

CLEARSIGN COMBUSTION CORP

Form 424B3

May 01, 2012

Prospectus Filed pursuant to Rule 424(b)(3)

Registration Statement File No. 333-177946

CLEARSIGN COMBUSTION CORPORATION

454,545 Shares

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

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

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

On April 24, 2012, a registration statement under the Securities Act with respect to our initial public offering underwritten by MDB Capital Group LLC, of \$12 million of shares of common stock was declared effective by the Securities and Exchange Commission. We expect to receive approximately \$9.5 million in net proceeds from the offering after payment of underwriting discounts and commissions and estimated expenses of the offering.

We are an "emerging growth company" under the federal securities laws and will be subject to reduced public company reporting requirements. Investing in our common stock involves a high degree of risk. You should

carefully consider the matters discussed under the section entitled “Risk Factors” beginning on page7 of this prospectus.

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

The date of this prospectus is April 24, 2012.

TABLE OF CONTENTS

	Page
PROSPECTUS SUMMARY	1
RISK FACTORS	7
BUSINESS	16
MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS	40
DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE	44
EXECUTIVE COMPENSATION	48
DESCRIPTION OF CAPITAL STOCK	51
DIVIDEND POLICY AND OTHER SHAREHOLDER MATTERS	56
SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT	56
CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE	57
SHARES REGISTERED FOR DISTRIBUTION	58
PLAN OF DISTRIBUTION	59
USE OF PROCEEDS	60
CAPITALIZATION	60
LEGAL MATTERS	61
EXPERTS	61
WHERE YOU CAN FIND MORE INFORMATION	61
DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES	61
INDEX TO FINANCIAL STATEMENTS	62

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

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

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

Prospectus Summary

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

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

About ClearSign Combustion Corporation

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

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

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

The Industry

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

Our Proprietary Technology

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

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

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

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

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

Better combustion – less unburned fuel and better fuel/air mixing increases efficiency and reduces pollutant formation.

- *Superior flame quality* – optimizes flame shape and flame stability to maximize energy efficiency.
- *Precision control of heat transfer* – increases thermal efficiency and therefore, fuel efficiency.

Control over combustion reaction chemistry – enables control over flame chemistry, which can selectively promote, suppress, retard or accelerate chemical reactions as desired to minimize formation of pollutants and enhance pollution

abatement.

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

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

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

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

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

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

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

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

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

The Combustion Markets

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

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

Industry research groups, whose mission is the development and testing of new technologies for the eventual benefit of their member companies;

Government entities such as the U.S. Department of Energy, that are chartered with the development of longer-range and potentially disruptive energy technologies;

Engineering and Construction (E&C) companies interested in differentiating their offerings while increasing profitability;

Large OEMs interested in ClearSign's technology

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

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

Going Concern

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

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

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

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

Risks Related to Our Business

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

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

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

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

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

Our efforts may never demonstrate the feasibility of our technology.

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

We may be unable to protect our intellectual property.

Stock Split

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

SUMMARY SELECTED FINANCIAL INFORMATION

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

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

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

December 31,
2011 2010

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

RISK FACTORS

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

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

Risks Related to Our Business

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

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

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

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

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

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

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

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

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

We are an "emerging growth company" under the JOBS Act of 2012 and we cannot be certain if the reduced disclosure requirements applicable to emerging growth companies will make our common stock less attractive to investors.

We are an “emerging growth company”, as defined in the Jumpstart Our Business Startups Act of 2012 (“JOBS Act”), and we may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not “emerging growth companies” including, but not limited to, not being required to comply with the auditor attestation requirements of section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved. We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

In addition, Section 107 of the JOBS Act also provides that an “emerging growth company” can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act for complying with new or revised accounting standards. In other words, an “emerging growth company” can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We are choosing to take advantage of the extended transition period for complying with new or revised accounting standards.

We will remain an “emerging growth company” for up to five years, although we will lose that status sooner if our revenues exceed \$1 billion, if we issue more than \$1 billion in non-convertible debt in a three year period, or if the market value of our common stock that is held by non-affiliates exceeds \$700 million as of June 30.

Our status as an “emerging growth company” under the JOBS Act of 2012 may make it more difficult to raise capital as and when we need it.

Because of the exemptions from various reporting requirements provided to us as an “emerging growth company” and because we will have an extended transition period for complying with new or revised financial accounting standards, we may be less attractive to investors and it may be difficult for us to raise additional capital as and when we need it. Investors may be unable to compare our business with other companies in our industry if they believe that our financial accounting is not as transparent as other companies in our industry. If we are unable to raise additional

capital as and when we need it, our financial condition and results of operations may be materially and adversely affected.

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

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

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

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

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

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

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

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

revoke our patents or limit the scope of coverage for those patents.

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

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

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

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

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

Our efforts may never demonstrate the feasibility of our product.

Our research and development efforts remain subject to all of the risks associated with the development of new products based on emerging and innovative technologies, including without limitation unanticipated technical or other problems, our ability to scale our technology to large, industrial applications, conditions in the field during installation and the possible insufficiency of funds for completing development of these products. Technical problems, including those specific to customer site implementation, may result in delays and cause us to incur additional expenses that would increase our losses. If we cannot complete, or if we experience significant delays in completing, research and development of our technology for use in potential commercial applications, particularly after incurring significant expenditures, our business may fail.

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

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

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

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

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

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

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

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

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

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

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

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

Risks Related to this Offering and Owning Our Common Stock

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

Prior to our initial public offering, there was no public market for our common stock. While we plan to list our shares on the Nasdaq Capital Market, we cannot assure you that a public market for our common stock will develop.

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

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

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

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

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

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

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

All decisions with respect to the management of the Company will be made by our board of directors and our officers, who will beneficially own 23.4% of our common stock, as calculated in accordance with Rule 13d-3 promulgated under the Securities Exchange Act of 1934. Holders of the common stock who acquire our common stock in this offering will not obtain majority control of the Company. Therefore, management will retain the power to elect a majority of the board of directors who shall, in turn, have the power to appoint the officers of the Company and to determine, in accordance with their fiduciary duties and the business judgment rule, the direction, objectives and policies of the Company including, without limitation, the purchase of businesses or assets; the sale of all or a substantial portion of the assets of the Company; the merger or consolidation of the Company with another corporation; raising additional capital through financing and/or equity sources; the retention of cash reserves for future product development, expansion of our business and/or acquisitions; the filing of registration statements with the Securities and Exchange Commission for offerings of our capital stock; and transactions which may cause or prevent a change in control of the Company or its winding up and dissolution. Accordingly, no investor should acquire our common stock in this offering unless such investor is willing to entrust all aspects of the management of the Company to such individuals.

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

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

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

As a public company reporting to the Securities and Exchange Commission, we will incur significant legal, accounting and other expenses that we did not incur as a private company. We will be subject to reporting requirements of the Securities Exchange Act of 1934 and the Sarbanes-Oxley Act of 2002, as well as rules subsequently implemented by the Commission that impose significant requirements on public companies, including requiring establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. In addition, on July 21, 2010, the Dodd-Frank Wall Street Reform and Protection Act was enacted. There are significant corporate governance and executive compensation-related provisions in the Dodd-Frank Act that are expected to increase our legal and financial compliance costs, make some activities more difficult, time-consuming or costly and may also place undue strain on our personnel, systems and resources. Our management and other personnel will need to devote a substantial amount of time to these new compliance initiatives. In addition, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance, and we may be required to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. As a result, it may be more difficult for us to attract and retain qualified people to serve on our board of directors, our board committees or as executive officers.

Shares eligible for future sale may adversely affect the market.

From time to time, certain of our shareholders may be eligible to sell all or some of their shares of common stock by means of ordinary brokerage transactions in the open market pursuant to Rule 144, promulgated under the Securities Act, subject to certain limitations. In general, pursuant to Rule 144, non-affiliate shareholders may sell freely after six months subject only to the current public information requirement (which disappears after one year). Of the 5,157,716

shares of our common stock outstanding as of March 31, 2012, approximately 2,527,016 shares are held by “non-affiliates” and will be freely tradable without restriction once we become subject to the reporting requirements of section 13 or 15(d) of the Securities Exchange Act of 1934 for a period of at least 90 days. Any substantial sale of our common stock pursuant to Rule 144 or pursuant to any resale prospectus (including sales by investors of securities acquired in connection with this offering) may have a material adverse effect on the market price of our common stock.

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

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

authorize our board of directors to issue preferred stock without shareholder approval and to designate the rights, preferences and privileges of each class; if issued, such preferred stock would increase the number of outstanding shares of our capital stock and could include terms that may deter an acquisition of us;

limit who may call shareholder meetings;

do not provide for cumulative voting rights; and

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

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

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

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

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

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

BUSINESS

Introduction

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

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

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

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

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

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

Corporate History

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

Our Industry

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

Our Technology

Overview of Our Technology. While we have not deployed our technology commercially, if the results we have observed in our testing can be replicated on a commercial scale, we believe our p