.

The securities may be offered to the public either through underwriting syndicates represented by one or more managing underwriters or directly by one or more of such firms. Unless otherwise set forth in the prospectus supplement, the obligations of underwriters or dealers to purchase the securities offered will be subject to certain conditions precedent and the underwriters or dealers will be obligated to purchase all the offered securities if any are

purchased. Any public offering price and any discount or concession allowed or reallocated or paid by underwriters or dealers to other dealers may be changed from time to time.

The securities may be sold directly by us, the selling shareholders or through agents as designated from time to time. Any agent involved in the offer or sale of the securities in respect of which this prospectus is delivered will be named, and any commissions payable to such agent will be set forth in, the prospectus supplement. Unless otherwise indicated in the prospectus supplement, any such agent will be acting on a best efforts basis for the period of its appointment.

Offers to purchase the securities offered by this prospectus may be solicited, and sales of the securities may be made by us or the selling shareholders directly to institutional investors or others, who may be deemed to be underwriters within the meaning of the Securities Act with respect to any resale of the securities. The terms of any offer made in this manner will be included in the prospectus supplement relating to the offer.

Some of the underwriters, dealers or agents used by us or the selling shareholders in any offering of securities under this prospectus may be customers of, engage in transactions with, and perform services for us or affiliates of ours in the ordinary course of business. Underwriters, dealers, agents and other persons may be entitled to indemnification against and contribution toward certain civil liabilities, including liabilities under the Securities Act, and to be reimbursed for certain expenses.

Subject to any restrictions relating to debt securities in bearer form, any securities initially sold outside the United States may be resold in the United States through underwriters, dealers or otherwise.

Any underwriters to which offered securities are sold by us or the selling shareholders for public offering and sale may make a market in such securities, but those underwriters will not be obligated to do so and may discontinue any market making at any time.

The anticipated date of delivery of the securities offered by this prospectus will be described in the applicable prospectus supplement relating to the offering.

The selling shareholders and any broker-dealer participating in the distribution of the shares of common stock may be deemed to be an “underwriter” within the meaning of the Securities Act with respect to any securities such entity sells pursuant to this prospectus.

To comply with the securities laws of