CLEARSIGN COMBUSTION CORP
Form 10-K
February 22, 2013

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

x ANNUAL REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2012

OR

o TRANSITION REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission File Number 001-35521

CLEARSIGN COMBUSTION CORPORATION

(Exact name of registrant as specified in its charter)

WASHINGTON	**26-2056298**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

12870 Interurban Avenue South

Seattle, Washington 98168

(Address of principal executive offices)

(Zip Code)

(206) 673-4848

(Registrant's telephone number, including area code)

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

Title of each class	**Name of each exchange on which each is registered**
Common Stock, par value $.0001	NASDAQ Capital Market

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

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

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports); and (2) has been subject to such filing requirements for the past 90 days.

Yes x No ¨

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 229.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No ¨

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company.

Large accelerated filer ¨	Accelerated filer ¨
Non-accelerated filer ¨	Smaller reporting company x
(Do not check if a smaller reporting company)	

Indicate by check mark whether the issuer is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes ¨ No x

State the aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold, or the average bid and asked price of such common equity, as of the last business day of the registrant's most recently completed second fiscal quarter.

As of June 30, 2012, the aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the last sale price of the common equity was $46,438,000.

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date.

As of February 22, 2013 the issuer has 8,782,015 shares of common stock, par value $.0001, issued and outstanding.

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

This report contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 and the provisions of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. 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,” or other similar expressions in th 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 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 report.

The forward-looking statements are based upon management’s beliefs and assumptions and are made as of the date of this report. We undertake no obligation to publicly update or revise any forward-looking statements included in this report. You should not place undue reliance on these forward-looking statements.

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

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ITEM 1: 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.

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.

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.clearsign.com. The information contained on or that may be obtained from our website is not a part of this report. 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 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

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 NOx 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.

Our technology consists, in its simplest form, of four major components displayed below: (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 combustion systems design, cost and operation. 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). In some cases, economic gain may also be realized by increasing plant throughput, capacity and/or availability due to a reduced maintenance cycle, and increases in the lifetime of systems - the latter due to improved mechanical reliability as a result of reduced mechanical complexity and/or improved heat transfer.

Our 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 electrostatic forces (body forces) within the gas cloud that can be manipulated to modify and control flame shape and the transfer of heat to, through, or away from surfaces. At the same time, we believe that our technology provides an unprecedented level of precision for optimizing combustion chemistry to suppress formation of pollutants at the flame source.

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

- *Better combustion*: increases the homogeneity and momentum transfer within the flame to reduce peak flame temperatures, formation of nitrogen oxides (i.e. NO and NO_2, or NO_x), carbon monoxide (CO), and particulates.

- *Superior flame quality:* optimizes flame shape and flame stability to maximize energy efficiency throughout the operating range, which is particularly important for gas-fired boilers and furnaces.

- *Precision control of heat transfer:* controls the rate at which heat is transferred through or reflected away from a surface such that it may be possible to optimize thermal efficiency in boilers, kilns, furnaces, turbines and waste heat recovery systems.

- *Selectively-controlled reaction chemistry:* selectively promotes, suppresses, retards or accelerates chemical reactions to minimize formation of pollutants, enhance pollution abatement, and improve the combustion process.

- *Agglomeration of fine particulate into large, more easily removed clusters:* agglomerates ultrafine particles into much larger clusters that can be removed efficiently and cost-effectively, thereby enhancing particulate removal and reducing the cost of existing particulate control systems.

- *Increased luminosity* - low radiance flames such as those produced by burning natural gas are made brighter and more radiant, transferring more radiant heat energy to the load.

The way in which the electrostatic forces are applied varies somewhat by the broad equipment categories we are evaluating:

- *Gas- and liquid-fired boilers and furnaces:* in boilers and furnaces, the charge could be introduced directly to the flame and a controlled vortex could be used to minimize the formation of NO_X while improving heat distribution and stabilizing the flame. Flame shape and heat transfer would be optimized to improve thermal efficiency and mixing within the flame is enhanced to reduce NO_X, CO, and particulate.

- *Cement kilns:* in systems such as cement kilns, the charge could be introduced directly into the flame and heat could be directed away from the wall of the kiln and into the product. Heat loss through the wall would be minimized, increasing system efficiency and the amount of product produced.

Stoked furnaces: in solid-fired furnaces using stokers and grates (e.g., industrial coal, biomass and municipal solid waste), the charge could be introduced into the flame cloud while the grate remains grounded, which would enhance residence time of solids, increasing the amount of fuel burned and reducing particulate.

Petrochemical reaction furnaces such as refinery heaters, ethylene cracking units and hydrogen reformers (among others) are particularly sensitive to flame impingement (direct contact of the flame with the heat exchange surface). By appropriately charging the flame and post-flame regions, the flame could be managed and shaped, and heat transfer could be supplied to the process tubes without flame impingement.

Refinery process heaters are routinely over-fired (operated beyond their recommended limit) to satisfy demand for refinery fuels as the market demand steadily increases, overstressing the available heater population (the last new refinery was built in 1976, thus plot space for new furnaces remains constrained). When refinery heaters are over-fired, flames become unwieldy and difficult to control, especially in vertical-cylindrical heaters with low- NO_X burners. Appropriate charging of the flame improves mixing and manages the flame shape.

Gas turbines: gas turbine efficiency is limited, in part, by the maximum working temperature of the turbine blades. In these systems the cooling film could be charged with the intention of keeping it attached to the turbine blade and insulating it, allowing for higher operating temperatures.

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We believe that the most significant energy efficiency gain provided by our technology in boilers, kilns, furnaces and turbines could stem from our ability to precisely control the flow of hot gases within a gas volume. In most cases, efficiency could be increased by increasing heat flux onto targeted surfaces and reducing heat loss to other surfaces. However, in the case of gas turbines, thermal efficiency is limited by the ability of the turbine blades to withstand high peak operating temperatures.

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

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

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 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 December 31, 2012, we have filed 74 patent applications. See “Intellectual Property Protection” for additional information.

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

Our activities are currently, and will continue to be, directed at thoroughly characterizing and exploring the full range of Electrodynamic Combustion Control technology. We have been and will continue to conduct laboratory and bench-top scale experimentation to this end. In parallel, we intend to advance the technology toward commercialization by identifying those market opportunities offering potential value to our customers while requiring only a limited set of features, and building those systems to a commercial scale.

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

Finalize product offerings that meet customer needs.

Secure sponsored development funding for continued technology and product development.

Access strategic customers and key influencers.

Enter key market segments with channel partners who enjoy prominent market positions and are highly experienced at successfully introducing new technologies into these segments.

Addressable Market

We view our market as divided into two broad segments. The first, industrial combustion, includes both solid fuel systems such as cement kilns, wood and biomass furnaces and industrial coal systems as well as gas-fired systems such as down-fired petrochemical reformers and natural gas-fired boilers. The second segment, *power generation*, includes electric power plants fueled by pulverized coal and those utilizing gas-turbines. In each market segment and sub-segment, 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.

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

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

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

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

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

Industrial combustion systems fall generally under the following segments:

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

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

While the specifics of each installation type will differ by fuel, combustion system configuration, size and regional clean air requirements, industrial combustion and power generation businesses have a strong incentive to decrease energy costs, which represent a significant percentage of their annual fixed expense. Certain businesses have communicated to us that even very small gains in energy efficiency are meaningful and would warrant investment. Additionally, we believe that these businesses are increasingly concerned about a regulatory environment they perceive to be tightening progressively every year. For example, the maximum achievable control technology regulations for boilers (Boiler MACT) proposed by the U.S. Environmental Protection Agency (EPA) are causing tremendous concern – with some businesses indicating they will shut down if this rule is imposed before a cost-effective air pollution control solution becomes available. Boiler MACT consists of four interrelated rules governing emissions of chemicals identified in the Clean Air Act of 1990, including mercury, dioxin, particulate matter, hydrogen chloride, and carbon monoxide, emitting from an estimated 200,000 boilers nationwide. These complex rules encompass controls and monitoring standards for 11 subcategories of boilers and process heaters that vary in design and fuel type. A broad range of boiler and process heat users, from factories to schools, would be required to conduct emissions testing and comply with standards of control that vary by boiler size, feedstock, and available technologies. In the December 2012 update of its Regulatory Impact Analysis, the EPA estimated the compliance cost of these rules to be $5.1 billion initially with annual costs thereafter of $1.4 - $1.8 billion.

Retrofit to existing systems. An industrial retrofit of our technology would be implemented to occur during the routine maintenance cycle of a plant operator, generally every 12 – 18 months. In many cases plants operate multiple systems with ‘shut downs’ occurring on a staggered basis several times per year, during which time we could install and test each system in multiple phases. *Power Generation.* In the United States, approximately 45% of the electricity produced for domestic consumption is generated by coal-fired power plants. There are currently 1,436 large-scale coal-fired utility boilers in the US and more than 6,000 worldwide, ranging in size from 50 MW (megawatts) to over 1.5GW (gigawatts, or 1,000 MW). Assuming an average system size of 300MW, a typical air-pollution control train can cost up to $200 million to install and $50 million annually to operate.

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

delay and, in many cases, cancelation of major power generation projects.

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

Such a retrofit could provide several key benefits:

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

The most important potential impact of our Electrodynamic Combustion Control technology is that, for the first time, an air pollution control system could have the potential to provide a net positive return on investment for operators. Currently, the primary benefit provided by legacy air pollution control systems, such as scrubbers, electrostatic precipitators and bag houses (fabric filters), is to allow operators to avoid regulatory sanction – simply a cost of doing business. We believe that our technology could disrupt the legacy economics of utility plant operation and will, if that is the case, be adopted by customers as a method to increase the profitability of their operations.

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

Market Entry

We believe that our Electrodynamic Combustion Control technology could potentially be applied to virtually any system in which there is a flame. While this implies a vast array of potential market opportunities, it also requires that we exercise a disciplined approach in comparatively evaluating those opportunities in order to select and prioritize those applications that afford the best mix of required development effort (and time and cost) relative to revenue

potential. We also aim to select applications in which our technology offers the clearest and most measurable advantages relative to competing technologies or addresses unmet market needs.

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

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

Sales and Marketing Plan

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

Key technical challenges. As with any new industrial technology, scaling our technology from lab prototype to a field-operating unit will require deliberate staging from the initial retrofit installation of "meaningful but manageable" systems to progressively larger and more complex systems. Because of the large numbers, wide variety and varying capacities of combustion systems, we believe we will be able to identify and target progressively larger systems without introducing significant 'step-function' increases in scale that would introduce significant risk.

Partnership Strategy. The formation of research and development partnerships to develop a new technology is common in both the industrial combustion and power generation segments. While we have commenced seeking such partners and have engaged in discussions with several companies and personnel with government agencies, we have not entered into any definitive partnership or sponsorship agreements. Among the types of potential partners 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.

Such partnerships would enable us to meet several objectives:

- Ability to share the cost and risk associated with adapting and deploying the technology into new applications and markets;
- Access to industry expertise and the reputation of established companies to hasten market acceptance;

- Reduction of design / build cycle times; and

- Opportunity to leverage our capital investments through funded research.

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

- Ongoing development of algorithms specific to representative combustion systems;

- A small team of expert technicians, initially deployed to install systems at early customer sites to optimize installations, create technical and channel enablement tools; and

- Training of installation teams within channel partners to deploy the technology more broadly.

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

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

Competition and Barriers to Entry

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

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

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

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

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

- *Availability of trained technicians:* The number of technicians who are able to specify, install and operate our competitors' products will be greater than those who have been trained on our technology.

- *Conservative choice:* Because our competitors' technologies are well understood and their performance has been proven over time, customers may perceive their offerings represent a safe, low-risk choice.

- *Business relationships:* Because our competitors have established long-standing personal relationships with their customers, they may prefer to continue to do business with one another.

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

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

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

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

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

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

Research and Development Program

Our research and development program consists of bench- and pilot-scale research anticipating future site demonstrations. The contacts of our management, board of directors and advisory board with potential customers in the petroleum, petrochemical, and industrial steam applications inform our research program. These are supported by

memoranda of understanding (MOUs) with potential development partners, customers and research institutions. Our research and development activities make use of employees and consultants that are respective experts in the areas of industrial combustion, statistical experimental design, gas turbines, fluid mechanics, physics of particles and ions, and electric fields. We spent $1,184,000 and $463,000 on research and development for the years ended December 31, 2012 and 2011, respectively.

Intellectual Property Protection

We are pursuing an aggressive intellectual property strategy including:

- *Aggressive invention and ideation.* Thus far we have identified more than 150 specific inventions that we believe to be novel and patentable. We are pursuing a proven ideation process to enhance and continue these discoveries.

- *Development of a strong patent portfolio.* As of December 31, 2012, we have filed 74 patent applications. We expect to file a significant number of additional patent applications.

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

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

Jurisdiction	Pat. App. Serial No.	Title	Owner
US	12/753,047	System and Apparatus for Applying an Electric Field to a Combustion Volume	ClearSign Combustion Corporation
US	13/006,344	Method and Apparatus for Electrical Control of Heat Transfer	ClearSign Combustion Corporation
US	13/370,183	Electric Field Control of Two or More Responses in a Combustion System	ClearSign Combustion Corporation

Government Regulation

Government approval is not required in order for us to sell the principal products or services that we are developing. However, government regulation, particularly environmental regulation, is likely to play a role in shaping our product mix and offerings. Our technology includes enhancement of the combustion process, inclusion of a computer-controlled electric field to selectively promote, suppress, retard or accelerate chemical reactions as desired, and to reduce certain emissions at a lower cost than current air pollution control devices. 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.

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

Employees

As of February 22, 2013, we had 11 full-time employees and one part-time employees. None of these employees are covered by a collective bargaining agreement, and we believe our relationship with our employees is good. We also employ consultants, including technical advisors, on an as-needed basis to supplement existing staff. Consultants and technical advisors provide us with expertise in physics, chemistry, mechanical engineering, aeronautics and other specialized areas of science. Compensation paid to our consultants and technical advisors is negotiated with each individual. Compensation may include cash, shares of our common stock or options or warrants to purchase shares of our common stock or any combination thereof. From inception through December 31, 2012, we have paid to our technical advisors a total of $112,000 in cash and we have issued 125,000 shares of our common stock and options or warrants to purchase 42,500 shares of our common stock. When we engage consultants or technical advisors, we typically enter into intellectual property assignment and non-disclosure agreements with them. From time-to-time we enter into written agreements with our technical advisors.

Technical Advisors

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

Name	Age	Position
Thomas S. Hartwick, Ph.D.	78	Technical Advisor
Robert E. Breidenthal, Ph.D.	61	Technical Advisor
Uri Shumlak, Ph.D.	47	Technical Advisor
John C. Kramlich, Ph.D.	61	Technical Advisor
Swapna Hiray	41	Technical Advisor

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

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

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

Dr. Breidenthal became an advisor to our Company in November 2009. A professor at the University of Washington's Department of Aeronautics and Astronautics since 1980, Dr. Breidenthal is a recognized expert in turbulent entrainment, including the high-speed mixing of fuel and oxidant and the high-velocity fluid flow that power jet engines and turbine generators. He has led projects for companies including The Boeing Company, CH2M Hill, ARCO Alaska and PACCAR, and has received research support from the Air Force Office of Scientific Research, the National Science Foundation, NASA and ASEA Brown Boveri, Ltd., of Switzerland. Dr. Breidenthal has published numerous papers for major scientific journals on subjects including ignition and flame propagation process, turbulent mixing, flow visualization, mixing and chemical reaction, elements of entrainment, and addressing complexity in laboratory experiments. Journals in which his papers have appeared include the American Institute of Aeronautics and Astronautics, Physics of Fluids, Journal of the Atmospheric Sciences, and the Journal of the Royal Meteorological Society. He has presented papers at the Symposium of Turbulence and Diffusion, the International Conference on Lasers and Applications, and the International Conference on Fluid Mechanics. Among several issued patents, Dr. Breidenthal is the inventor of a method of improving fuel and air mixing in high-pressure combustion systems, which describes an approach to simplify mechanical design while at the same time reducing emissions, improving fuel efficiency and increasing compression ratios (horsepower). His work is also cited in numerous other US and international patents. Dr. Breidenthal received a BSc. in Aeronautical Engineering from Wichita State University, and a MSc. and Ph.D. in Aeronautics from the California Institute of Technology.

Uri Shumlak, Ph.D., Technical Advisor

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

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

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

Swapna Hiray, Technical Advisor

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

ITEM 1A: 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 report.

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, 2012, we had a total accumulated deficit of $8,679,000. 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.

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 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.

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

Our company and technology are new and unproven. If we are unable to effectively develop and timely promote our 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 awareness over time, there cannot be assurance that awareness of our company and technology will develop in a manner or pace that is necessary for us to achieve profitability in the near term.

Further 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.

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.

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 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 enhancement of the combustion process, inclusion of a computer-controlled electric field to selectively promote, suppress, retard or accelerate chemical reactions as desired, and to reduce certain emissions at a lower cost than current air pollution control devices. 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.

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.

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 or make it more difficult to raise capital as and when we need it.

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” or smaller reporting companies including, but not limited to, not being required to comply with the auditor attestation requirements of section 404 of the Sarbanes-Oxley Act and reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements. In addition, emerging growth companies are entitled to take advantage of exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved, even though smaller reporting companies will be subject to this requirement for the first annual meeting that is held after January 21, 2013. Furthermore, an “emerging growth company” can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. 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 and it may be difficult for us to raise additional capital as and when we need it. If we are unable to raise additional capital as and when we need it, our financial condition and results of operation may be materially and adversely affected.

We will remain an “emerging growth company” until December 31, 2017, 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 any June 30.

Risks Related to Owning Our Common Stock

The public market for our common stock has been volatile since completion of our initial public offering. This may affect the ability of our investors to sell their shares as well as the price at which they sell their shares.

We completed our initial public offering in April 2012. Since that time, our shares have traded from $4.00 per share to $9.75 per share and day-to-day trading has been volatile at times. This volatility may continue or increase in the future. The market price for the shares may be significantly affected by factors such as progress in the development of our technology, agreements with research facilities or co-development partners, commercialization of our technology, 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. 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 our common stock. 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 our stockholders. 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.

Due to the large number of shares of our common stock that are beneficially owned by our officers and directors, management of our Company has significant influence in a number of decisions that may affect our stockholders.

All decisions with respect to the management of the Company are made by our board of directors and our officers, who beneficially own 24.2% of our common stock as of February 22, 2013, as calculated in accordance with Rule 13d-3 promulgated under the Securities Exchange Act of 1934. Therefore, management has significant influence in electing the board of directors who, 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.

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 December 31, 2012, we had outstanding options and warrants for the purchase of 359,375 and 561,368 shares of common stock, respectively. Further, in January 2013 we granted additional options for the purchase of 203,990 shares of common stock. 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, as of January 31, 2013, we have reserved an additional 246,270 shares of common stock for such awards and the Plan provides that this number may increase quarterly by an amount of up to 10% of the number of shares issued by the Company each quarter. Certain 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 have incurred and will incur significant costs as a result of being a public company that reports to the Securities and Exchange Commission and our management is required to devote substantial time to meet compliance obligations.

As a public company reporting to the Securities and Exchange Commission, we incur significant legal, accounting, investor relations, printing, board compensation, and other expenses that we did not incur as a private company. These costs totaled $711,000 from the date of our initial public offering to December 31, 2012. We are subject to the reporting requirements of the Securities Exchange Act of 1934 and the Sarbanes-Oxley Act of 2002 (with the

exception of the requirement of auditor attestation of internal control over financial reporting), 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.

In conjunction with the initial public offering of our common stock, substantially all of our shareholders signed "lock-up" agreements. As of the date of this report, 3,167,761 shares of common stock continue to be subject to lock-up agreements which will expire on April 24, 2013. These include 2,380,863 shares owned by our officers, directors, certain of our employees, and trusts established for the benefit of the children of one of our officers, and 786,898 shares owned by MDB Capital Group LLC, its officers, directors, associates, and certain employees. Following the expiration of the lock-up agreements, all of these shares will be eligible for sale by means of ordinary brokerage transactions in the open market pursuant to Rule 144 promulgated under the Securities Act, subject to certain limitations. Furthermore, there are an additional 13,500 shares of common stock that will become eligible for sale pursuant to Rule 144 in 2013. Any substantial sale of our common stock pursuant to Rule 144 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.

ITEM 1B: UNRESOLVED STAFF COMMENTS

None.

ITEM 2: PROPERTIES

Our principal office is located at 12870 Interurban Avenue South, Seattle, Washington. We currently lease approximately 6,950 square feet of office and laboratory space under a triple net lease which expires in February 2017. Current monthly minimum rent is $8,970 and increases by approximately 3% annually.

ITEM 3: LEGAL PROCEEDINGS

We are not a party to any pending legal proceedings.

ITEM 4: MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5: MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock is quoted under the symbol CLIR on the NASDAQ Capital Market commencing from our initial public offering on April 25, 2012. Table 13 presents the range of high and low sales prices of our common stock since April 25, 2012.

Table 13: High and low sales prices

	High	Low
Fiscal year ended December 31, 2012		
First quarter	n/a	n/a
Second quarter	$9.75	$4.00
Third quarter	$7.79	$5.50
Fourth quarter	$8.75	$4.01

According to our transfer agent, as of February 22, 2013 we had approximately 148 shareholders of record. This number does not include an indeterminate number of shareholders whose shares are held by brokers in street name. Our stock transfer agent is VStock Transfer, LLC, 77 Spruce Street, Suite 201, Cedarhurst, NY 11516 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.

Securities Authorized for Issuance under Equity Compensation Plans

Table 14 provides information as of December 31, 2012, regarding the compensation plan (2011 Equity Incentive Plan) under which equity securities of ClearSign are authorized for issuance.

Table 14. Equity compensation plans

Plan category	Number of securities to be issued upon exercise of	Weighted-average exercise price of outstanding	Number of securities remaining available for

	outstanding options, warrants and rights (a)	options, warrants and rights (b)	future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders	920,743	$ 3.21	480,260

Recent Issuances of Unregistered Securities

In November 2011 we filed a registration statement, number 333-177946, with the Securities and Exchange Commission to register an offering of 3 million shares of our common stock, with an option granted to the underwriter to sell an additional 450,000 shares of our common stock (the “overallotment”). The registration statement was declared effective on April 24, 2012. The offering closed on April 30, 2012 and the offering of the overallotment closed on May 15, 2012. The common stock was offered at a price of $4 per share. All of the shares of common stock, including the overallotment, were sold. We raised a total of $13,800,000 in gross proceeds in the offering and received approximately $11,200,000 after expenses. Through December 31, 2012, the net proceeds from the offering were used as follows: approximately $6,500,000 for the purchase of a 30-day certificate of deposit, $1,496,000 increased cash and money market funds, $2,472,000 for operations, $310,000 for capital expenditures primarily related to research and development machinery and equipment, $495,000 for patents, $238,000 for the payment of accrued compensation, and $129,000 for the repayment of short term indebtedness. None of the proceeds were used for construction of plant, building and facilities, the purchase of real estate, or the acquisition of any business.

ITEM 6: SELECTED FINANCIAL DATA.

As a smaller reporting company we are not required to provide this information.

ITEM 7: MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the audited financial statements and related notes included elsewhere in this Annual Report on Form 10-K. In addition to historical information, this discussion and analysis here and throughout this Form 10-K contains forward-looking statements that involve risks, uncertainties and assumptions. Our actual results may differ materially from those anticipated in these forward-looking statements.

OVERVIEW

We are a development stage company located in Seattle, Washington. We were formed for the purpose of developing a technology that improves both the energy efficiency and emissions control characteristics of combustion systems. To date, our operations have been funded through sales of our common stock. We have earned no revenue since inception on January 23, 2008.

Plan of Operation

We are pursuing development of our technology to enable future sales. These activities entail laboratory research, where we have successfully demonstrated our proprietary technology operating in our research facility with thermal output of 1,000,000 Btus per hour, and business development and marketing activities with established manufacturers and other entities that use boilers, burners, refinery heaters, and other combustion systems. We intend to create co-development collaborations which would enable us to work closely with established companies in specific industries to apply developed solutions in laboratory and field settings.

In April 2012, we completed an initial public offering (IPO) of our common stock whereby we sold 3,000,000 shares of common stock at $4.00 per share. In May 2012, as a result of the exercise of the underwriter's overallotment allowance option, we sold an additional 450,000 shares of common stock. Gross proceeds from the IPO, including proceeds from the exercise of the underwriter's overallotment allowance option, totaled $13,800,000. Expenses of the offering approximated $2,727,000, including underwriter fees of $1,200,000 paid to MDB Capital Group, LLC (MDB) along with a warrant to purchase 345,000 shares of our common stock at $5.00 per share valued at $128,000, qualified independent underwriter fees of $110,000, underwriter legal fees of $125,000, other underwriter expenses of $35,000, and issuer legal fees of $822,000, which was paid in part through the issuance of 110,000 shares of our common stock to our legal counsel at a price of $4.00 per share.

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The $11,640,000 of net proceeds from the IPO and stock issued to our legal counsel has been used as follows through December 31, 2012: approximately $6,500,000 for the purchase of a 30-day certificate of deposit, $1,496,000 increased cash and money market funds, $2,472,000 for operations, $310,000 for capital expenditures primarily related to research and development machinery and equipment, $495,000 for patents, $238,000 for the payment of accrued compensation, and $129,000 for the repayment of short term indebtedness. We anticipate that in total the net proceeds will be used as follows: $4 million for research and development including related capital expenditures, $2 million for protection of intellectual property, $1.75 million for exploration of market opportunities, and the balance for working capital and general corporate purposes. In addition, we may use a portion of the net proceeds from the IPO to acquire complementary products, technologies or businesses; however, we do not have plans for any acquisitions at this time. We expect the net proceeds from the IPO to be sufficient to fund our activities at least through April 2014. Our anticipated costs include employee salaries and benefits, compensation paid to consultants, capital costs for research and other equipment, costs associated with development activities including travel and administration, legal expenses, sales and marketing costs, general and administrative expenses, and other costs associated with an early stage, publicly-traded technology company. We anticipate increasing the number of employees by up to approximately 20-30 employees; however, this is highly dependent on the nature of our development efforts. We anticipate adding employees in the areas of research and development, sales and marketing, and general and administrative functions required to support our efforts. We expect to incur consulting expenses related to technology development and other efforts as well as legal and related expenses to protect our intellectual property. We expect capital expenditures to be between $0.5 and $1.0 million annually, but these are highly dependent on the nature of the operations where co-development activities are ongoing.

The amount that we spend for any specific purpose may vary significantly, and could depend on a number of factors including, but not limited to, the pace of progress of our commercialization and development efforts, actual needs with respect to product testing, development and research, market conditions, and changes in or revisions to our marketing strategies.

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

If management is unable to implement its proposed business plan or employ alternative financing strategies, it does not presently have any alternative proposals. In that case, we may be required to scale back our development plans by reducing expenditures for employees, consultants, business development and marketing efforts, and other envisioned expenditures or curtail or even suspend our operations.

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

CRITICAL ACCOUNTING POLICIES

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

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

Research and Development. The cost of research and development is expensed as incurred. Research and development costs consist of salaries, share based compensation, consulting fees, rent, utilities, depreciation, and consumables.

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

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

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

RESULTS OF OPERATIONS

Comparison of the Years Ending December 31, 2012 and 2011

Operating Expenses. Operating expenses increased by $1,231,000 to $4,210,000 for the year ended December 31, 2012 compared to 2011. The Company increased its research and development expenses by $721,000 to $1,184,000 for 2012. R&D expenses rose due to increased personnel levels and research activities. G&A expenses increased by $510,000 to $3,026,000 for 2012. This increase resulted primarily from an increase in the level of personnel for general and administrative purposes to complete the management team, thereby increasing compensation expense by $563,000 to $1,906,000 for 2012, and the expense of operating as a public company, which totaled $711,000 in 2012. Further, other overhead costs increased $235,000 to $408,000 due to additional expenses we incurred as a result of our growth, including a consulting expense increase of $69,000 and rent expense increase of $37,000. This increase was offset by a non-recurring expense for 2011 of $1,000,000 paid in the form of common stock issued at $2.20 per share to MDB for consulting services including assistance with building an intellectual property development strategy, retaining appropriate executive personnel, and advising with respect to the development of our business.

Loss from Operations. Due to the increase in operating expenses, our loss from operations increased during 2012 by $1,231,000, to $4,210,000.

Net Loss. Primarily as a result of the increase in operating expenses, our net loss for 2012 was $4,189,000 as compared to a net loss of $2,976,000 for 2011, resulting in an increased net loss of $1,213,000.

Liquidity and Capital Resources

At December 31, 2012, our cash and cash equivalent balance totaled $8,027,000 compared to $930,000 at December 31, 2011. We expect this sum to be sufficient to fund our activities at least through April 2014. At December 31, 2012, our current assets were in excess of current liabilities resulting in working capital of $7,643,000 compared to $623,000 at December 31, 2011.

Operating activities for 2012 resulted in cash outflows of $3,188,000 which were due primarily to the loss for the period of $4,189,000, offset primarily by net changes in working capital, exclusive of cash, of $575,000 related primarily to the IPO and the timing of year-end expenditures, services and compensation paid with common stock of $175,000, share based compensation from the Company’s Equity Incentive Plan of $135,000, and other non-cash expenses of $116,000. Cash outflows of 2011 of $1,688,000 were primarily due to the loss for the period of $2,976,000, offset by $1,021,000 of services and compensation paid with common stock, share based compensation from the Company’s Equity Incentive Plan of $187,000, and increases in accounts payable and accrued compensation expense of $448,000.

Investing activities for 2012 and 2011 resulted in cash outflows of $868,000 and $218,000, respectively, for acquisition of fixed assets and development of patents and other intangible assets.

Financing activities for 2012 resulted in $11,153,000 of cash inflows related primarily to net cash generated from the IPO of $11,201,000 offset by the extinguishment of all debt totaling $48,000 from the IPO proceeds. Financing activities for 2011 generated net cash of $2,836,000 from a private offering of our common stock through our placement agent, MDB.

Off-Balance Sheet Transactions

We do not have any off-balance sheet transactions.

Trends, Events and Uncertainties

The JOBS Act

We are an emerging growth company, as defined under the Jumpstart Our Business Startups Act of 2012 (the JOBS Act), and are subject to reduced public company reporting requirements. In addition, Section 107 of the JOBS Act 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 of 1933 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 elected to take advantage of the extended transition period for complying with new or revised accounting standards. The Company will remain an emerging growth company until December 31, 2017, although it will lose that status sooner if its revenues exceed $1 billion, if it issues more than $1 billion in non-convertible debt in a three year period, or if the market value of its common stock that is held by non-affiliates exceeds $700 million as of any June 30.

Claim by Perkins Coie LLP

Our former legal advisors, Perkins Coie LLP, contacted us on March 26, 2012 to advise us that they believe TWB Investment Partnership II, L.P., a party related to Perkins Coie LLP, has the right to acquire 25,250 shares of our common stock at $0.02 per share pursuant to an engagement letter dated December 4, 2007. We denied the claim

since, among other defenses, we believe we entered into a full settlement of all amounts owed to Perkins Coie LLP in November 2011. Perkins Coie LLP currently owns 3,555 shares of our common stock which we issued in conjunction with the November 2011 settlement.

ITEM 7A: QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

As a smaller reporting company we are not required to provide this information.

ITEM 8: FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

ClearSign Combustion Corporation

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders

of ClearSign Combustion Corporation

We have audited the accompanying balance sheets of ClearSign Combustion Corporation (a development stage company) (the "Company") as of December 31, 2012 and 2011, and the related statements of operations, stockholders' equity (deficit), and cash flows for each of the years in the two-year period ended December 31, 2012, and for the period from inception (January 23, 2008) through December 31, 2012. The Company's management is responsible for these financial statements. Our responsibility is to express an opinion on these financial statements based on our audits.

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

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2012 and 2011, and the results of its operations and its cash flows for each of the years in the two-year period ended December 31, 2012, and for the period from inception (January 23, 2008) through December 31, 2012, in conformity with accounting principles generally accepted in the United States of America.

/s/ GUMBINER SAVETT INC.

February 22, 2013

Santa Monica, California

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ClearSign Combustion Corporation

(a Development Stage Company)

Balance Sheets

	December 31, 2012	2011
ASSETS		
Current Assets:		
Cash and cash equivalents	$8,027,000	$930,000
Prepaid expenses	60,000	437,000
Total current assets	8,087,000	1,367,000
Fixed assets, net	400,000	162,000
Patents and other intangible assets	618,000	87,000
Other assets	10,000	20,000
Total Assets	$9,115,000	$1,636,000
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Accounts payable	$276,000	$443,000
Promissory note	-	47,000
Accrued compensation and taxes	168,000	254,000
Total current liabilities	444,000	744,000
Deferred rent	35,000	18,000
Total liabilities	479,000	762,000
Commitments and Contingencies		
Stockholders' Equity:		
Preferred stock, $0.0001 par value, zero shares issued and outstanding	-	-
Common stock, $0.0001 par value, 8,752,015 and 5,153,216 shares issued and outstanding at December 31, 2012 and 2011, respectively	1,000	-
Additional paid-in capital	17,314,000	5,364,000
Deficit accumulated in the development stage	(8,679,000)	(4,490,000)
Total stockholders' equity	8,636,000	874,000
Total Liabilities and Stockholders' Equity	$9,115,000	$1,636,000

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

ClearSign Combustion Corporation

(a Development Stage Company)

Statements of Operations

	For the Year Ended December 31,		For the Period from Inception (January 23, 2008) to December 31, 2012
	2012	2011	
Operating expenses:			
Research and development	$ 1,184,000	$ 463,000	$ 1,708,000
General and administrative	3,026,000	2,516,000	6,996,000
Total operating expenses	4,210,000	2,979,000	8,704,000
Loss from operations	(4,210,000)	(2,979,000)	(8,704,000)
Other income (expense):			
Interest income	22,000	3,000	26,000
Interest expense	(1,000)	-	(1,000)
Total other income (expense)	21,000	3,000	25,000
Net Loss	$ (4,189,000)	$ (2,976,000)	$ (8,679,000)
Net Loss per share - basic and fully diluted	$ (0.55)	$ (0.67)	$ (2.30)
Weighted average number of shares outstanding - basic and fully diluted	7,596,962	4,435,763	3,773,881

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

ClearSign Combustion Corporation

(a Development Stage Company)

Statement of Stockholders' Equity (Deficit)

For the period from Inception (January 23, 2008) to December 31, 2012

	Common Stock		Common Stock Class B		Common Shares Issuable		Additional	Deficit Accumulated in the	Total
	Shares	Amount	Shares	Amount	Shares	Amount	Paid-In Capital	Development Stage	Stockholders' Equity (Deficit)
Shares issued to founders, at no cost	1,065,000	$-	476,000	$-	-	$-	$33,000	$-	$33,000
Shares issued for services ($0.02 per share)	125,000	-	-	-	-	-	2,000	-	2,000
Shares issued for cash ($0.02 per share)	-	-	384,000	-	-	-	10,000	-	10,000
Shares issued for cash ($1.80 per share)	467,310	-	-	-	-	-	841,000	-	841,000
Issuance costs	-	-	-	-	-	-	(6,000)	-	(6,000)
Share based payments of warrants	-	-	-	-	-	-	48,000	-	48,000
Shares issued for services ($1.80 per share)	38,609	-	-	-	-	-	70,000	-	70,000
Common stock issuable for services	-	-	-	-	110,746	199,000	-	-	199,000
Net loss	-	-	-	-	-	-	-	(1,514,000)	(1,514,000)

Balances at December 31, 2010	1,695,919	-	860,000	-	110,746	199,000	998,000	(1,514,000)	(317,000)
Conversion of shares	1,075,000	-	(860,000)	-	-	-	-	-	-
Shares issued for services ($1.80 per share)	108,035	-	-	-	(104,921)	(189,000)	194,000	-	5,000
Canceled common shares issuable previously for services ($1.80 per share)	-	-	-	-	(5,825)	(10,000)	-	-	(10,000)
Shares issued for services ($2.20 per share)	733,523	-	-	-	-	-	1,614,000	-	1,614,000
Shares issued for cash ($2.20 per share)	1,363,364	-	-	-	-	-	2,999,000	-	2,999,000
Issuance costs	-	-	-	-	-	-	(807,000)	-	(807,000)
Share based payments of warrants	-	-	-	-	-	-	64,000	-	64,000
Share based compensation	177,375	-	-	-	-	-	302,000	-	302,000
Net loss	-	-	-	-	-	-	-	(2,976,000)	(2,976,000)
Balances at December 31, 2011	5,153,216	-	-	-	-	-	5,364,000	(4,490,000)	874,000
Shares issued in initial public offering ($4.00 per share)	3,450,000	1,000	-	-	-	-	13,799,000	-	13,800,000
Issuance costs of initial public offering	-	-	-	-	-	-	(2,727,000)	-	(2,727,000)
Share based payments of	-	-	-	-	-	-	128,000	-	128,000

warrants									
Shares issued for services ($4.00 per share)	18,000	-	-	-	-	-	72,000	-	72,000
Shares issued to retire payable ($4.00 per share)	110,000	-	-	-	-	-	440,000	-	440,000
Shares issued for services ($4.94 per share)	20,799	-	-	-	-	-	103,000	-	103,000
Share based compensation	-	-	-	-	-	-	135,000	-	135,000
Net loss	-	-	-	-	-	-	-	(4,189,000)	(4,189,000)
Balances at December 31, 2012	8,752,015	$1,000	-	$-	-	$-	$17,314,000	$(8,679,000)	$8,636,000

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

ClearSign Combustion Corporation

(a Development Stage Company)

Statements of Cash Flows

	For the Year Ended December 31, 2012	2011	For the Period from Inception (January 23, 2008) to December 31, 2012
Cash flows from operating activities:			
Net loss	$ (4,189,000)	$ (2,976,000)	$ (8,679,000)
Adjustments to reconcile net loss to net cash used in operating activities:			
Common stock issued or issuable for services	175,000	1,021,000	1,529,000
Share based payments	135,000	187,000	322,000
Depreciation	99,000	28,000	157,000
Deferred rent	17,000	18,000	35,000
Change in operating assets and liabilities:			
Prepaid expenses	377,000	(394,000)	(60,000)
Other assets	10,000	(20,000)	(10,000)
Accounts payable	274,000	349,000	770,000
Accrued compensation	(86,000)	99,000	283,000
Net cash used in operating activities	(3,188,000)	(1,688,000)	(5,653,000)
Cash flows from investing activities:			
Acquisition of fixed assets	(337,000)	(131,000)	(536,000)
Disbursements for patents and other intangible assets	(531,000)	(87,000)	(618,000)
Net cash used in investing activities	(868,000)	(218,000)	(1,154,000)
Cash flows from financing activities:			
Proceeds from issuance of common stock for cash, net of offering costs	11,201,000	2,836,000	14,882,000
Proceeds from issuance of short term promissory note	98,000	-	98,000
Principal payments on promissory notes	(146,000)	-	(146,000)
Net cash provided by financing activities	11,153,000	2,836,000	14,834,000
Net increase in cash and cash equivalents	7,097,000	930,000	8,027,000
Cash and cash equivalents, beginning of period	930,000	-	-
Cash and cash equivalents, end of period	$ 8,027,000	$ 930,000	$ 8,027,000

Supplemental disclosure of cash flow information:

Cash paid during the period for interest	$ 1,000	$ -	$ 1,000

Supplemental disclosure of non-cash investing and financing activities:

During the year ended December 31, 2012, the Company:

- issued warrants to purchase 345,000 shares of common stock valued at $128,000 as part of an underwriting fee related to the initial public offering,
- issued 110,000 shares of common stock valued at $440,000 in partial satisfaction of an account payable,

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

- issued 263,637 shares of common stock valued at $580,000 and warrants to purchase 136,368 shares of common stock valued at $64,000 for issuance costs related to a common stock offering,
- issued 52,375 shares of common stock valued at $115,000 to certain employees to partially satisfy compensation accrued at December 31, 2010,
- issued 68,091 shares of common stock valued at $126,000 in order to discharge $99,000 of common stock to be issued at December 31, 2010 and pay rent for the eight months ended August 31, 2011,
- issued 49,728 shares of common stock valued at $90,000 in order to discharge the common stock to be issued at December 31, 2010,
- canceled 5,825 shares valued at $10,000 in order to partially discharge common stock to be issued at December31, 2010,
- made stock grants of 50,000 and 75,000 shares to an employee valued at $275,000 which is to be earned from July 2011 to June 2015,
- swapped 860,000 shares of Class B common stock held by its founding shareholders for 1,075,000 shares of common stock.
- converted a $46,000 account payable to a vendor and acquired a fixed asset valued at $2,000 through a $48,000 interest-bearing promissory note retired in 2012,
- issued 3,555 shares of common stock valued at $8,000 in partial satisfaction of an account payable.

During the period from inception (January 23, 2008) to December 31, 2010, the Company:

- issued 10,834 shares of common stock valued at $20,000 in exchange for equipment.

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

ClearSign Combustion Corporation

(a Development Stage Company)

Notes to Financial Statements

Note 1 – Organization and Description of Business

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

Note 2 – Summary of Significant Accounting Policies

Development Stage Enterprise

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

Use of Estimates

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

Reclassifications

Certain 2011 amounts have been reclassified to conform with 2012 presentation.

Cash and Cash Equivalents

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

Fixed Assets

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

Patents and Trademarks

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

Impairment of Long-Lived Assets

The Company tests long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable through the estimated undiscounted cash flows expected to result from the use and eventual disposition of the assets. In that event, a loss is recognized based on the amount by which the carrying amount exceeds the fair value of the long-lived assets. Loss on long-lived assets to be disposed of is determined in a similar manner, except that fair values are reduced for the cost of disposal. As of December 31, 2012 and 2011, the Company determined that there was no impairment.

Fair Value of Financial Instruments

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

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

Research and Development

The cost of research and development is expensed as incurred. Research and development costs consist of salaries, benefits, share based compensation, consulting fees, rent, utilities, depreciation, and consumables.

Deferred Rent

Operating lease agreements which contain provisions for future rent increases or periods in which rent payments are reduced or abated are recorded in monthly rent expense in the amount of the total payments over the lease term

divided by the number of months of the lease term. The difference between rent expense recorded and the amount paid is credited or charged to deferred rent which is reflected on the accompanying balance sheet.

Income Taxes

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

Tax benefits from an uncertain tax position are recognized only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than 50 percent likelihood of being realized upon ultimate resolution.

Stock-Based Compensation

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

Stock Issuance Costs

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

Common Stock

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

Net Loss per Common Share

Basic loss per share is computed by dividing loss available to common stockholders by the weighted-average number of common shares outstanding. Diluted loss per share is computed similar to basic loss per share except that the denominator is increased to include additional common shares available upon exercise of stock options and warrants using the treasury stock method, except for periods for which no common share equivalents are included because their effect would be anti-dilutive. Potentially dilutive shares outstanding amounted to 920,743 and 575,743 at December 31, 2012 and 2011, respectively.

Recently Issued Accounting Pronouncements

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

Emerging Growth Company

The Company is an emerging growth company as defined under the Jumpstart Our Business Startups Act of 2012 (JOBS Act). An emerging growth company may delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. The Company will remain an emerging growth company until December 31, 2017, although it will lose that status sooner if its revenues exceed $1 billion, if it issues more than $1 billion in non-convertible debt in a three year period, or if the market value of its common stock that is held by

non-affiliates exceeds $700 million as of any June 30.

Note 3 – Fixed Assets

Fixed assets are summarized as follows:

	December 31,	
	2012	2011
Machinery and equipment	$444,000	$142,000
Office furniture and equipment	71,000	25,000
Leasehold improvements	29,000	8,000
Accumulated depreciation	(157,000)	(58,000)
	387,000	117,000
Construction in progress	13,000	45,000
	$400,000	$162,000

Note 4 – Promissory Notes

In December 2011, the Company executed a $48,000 promissory note with a vendor to extend the terms of an account payable. The fully amortizing unsecured note bore interest at 8% per annum and was payable in equal monthly payments of $4,000 through its maturity in November 2012. The Company paid the note in full without penalty in May 2012.

In April 2012, the Company executed a $98,000 promissory note to finance certain insurance coverage. The fully amortizing unsecured note bore interest at 3.39% per annum and was payable in equal monthly payments of $11,000 through its maturity in January 2013. The Company paid the note in full without penalty in May 2012.

Note 5 – Income Taxes

Through December 31, 2012, the Company incurred net operating losses for federal tax purposes of approximately $9,000,000. The net operating loss carry forward may be used to reduce taxable income through the years 2028 to 2032. The availability of the Company's net operating loss carry forward is subject to limitation if there is a 50% or more change in the ownership of the Company's stock.

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

	2012	2011
Expected tax benefit at 34%	$(1,424,000)	$(1,012,000)
Change in valuation allowance	1,675,000	900,000
Other	(251,000)	112,000
Provision for income taxes	$-	$-

The deferred tax asset at December 31, 2012 and 2011 was $3,075,000 and $1,400,000, respectively. A 100% valuation allowance has been established against the deferred tax assets as the utilization of the loss carry forward cannot reasonably be assured. Significant components of the deferred tax assets (liabilities), computed at the statutory federal tax rate of 34%, are approximately as follows:

	2012	2011
Net operating loss carry forwards	$3,020,000	$1,525,000
Accrued liabilities	(20,000)	(115,000)
Stock compensation	(15,000)	(30,000)
Depreciation	80,000	25,000
Prepaid expenses	20,000	
Deferred rent	(10,000)	(5,000)
Deferred tax assets, net	3,075,000	1,400,000
Valuation allowance	(3,075,000)	(1,400,000)
Net deferred tax asset	$-	$-

Although the Company is not under examination, the tax years for 2008 and forward are subject to examination by United States tax authorities. The Company's practice is to recognize interest and penalties related to income tax matters in income tax expense. As of December 31, 2012 and 2011, there was no accrued interest or penalties related to uncertain tax positions.

Note 6 – Stockholders' Equity (Deficit)

Common Stock

In April and May 2012, the Company completed an initial public offering (IPO) whereby 3,450,000 shares of common stock were issued at $4.00 per share, which included the exercise of the overallotment allowance by the underwriter, MDB Capital Group LLC (MDB). Gross proceeds from the IPO totaled $13.8 million and net cash proceeds approximated $11.2 million. Expenses of the offering approximated $2.7 million, including underwriter fees of $1.2 million paid to MDB along with 345,000 warrants to purchase ClearSign's common stock at $5.00 per share exercisable from April 2013 to April 2017 valued at $128,000, qualified independent underwriter fees of $110,000, underwriter legal fees of $125,000, underwriter expenses of $35,000, and issuer legal fees of $822,000, which was paid in part through the issuance of 110,000 shares of the Company's common stock to its legal counsel at a price of $4.00 per share.

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

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

From March to May 2011, the Company completed the sale of 1,363,364 shares of common stock at $2.20 per share to raise approximately $3 million. In conjunction with this sale, the placement agent, MDB, earned a fee of $300,000 which it elected to receive in the form of 136,364 common stock shares valued at $2.20 per share. MDB also received warrants to purchase 136,368 common stock shares at $2.20 per share with a weighted average grant-date fair value of these warrants of approximately $64,000. The Company's legal counsel and others were paid with 127,000 common stock shares at $2.20 per share. The Company incurred $807,000 of issuance costs which is recorded against additional paid-in capital in 2011, of which $644,000 was paid with common stock. In addition, MDB provided consulting services to the Company in 2011 where it earned a fee of $1,000,000 which MDB elected to receive in the form of 454,547 common stock shares valued at $2.20 per share. This fee is included in general and administrative expense. The grants of common stock are reflected in the Statement of Stockholders' Equity (Deficit) under shares issued for services at $2.20 per share. MDB is a related party due to its significant ownership of the Company's common stock and warrants.

Preferred Stock

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

Equity Incentive Plan

In January 2011, the Company adopted an Equity Incentive Plan (the Plan) providing for the granting of options to purchase shares of common stock, stock awards to purchase shares at no less than 85% of the value of the shares, and stock bonuses to officers, employees, board members, consultants, and advisors. The Company originally reserved 625,000 shares of common stock for issuance under the Plan. The Plan provides for periodic increases in the number of authorized shares available for issuance under the Plan on the first day of each of the Company's fiscal quarters beginning October 1, 2011. The quarterly increases are equal to 10% of any new shares subsequently issued by the Company or such lesser amount as the Board of Directors shall determine. As of December 31, 2012, the number of shares reserved for issuance under the Plan totaled 985,434 shares. The Compensation Committee of the Board of Directors is authorized to administer the Plan and establish the grant terms, including the grant price, vesting period and exercise date. Activity under the Plan is as follows:

	2012	2011
Reserved but unissued shares under the Plan, beginning of year	140,625	625,000
Increases in the number of authorized shares under the Plan	360,434	-
Grants of stock options	-	(362,500)
Stock option forfeitures	-	3,125
Stock grants	(83,299)	(125,000)
Stock grant forfeitures	62,500	-
Reserved but unissued shares under the Plan, end of year	480,260	140,625

Stock Options

Effective July 1, 2011, the Company made its first grants of stock options under the Equity Incentive Plan to certain key employees. The fair value of each option award was estimated on the date of grant using the Black-Scholes option valuation model. All options granted have a term of ten years. As permitted by SAB 107, due to the Company's insufficient history of option activity, management utilized the simplified approach to estimate the options' expected term, which represents the period of time that options granted are expected to be outstanding. Expected volatility was determined through the average of a peer group of public companies. The Company estimated the forfeiture rate at the time of grant and will revise it, if necessary, in subsequent periods if actual forfeitures differ from those estimates. The Company recognizes compensation costs only for those equity awards expected to vest. The risk-free rate for periods within the contractual life of the option is based on the U.S. Treasury yield in effect at the time of grant. The Company has never declared or paid dividends and has no plans to do so in the foreseeable future. The Company did not grant stock options in 2012. The following weighted-average assumptions were utilized for the calculations of stock options granted in 2011:

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

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

	2012		2011	
	Weighted Average	Weighted Average Remaining Contractual Life (in years)	Weighted Average	Weighted Average Remaining Contractual Life (in years)

	Common Stock	Exercise Price		Common Stock	Exercise Price	
Outstanding at January 1	359,375	$ 2.20	9.75	-	-	-
Granted	-	-	-	362,500	$ 2.20	9.75
Exercised	-	-	-	-	-	-
Forfeited/Expired/Exchanged	-	-	-	(3,125)	$ 2.20	-
Outstanding at December 31	359,375	$ 2.20	8.75	359,375	$ 2.20	9.75
Exercisable at December 31	242,188	$ 2.20	8.75	125,000	$ 2.20	9.75

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

A summary of the status of the Company's non-vested stock options at December 31, 2012 and changes during the year ended December 31, 2012 is presented below:

	Number of Options	Weighted Average Grant Date Fair Value
Non-vested stock options at January 1, 2012	234,375	$ 2.20
Granted	-	-
Vested	(117,188)	$ 2.20
Exercised	-	-
Forfeited/Expired/Exchanged	-	-
Non-vested stock options at December 31, 2012	117,188	$ 2.20

At December 31, 2012, there was $98,000 of total unrecognized compensation cost related to non-vested stock option-based compensation arrangements granted under the Plan. That cost is expected to be recognized in future years as follows:

2013	$39,000
2014	39,000
2015	20,000
	$98,000

The recognized compensation cost is as follows for the years ended December 31:

	2012	2011
Research and development	$16,000	$8,000
General and administrative	23,000	103,000
Effect on net loss	$39,000	$111,000
Effect on net loss per share	$0.01	$0.03

Stock Grants

In 2011, the Company granted 125,000 shares of stock under the Plan to a key employee which are subject to declining repurchase rights by the Company at $0.0001 per share should the employee terminate employment or upon other related circumstances prior to June 30, 2015. The fair value of the stock at the time of grant was $2.20 per share

for a total value of $275,000. After the repurchase rights had expired on 62,500 shares, the Company terminated the remaining stock grant agreement in December 2012 and issued a new stock grant for 62,500 shares of which 2,500 shares were vested immediately. The new stock grant is subject to declining repurchase rights by the Company on 60,000 shares at $0.0001 per share should the employee terminate employment or upon other related circumstances prior to September 30, 2016. The Company recognized general and administrative compensation expense of $96,000, or $0.01 per share, and $76,000, or $0.02 per share, for the years ended December 31, 2012 and 2011, respectively. The remaining cost is reflected as a contra-equity balance against additional paid in capital and is expected to be recognized in future years as follows:

2013	$28,000
2014	27,000
2015	27,000
2016	21,000
	$103,000

In 2012, the Company granted 20,799 shares of stock under the Plan to its three independent directors in accordance with board agreements for service from the date of the IPO to December 31, 2012. The fair value of the stock at the time of grant was $4.94 per share for a total value of $103,000 which the Company recognized in general and administrative expense for the year ended December 31, 2012.

Warrants

In conjunction with the IPO, the Company granted warrants to MDB to purchase 345,000 common stock shares at $5.00 per share exercisable from April 2013 to April 2017 (the 2012 Warrants). In conjunction with the issuance of common stock from March to May 2011, the Company granted warrants to MDB to purchase 136,368 common stock shares at the fair value of $2.20 per share (the 2011 Warrants) exercisable through May 2016. In 2009, the Company granted warrants to purchase a total of 80,000 shares of common stock of the Company to technical advisors (the 2009 Warrants) exercisable through February 2021. The warrants were issued in 2011 and are exercisable at the fair value of $1.80 per share. The fair value of the 2012 Warrants, the 2011 Warrants, and the 2009 Warrants was estimated to be $128,000, $64,000, and $48,000, respectively, on the date of the grant using the Black-Scholes option-pricing model. Expected volatility was determined through the average of a peer group of public companies. The risk-free rate for periods within the contractual life of the warrants is based on the U.S. Treasury yield in effect at the time of grant. The Company has never declared or paid dividends and has no plans to do so in the foreseeable future. The following weighted-average assumptions were utilized for the calculations:

	2012	2011	2009
Expected life (in years)	2.5	2.5	5
Weighted average volatility	27 %	33 %	34 %
Weighted average risk-free interest rate	0.33%	0.81%	2.01%
Expected dividend rate	-	-	-

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

	2012		2011	
	Warrants	Weighted Average Exercise Price	Warrants	Weighted Average Exercise Price
Outstanding at beginning of year	216,368	$ 3.25	80,000	$ 1.80
Granted	345,000	$ 5.00	136,368	$ 2.20
Exercised	-	-	-	-
Forfeited/Expired	-	-	-	-
Outstanding at end of year	561,368	$ 3.86	216,368	$ 3.25

The following table summarizes the number of warrants, the weighted average exercise price, and weighted average life (in years) by price for both total outstanding warrants and total exercisable warrants at December 1, 2012:

	Total Outstanding Warrants		
Exercise Price	Warrants	Weighted Average Exercise Price	Life (in years)
$ 1.80	80,000	$ 1.80	8.13
$ 2.20	136,368	$ 2.20	3.36
$ 5.00	345,000	$ 5.00	4.32
	561,368		

Note 7 – Retirement Plan

In May 2012, the Company adopted a defined contribution retirement plan covering all of its employees. Under the plan, the Company matches employee contributions up to 2% of each employee's 2012 earnings. The Company's matching contributions will increase to 3% in 2013. The Company's matching contribution expense totaled $24,000 in 2012.

Note 8 – Related Party Transactions

For the years ended December 31, 2012 and 2011 and for the period from inception (January 23, 2008) to December 31, 2012, the Company paid consulting fees of $145,000, $108,000 and $262,000, respectively, to the Alternative Energy Resource Alliance, a non-profit organization whose executive director is David Goodson. In exchange, Mr. Goodson provides services as the Company's Chief Science Officer. Mr. Goodson is a director and co-founder of the Company and, through an irrevocable trust, a significant beneficial owner of the Company's common stock at December 31, 2012.

In addition to the compensation disclosed in Note 6, MDB was paid $65,000 for patent work and $11,000 of travel expenses in 2012. MDB and its chief executive officer constitute a significant beneficial owner of the Company's common stock at December 31, 2012.

Note 9 – Commitments and Contingencies

The Company has a triple net lease for office and laboratory space for the period November 2011 to February 2017. Under the terms of the lease, the Company paid no rent for the period November 2011 to February 2012. Rent payments commenced in March 2012 and will escalate annually by 3%. The Company records monthly rent expense equal to the total of the payments over the lease term divided by the number of months of the lease term. Therefore, rent expense of $17,000 and $18,000 was accrued in 2012 and during the period of November 2011 to December 2011, respectively. Under the terms of the lease, the Company will also pay monthly triple net operating costs which currently approximate $2,000 per month. Minimum future payments under these leases at December 31, 2012 are as follows:

2013	$108,000
2014	111,000
2015	115,000
2016	118,000
2017	20,000
	$472,000

For the years ended December 31, 2012 and 2011, rent expense amounted to $137,000 and $57,000, respectively.

Effective January 1, 2012, the Company entered into an Employment Agreement (the Agreement) with Richard Rutkowski, its Chief Executive Officer. Unless earlier terminated, the Agreement will continue for a term of three

years. Compensation includes an annual salary of $350,000 with annual cost-of-living adjustments, annual cash and equity bonuses based on performance standards established by the Compensation Committee of the Board of Directors, medical and dental benefits for Mr. Rutkowski and his family, disability insurance, and term life insurance for the benefit of his dependents. The Agreement may be terminated by the Company without cause under certain circumstances, as defined in the Agreement whereby a severance payment would be due in the amount of compensation that would have been due had employment not been terminated or one year of the current annual compensation, whichever is greater.

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

The Company's former legal advisors, Perkins Coie LLP, contacted management in March 2012 to advise that they believe TWB Investment Partnership II, L.P., a party related to Perkins Coie LLP, has the right to acquire 25,250 shares of the Company's common stock at $0.02 per share pursuant to an engagement letter dated December 4, 2007. The claim was denied since, among other defenses, management believes it entered into a full settlement of all amounts owed to Perkins Coie LLP in November 2011.

Note 10 – Subsequent Events

In January 2013, the Company granted 30,000 shares of common stock under the Equity Incentive Plan to its three independent directors in accordance with board agreements for service in 2013. The fair value of the stock at the time of grant was $5.00 per share for a total value of $150,000 which the Company will recognize in general and administrative expense on a quarterly basis in 2013.

In January 2013, the Company granted 203,990 stock options under the Equity Incentive Plan to certain employees. The stock options have an exercise price of $4.88 per share, the grant date fair value, and the contractual life of 10 years. The fair value of stock options granted in January 2013 estimated on the date of grant using the Black-Scholes option valuation model was $302,000.

After taking into effect the January 2013 stock option grant, the total unrecognized compensation cost related to non-vested stock option-based compensation arrangements granted under the Plan that is expected to be recognized in future years as follows:

2013	$115,000
2014	115,000
2015	95,000
2016	75,000
	$400,000

Activity under the Plan in January 2013 is as follows:

Reserved but unissued shares under the Plan, January 1, 2013	480,260
Grants of stock options	(203,990)
Stock grants	(30,000)
Reserved but unissued shares under the Plan, January 31, 2013	246,270

ITEM 9: CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

ITEM 9A: CONTROLS AND PROCEDURES

Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by an issuer in the reports that it files or submits under the Securities Exchange Act of 1934, as amended (the "Act") is accumulated and communicated to the issuer's management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

Report on Controls and Procedures

We carried out an evaluation, under the supervision and with the participation of our management, including our chief executive officer and our chief financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the period covered by this report. The evaluation was undertaken in consultation with our accounting personnel. Based on that evaluation, our chief executive officer and our chief financial officer concluded that our disclosure controls and procedures are effective to ensure that information required to be disclosed by us in the reports that we file or submit under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms.

Report on Internal Control over Financial Reporting

Our chief executive officer and our chief financial officer are responsible for establishing and maintaining internal control over financial reporting. Internal control over financial reporting is defined in Rule 13a-15(f) and 15d-15(f) promulgated under the Securities Exchange Act of 1934 as a process designed by, or under the supervision of, our principal executive and principal financial officers and effected by our board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and includes those policies and procedures that:

- pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of our assets;

- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of management and our directors; and

- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Because of its inherent limitations, our internal control over financial reporting may not prevent or detect misstatements. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our chief executive officer and our chief financial officer assessed the effectiveness of our internal control over financial reporting as of December 31 2012. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control—Integrated Framework*.

Based on our assessment, our chief executive officer and our chief financial officer determined that, as of December 31, 2012, our internal control over financial reporting is effective.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15 (f) under the Exchange Act) during the fourth quarter of the last fiscal year that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B: OTHER INFORMATION

Not applicable.

PART III

Item 10: Directors, Executive Officers and corporate governance

The information concerning the Company's Code of Business Conduct and Ethics is set forth below in this Item 10. All other information required by this item is incorporated by reference to the Company's Proxy Statement for the 2013 Annual Meeting of Shareholders.

Code of Business Conduct and Ethics

The Board of Directors has adopted a code of business conduct and ethics (the Code) designed, in part, to deter wrongdoing and to promote honest and ethical conduct, including the ethical handling of actual or apparent conflicts of interest between personal and professional relationships, full, fair, accurate, timely and understandable disclosure in reports and documents that the Company files with or submits to the Securities and Exchange Commission and in the Company's other public communications, compliance with applicable governmental laws, rules and regulations, the prompt internal reporting of Code violations to an appropriate person or persons, as identified in the Code and accountability for adherence to the Code. The Code applies to all directors, executive officers and employees of the Company. The Code may be found on the Company's website at www.clearsign.com.

The Company intends to disclose any amendments to or waivers of its code of ethics as it applies to directors or executive officers by filing them on Form 8-K.

Item 11: Executive Compensation

The information required by this item is incorporated by reference to the Company's Proxy Statement for the 2013 Annual Meeting of Shareholders.

Item 12: Security Ownership of Certain Beneficial Owners and Management AND RELATED SHAREHOLDER MATTERS

The information concerning the Company's equity compensation plan is set forth below in this Item 12. All other information required by this item is incorporated by reference to the Company's Proxy Statement for the 2013 Annual Meeting of Shareholders.

Equity Compensation Plan Information

The Equity Compensation Plan Information as of December 31, 2012:

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights as of December 31,2012	Weighted-average exercise price of outstanding options, warrants and rights as of December 31, 2012	Number of securities remaining available for future issuance under equity compensation plans (Excluding securities to be issued upon exercise of outstanding options, warrants and rights as of December 31, 2012
Equity compensation plans approved by security	920,743	$ 3.21	480,260
Equity compensation plans not approved by security	-	-	-
Total	920,743	$ 3.21	480,260

Item 13: Certain Relationships and Related Transactions, AND DIRECTOR INDEPENDENCE

The information required by this item is incorporated by reference to the Company's Proxy Statement for the 2013 Annual Meeting of Shareholders.

ITEM 14: PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this item is incorporated by reference to the Company's Proxy Statement for the 2013 Annual Meeting of Shareholders.

PART IV

Item 15. Exhibits AND Financial Statement Schedules

15(a) (1) **Financial Statements**

The financial statements filed as part of this report are listed and indexed in the table of contents. Financial statement schedules have been omitted because they are not applicable or the required information has been included elsewhere in this report.

15(a) (2) **Financial Statement Schedules**

Not applicable.

15 (a) (3) **Exhibits**

The exhibits filed as part of this Annual Report on Form 10-K are listed in the Exhibit Index immediately preceding the exhibits. The Company has identified in the Exhibit Index each management contract and compensation plan filed as an exhibit to this Annual Report on Form 10-K in response to Item 15(a) (3) of Form 10-K.

Exhibit No.	Description of Document
3.1	Articles of Incorporation of ClearSign Combustion Corporation, amended on February 2, 2011(1)
3.1.1	Articles of Amendment to Articles of Incorporation of ClearSign Combustion Corporation filed on December 22, 2011(1)
3.2	Bylaws of ClearSign Combustion Corporation(1)
4.1	Form of Common Stock Certificate(1)
4.2	Underwriter's Warrant(1)
4.3	Form of Common Stock Purchase Warrant issued on February 16, 2011 to various consultants(1)
10.1	Consulting Agreement dated February 14, 2011 between the registrant and MDB Capital Group LLC(1)
10.2	Engagement Agreement(1)
10.3.1	Form of Lock-Up Agreement(1)
10.3.2	Form of Lock-Up Agreement executed by MDB Capital Group, LLC(1)
10.3.3	Form of Lock-Up Agreement executed by Integrated Surgical Systems, Inc.(1)
10.4	Subscription Agreement between the registrant and various investors for an offering completed on April 20, 2011(1)
10.5	Office Lease Agreement(1)
10.6	Form of Employee Intellectual Property Assignment and Nondisclosure Agreement(1)
10.7	ClearSign Combustion Corporation 2011 Equity Incentive Plan(1)
10.8	Advisory Board Agreement dated April 14, 2008 between the registrant and Dr. Thomas Hartwick(1)
10.9	Form of Subscription Agreement between the registrant and various investors in an offering completed in October 2009(1)
10.10	Form of Director and Officer Indemnification Agreement(1)+
10.11	Settlement Agreement and Bill of Sale dated December 13, 2011 between the registrant and Trek, Inc.(1)
10.12	Promissory Note dated December 15, 2011 made by the registrant in favor of Trek, Inc.(1)
10.13	Employment Agreement dated December 27, 2011 between the registrant and Richard Rutkowski(1)+
10.14	Amended and Restated Consulting Agreement dated December 22, 2011 between the registrant and John McFarland(1)
23.1	Consent of Gumbiner Savett Inc., Independent Registered Public Accounting Firm*
100.1	The following financial statements from the registrant's Annual Report on Form 10-K for 2012, formatted in XBRL: (i) Balance Sheets; (ii) Statements of Operations; (iii) Statement of Stockholders' Equity; (iv) Statements of Cash Flows; (v) Notes to Financial Statements.*

*Filed herewith.

+Agreement with management.

(1) Incorporated by reference from the registrant's registration statement on Form S-1, as amended, file number 333-177946, originally filed with the Securities and Exchange Commission on November 14, 2011.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Seattle, State of Washington, on this 22nd day of February, 2013.

CLEARSIGN COMBUSTION CORPORATION

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

By: /s/ James N. Harmon
James N. Harmon
Chief Financial Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Dated: February 22, 2013 /s/ Richard F. Rutkowski
Richard F. Rutkowski
Chief Executive Officer and Director
(Principal Executive Officer)

Dated: February 22, 2013 /s/ James N. Harmon
James N. Harmon
Chief Financial Officer
(Principal Financial and Accounting Officer)

Dated: February 22, 2013 /s/ David B. Goodson
David B. Goodson
Chief Science Officer and Director

Dated: February 22, 2013 /s/ Stephen E. Pirnat
Stephen E. Pirnat, Director

Dated: February 22, 2013 /s/ Scott P. Isaacson
Scott P. Isaacson, Director

Dated: February 22, 2013 /s/ Lon E. Bell

Lon E. Bell, Ph.D., Director

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