

CLEARSIGN COMBUSTION CORP
Form S-3
December 29, 2015

As filed with the Securities and Exchange Commission on December 29, 2015

Registration No. 333-_____

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form S-3

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

CLEARSIGN COMBUSTION CORPORATION

(Exact Name of Registrant as Specified in Its Charter)

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

12870 Interurban Avenue South

Seattle, Washington 98168

(206) 673-4848

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

Stephen E. Pirnat

Chief Executive Officer

ClearSign Combustion Corporation

12870 Interurban Avenue South

Seattle, Washington 98168

(206) 673-4848

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

With copies to:

Kevin Friedmann, Esq.

Mitchell Silberberg & Knupp LLP

11377 West Olympic Blvd.

Los Angeles, CA 90064

(310) 312-3106

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this registration statement, as determined by market conditions and other factors.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. "

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. x

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

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

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box. "

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. "

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

Large accelerated filer "

Non-accelerated filer " (Do not check if a smaller reporting company)

Accelerated filer "

Smaller reporting company x

CALCULATION OF REGISTRATION FEE

| Title of Each Class of Securities to be Registered | Amount to be Registered (1) | Proposed Maximum Offering Price Per Unit (2) | Proposed Maximum Aggregate Offering Price (3) | Amount of Registration Fee (4) | |
|--|-----------------------------|--|---|--------------------------------|-----|
| Primary Offering | | | | | |
| Common Stock | — | — | | | |
| Preferred Stock | — | — | | | |
| Warrants to purchase Preferred or Common Stock | — | — | | | |
| Units | — | — | | | |
| Total | | | \$ 30,000,000.00 | \$ 2,415.94 | (5) |

(1) The securities are being registered as an indeterminate number of securities which shall have an aggregate offering price not to exceed \$30,000,000. This Registration Statement shall also cover any additional securities to be offered or issued from share splits, share dividends, recapitalizations or similar transactions.

(2) The proposed maximum offering price per unit will be determined from time to time by the registrant in connection with the issuance of securities.

(3) The proposed maximum aggregate offering price has been estimated for the sole purpose of computing the registration fee pursuant to Rule 457(o) under the Securities Act.

(4) The fee has been calculated in accordance with Rule 457(o) under the Securities Act and is based on the total amount of the offering.

(5) In accordance with Rule 415(a)(6) under the Securities Act of 1933, the securities to be registered include \$6,008,500 of unsold securities previously registered under the registration statement on Form S-3 (Reg. No. 333-188381) (the "Prior Registration Statement") declared effective on May 30, 2013. Pursuant to Rule 415(a)(6), the registration fee paid with respect to such unsold securities in connection with the Prior Registration Statement will continue to be applied to the securities being registered. The registrant is paying a registration fee of \$2,415.94 with respect to the \$23,991,500 of new securities that are being registered under this registration statement. Pursuant to Rule 415(a)(6), the offering by the registrant of securities covered by the Prior Registration Statement will be deemed terminated as of the date of effectiveness of this registration statement.

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

The information in this prospectus is not complete and may be changed. We may not sell these securities until the Securities and Exchange Commission declares our registration statement effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

Subject to completion, dated December 29, 2015

PROSPECTUS

\$30,000,000

Common Stock, Preferred Stock, Warrants and Units Offered

by ClearSign Combustion Corporation

By this prospectus and an accompanying prospectus supplement, we may from time to time offer and sell, in one or more offerings, up to \$30,000,000 in any combination of common stock, preferred stock, warrants and units.

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

We may offer these securities from time to time in amounts, at prices and on other terms to be determined at the time of offering. We may offer and sell these securities to or through underwriters, dealers or agents, or directly to investors, on a continuous or delayed basis.

The supplements to this prospectus will provide the specific terms of the plan of distribution. The price to the public of the securities we offer and the net proceeds we expect to receive from such sale will also be set forth in a prospectus supplement.

Our common stock is listed on The NASDAQ Capital Market under the symbol “CLIR”. On December 28, 2015, the closing price of our common stock as reported by The NASDAQ Capital Market was \$4.99 per share. The aggregate market value of our outstanding voting common stock held by non-affiliates, based upon a closing sale price of our common stock on November 4, 2015, was \$71,106,000. During the 12 calendar month period that ends on, and includes, the date of this prospectus, we sold shares of our common stock pursuant to General Instruction I.B.6. of Form S-3 and received gross proceeds of \$17,491,500. Pursuant to General Instruction I.B.6 of Form S-3, in no event will we sell securities registered on this registration statement in a public primary offering with a value exceeding more than one-third of our public float in any 12-month period so long as our public float remains below \$75.0 million.

We are an “emerging growth company” under the federal securities laws and will be subject to reduced public company reporting requirements. An investment in our securities may be considered speculative and involves a high degree of risk, including the risk of a substantial loss of your investment. See “Risk Factors” on page 8 for more information on the risks you should consider before buying our securities. An investment in our securities is not suitable for all investors. We intend to continue to issue our securities in this offering and, as a result, your ownership in us is subject to dilution.

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

The date of this prospectus is [_____], 2015.

TABLE OF CONTENTS

| | Page |
|--|-------------|
| <u>ABOUT THIS PROSPECTUS</u> | 1 |
| <u>DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS</u> | 2 |
| <u>OUR BUSINESS</u> | 3 |
| <u>RISK FACTORS</u> | 8 |
| <u>USE OF PROCEEDS</u> | 8 |
| <u>DILUTION</u> | 8 |
| <u>DESCRIPTION OF SECURITIES THAT MAY BE OFFERED</u> | 8 |
| <u>PLAN OF DISTRIBUTION</u> | 14 |
| <u>LEGAL MATTERS</u> | 16 |
| <u>EXPERTS</u> | 16 |
| <u>WHERE YOU CAN FIND MORE INFORMATION</u> | 16 |
| <u>INFORMATION INCORPORATED BY REFERENCE</u> | 17 |
| <u>DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES</u> | 17 |

ABOUT THIS PROSPECTUS

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

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

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

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

DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS

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

Forward-looking statements in this prospectus and any accompanying prospectus supplement include, without limitation, statements related to our plans, strategies, objectives, expectations, intentions and adequacy of resources. Investors are cautioned that such forward-looking statements involve risks and uncertainties. Factors that could cause actual results to differ from those discussed in the forward-looking statements include, but are not limited to:

- our limited cash and our history of losses;
- our ability to successfully develop and implement our technology and achieve profitability;
- our limited operating history;
- emerging competition and rapidly advancing technology in our industry that may outpace our technology;
- customer demand for the products and services we develop;
- the impact of competitive or alternative products, technologies and pricing;
- our ability to manufacture any products we develop;
- general economic conditions and events and the impact they may have on us and our potential customers;
- our ability to obtain adequate financing in the future;
- our ability to continue as a going concern;
- our success at managing the risks involved in the foregoing items; and
- other factors discussed in this prospectus.

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

OUR BUSINESS

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

About ClearSign Combustion Corporation

We design and are currently developing technologies that aim to improve both the emission performance and operational efficiency characteristics of combustion systems. Our core technologies include our Duplex™ and Electrodynamic Combustion Control™ (ECC™) technologies. Our Duplex technology uses a unique refractory tile to homogenize the flame temperature and achieve very low emissions without the need of external flue gas recirculation, selective catalytic reduction, or higher excess air operation. Our ECC technology introduces a computer-controlled electric field into a combustion system in order to better control gas-phase chemical reactions and improve system performance and cost-effectiveness. To date, our operations have been funded primarily through sales of our common stock. We have earned no significant revenue since inception on January 23, 2008. We are headquartered in Seattle, Washington with an office in Tulsa, Oklahoma.

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

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

Our Industry

The combustion and emissions control markets are significant, both in the wide array of industries in which the systems are used and in the amount of money spent in installing and upgrading systems. The Energy Information Administration of the U.S. Department of Energy determined in its 2014 Annual Energy Outlook, its most recent estimate, that the world's industrial sector consumed 165 quadrillion British thermal units (BTUs) of hydrocarbon fuels. These are used to provide heat for all manner of industrial processes, including boilers, furnaces, kilns and turbines. In order to maximize energy efficiency while keeping pace with regulatory guidelines for air pollution emissions, operators of these systems are continually installing, maintaining and upgrading a variety of costly process control, air pollution control and monitoring systems. Although we believe that there are many potential markets for our technologies, to date we have limited the introduction of our technologies to market segments that include petroleum refining and petrochemical process heaters, package boilers, and OTSGs.

Our Technologies

We are pursuing development of our technologies to enable future sales. These activities entail (i) field development projects in the case of our Duplex technology where we have successfully demonstrated our proprietary technology operating in our field testing with thermal output of up to 52 million BTU/hr, (ii) laboratory research in the case of our ECC technology where we have demonstrated certain attributes of our proprietary technology operating in our research facility with thermal output of up to 2 million BTU/hr, and (iii) business development and marketing activities with established entities that use steam generators, process heaters, boilers, solid fuel burners, and other combustion systems as well as original equipment manufacturers. We intend to continue to enter into collaborative arrangements, such as those described below, which would enable us to work closely with established companies in targeted industries to apply solutions developed in our laboratory and field settings.

Field Testing of our Duplex Technology in Once-Through Steam Generators

After performing testing on our Duplex technology in our laboratory furnace with thermal output up to 5 million BTU/hr, we commenced field development work in the fourth quarter of 2014 with an oil field operator in Southern California to demonstrate and test the Duplex technology in an OTSG with a thermal output ranging from 40 to 62.5 million BTU/hr used to facilitate a thermally enhanced oil recovery process in California's San Joaquin Valley. To date, we have tested an OTSG at a rate of 52 million BTU/hr and met the San Joaquin Valley Air Pollution Control District's regulations under Rule 4320 requiring NO_x emissions not to exceed 5 ppm (corrected at 3% O₂). These results were achieved without major modifications to the burner or the need for flue gas recirculation (FGR). During testing, the OTSG unit continued to supply steam at the capacity and quality required for oil field operations. Our agreement with this customer includes time-sensitive pricing, delivery and installation terms, if elected, that will apply to future purchases of this Duplex application. In September 2015, this customer placed an initial commercial order to retrofit our Duplex technology in a second OTSG unit. Subject to final approval of the design, we expect the retrofit to be completed in 2016.

In May 2015, we received an order from an independent Southern California oil producer to retrofit a 25 million BTU/hr OTSG with our Duplex technology. The installation is expected to be completed 2016.

Based upon our results to date, we observed a thermal efficiency improvement in OTSGs of approximately 1% when compared to a baseline case with a conventional low NO_x burner without FGR. OTSG systems typically operate with FGR to lower NO_x emissions. FGR, however, penalizes thermal efficiency, increasing fuel and electricity costs. We estimate that Duplex, compared to systems operating with FGR, will provide an overall energy savings of as much as 3-4% which could represent a significant reduction in annual operating expense depending on variables such as the thermal output of the OTSG and the market price for natural gas and electricity. Further, compliance with current emissions standards would eliminate the cost of any fines associated with the retrofitted operations. We continue to conduct testing to address additional performance criteria in order to further validate the environmental and operational benefits of our Duplex technology.

Field Testing of our Duplex Technology in Refinery Process Heaters

In August 2015, we executed an agreement with Tesoro Refining & Marketing Company LLC, a subsidiary of Tesoro Corporation, to evaluate our Duplex technology in a multiple-burner process heater located in Tesoro's Los Angeles area refinery. The Duplex technology performance will be evaluated based on several performance criteria, including NO_x emission criteria determined by California's South Coast Air Quality Management District. The first phase of the project, involving initial design, was completed under a fixed price agreement in 2015. Future phases of the project are subject to approval of the design by Tesoro.

In September 2015, we executed an agreement with a subsidiary of Delek US Holdings, Inc. to install our Duplex technology in a process heater located in Delek's Tyler, Texas refinery. The Duplex installation is being installed to eliminate potential flame impingement upon process tubes and reduce maintenance costs and downtime. The installation is expected to be completed in 2016.

We previously executed two agreements regarding field tests related to process heaters with thermal outputs ranging from 12 to 15 million BTU/hr with prospective customers at two separate petroleum refineries in the San Joaquin Valley. Pursuant to each agreement, if we are able to retrofit the process heaters in accordance with the specifications set forth in the agreements, the prospective customers will purchase Duplex systems from us. These prospective customers have no other financial obligations under the agreements. We have commenced field testing in one of the refineries and expect to complete the projects in 2016.

We intend to continue field validation of our Duplex technology in order to produce sufficient data to demonstrate product attributes and dependability.

Laboratory Research of our ECC Technology

We continue to conduct solid fuel laboratory testing of our ECC technology in conjunction with six parties who contributed \$125,000 in 2014 and 2015 to our research. If successful, this would create a basis for further focused laboratory studies prior to any field demonstrations. There is no assurance that additional revenues will be realized, terms will be reached, or a final agreement executed between us and any of these six parties.

Technical Components of our Duplex and ECC Technologies

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

Our ECC technology consists, in its simplest form, of four major components: (a) a computer, (b) standard software delivering proprietary algorithms to (c) a power amplifier (resident outside the combustion chamber) and (d) electrodes inside the combustion chamber. ECC introduces a high voltage electric field into the combustion process to control the resulting flames electrically through the naturally forming ions. The electrodes are optimized in material and shape to best suit the specific geometry of a given installation. We have also demonstrated a technique to apply ECC to a combustion system without requiring an electrode to have physical contact with the flame. Based on our research and demonstrations, we believe ECC to be ideally suited to solid fuel combustion.

The basic components of both systems are either available “off the shelf” or require manufacturing techniques that are well within the current state of the art. Thus, our products are readily available and scalable for high volume demand.

We believe our technologies can be retrofitted to existing combustion systems to improve their performance and have the potential to provide substantial savings in both capital and operating costs, or, for new-builds, can serve as the basis for fundamental improvements in the design, cost and operation of combustion systems.

Research and Development Plan

We have tested aspects of our Duplex and ECC technologies in our laboratory on our 1 million and 5 million BTU/hr research furnaces, our 1 million BTU/hr boiler simulator, and our 1 million BTU/hr solid fuel furnace. We have installed our Duplex technology in three field test sites: two OTSG applications and one process heater. We also continue to conduct solid fuel laboratory testing utilizing our ECC technology in conjunction with six parties who have contributed a total of \$125,000 in 2014 and 2015 to our research. If successful, this would create a basis for further focused laboratory studies prior to any field demonstrations. Our technologies have not been tested or verified by any independent third party. Our research and development efforts are following this sequence of planned

activities:

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

Site demonstration at full scale. We have begun to demonstrate our Duplex technology at commercial sites firing retrofitted OTSGs up to 52 million BTU/hr and a retrofitted three burner, 12 million BTU/hr petroleum refinery process heater. Our early site demonstrations are aimed at retrofitting existing burners in single or multi-burner systems in order to evaluate our Duplex technology at full scale in several operating systems.

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

Enhancement of our intellectual property portfolio. We have generated inventions that we believe to be patentable subject matter and for which we have been seeking protection through patent application filings. As of December 2015, we have filed approximately 180 patent applications with the U.S. Patent and Trademark Office (USPTO) and certain foreign regulatory bodies related to our Duplex and ECC technologies, which remain pending. We have been granted 5 patents by the USPTO related to our ECC technology. We cannot predict when our patent applications may result in issued patents, if at all. Further, we may modify a patent application in the future as we develop additional information. As a result, we may create additional patent applications from an existing application, consolidate existing patent applications, abandon applications, or otherwise modify applications based upon our judgment in order to protect our intellectual property in a reasonably cost beneficial manner.

The Combustion Markets

Overview

We compete in the combustion and emissions control markets. These are highly competitive industries that are currently dominated by companies that have both substantially greater financial resources than we do and established products. However, we believe, based on the testing and the field studies done to date, that our technologies offer a unique and powerful ability to improve emissions and operational performance, energy efficiency and overall cost-effectiveness. We are targeting the following segments of the combustion market:

· process heaters for petroleum refining and petrochemical processing,

· heating systems in package boilers, and

· larger-scale steam generation systems and power boilers.

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

Partnership Strategy

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

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

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

large OEMs interested in our technologies;

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

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

Implications of Being an Emerging Growth Company

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

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

- reduced disclosure about our executive compensation arrangements;
- no non-binding advisory votes on executive compensation or golden parachute arrangements; and
- exemption from the auditor attestation requirement in the assessment of our internal control over financial reporting.

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

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

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

Corporate Information

Our primary facilities and executive offices are located at 12870 Interurban Avenue South, Seattle, Washington 98168, and our telephone number is (206) 673-4848. We were incorporated in Washington on January 23, 2008. Additional information about us is available on our website at www.clearsign.com. The information contained on or that may be obtained from our website is not, and shall not be deemed to be, a part of this prospectus. Our common stock, par value \$0.001 per share, is currently traded on The NASDAQ Capital Market under the ticker symbol “CLIR.”

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

RISK FACTORS

Investing in our common stock involves a high degree of risk. Please see the risk factors set forth in Part I, Item 1A of our Annual Report on Form 10-K and other filings we make with the SEC, which are incorporated by reference in this prospectus. Additional risk factors may be included in a prospectus supplement relating to a particular offering of securities. Before making an investment decision, you should carefully consider these risks as well as other information we include or incorporate by reference in this prospectus. These risks could materially affect our business, results of operations or financial condition and cause the value of our securities to decline.

USE OF PROCEEDS

Unless we state otherwise in an accompanying prospectus supplement, we intend to use the net proceeds from the sale of the securities offered by us under this prospectus and any related prospectus supplement for general corporate purposes. These purposes may include capital expenditures and additions to working capital. When a particular offering of securities is made, the prospectus supplement relating to that offering will set forth our intended use of the net proceeds we receive from the sale of the securities. Pending the application of the net proceeds, we may invest the proceeds in short-term, interest-bearing instruments or other investment-grade securities.

DILUTION

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

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

DESCRIPTION OF THE SECURITIES THAT MAY BE OFFERED

Description of Common Stock

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

We have 52,000,000 shares of capital stock authorized under our articles of incorporation, consisting of 50,000,000 shares of common stock and 2,000,000 shares of preferred stock.

As of December 28, 2015 we had 12,860,161 shares of common stock issued and outstanding. Our authorized but unissued shares of common stock are available for issuance without further action by our shareholders, unless such action is required by applicable law or the rules of The NASDAQ Capital Market or any other stock exchange or automated quotation system on which our securities may become listed or traded. If the approval of our shareholders is not so required, our board of directors may determine not to seek shareholder approval.

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

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

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

Our common stock is listed on The NASDAQ Capital Market under the symbol "CLIR". On December 28, 2015, the last sale price of our common stock was \$4.99 per share. The transfer agent and registrar for our common stock is VStock Transfer, LLC. Its address is 18 Lafayette Place, Woodmere, New York 11598, and its telephone number is (212) 828-8436.

Description of Preferred Stock

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

Subject to the limitations prescribed in our articles of incorporation and under Washington law, our articles of incorporation authorize the board of directors, from time to time by resolution and without further shareholder action, to provide for the issuance of shares of preferred stock, in one or more series, and to fix the designation, limitations, voting powers, preferences and relative rights of the shares and to fix the qualifications, limitations and restrictions thereof.

Description of Warrants to Purchase Common Stock or Preferred Stock

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

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

the title of the equity warrants;

the initial offering price;

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

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

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

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

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

redemption or call provisions, if any, applicable to the equity warrants;

any additional terms of the equity warrants, including terms, procedures and limitations relating to the exchange and exercise of the equity warrants; and

the exercise price.

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

Description of Units

We may, from time to time, issue units comprised of one or more of the other securities described in this prospectus in any combination. A prospectus supplement will describe the specific terms of the units offered under that prospectus supplement, and any special considerations applicable to investing in those units. You must read the applicable prospectus supplement and any applicable unit agreement for a full understanding of the specific terms of any units. We will incorporate by reference into the registration statement of which this prospectus is a part the form of unit agreement, including a form of unit certificate, if any, that describes the terms of the series of units we are offering before the issuance of the related series of units. While the terms we have summarized below will generally apply to any future units that we may offer under this prospectus, we will describe the particular terms of any series of units that we may offer in more detail in the applicable prospectus supplement and incorporated documents. The terms of any units offered under a prospectus supplement may differ from the terms described below.

We may issue units consisting of common stock, preferred stock, warrants or any combination thereof. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time, or at any time before a specified date.

We will describe in the applicable prospectus supplement and any incorporated documents the terms of the series of units, including the following:

the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;

any unit agreement under which the units will be issued; and

any provisions for the issuance, payment, settlement, transfer, or exchange of the units or of the securities comprising the units.

The provisions described in this section, as well as those described under “Description of Common Stock,” “Description of Preferred Stock,” and “Description of Warrants to Purchase Common Stock or Preferred Stock” will apply to each unit and to any common stock, preferred stock, or warrant included in each unit, respectively.

We may issue units in such amounts and in such numerous distinct series as we determine.

Each unit agent will act solely as our agent under the applicable unit agreement and will not assume any obligation or relationship of agency or trust with any holder of any unit. A single bank or trust company may act as unit agent for more than one series of units. A unit agent will have no duty or responsibility in case of any default by us under the applicable unit agreement or unit, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a unit, without the consent of the related unit agent or the holder of any other unit, may enforce by appropriate legal action its rights as holder under any security included in the unit.

We, the unit agent, and any of their agents may treat the registered holder of any unit certificate as an absolute owner of the units evidenced by that certificate for any purposes and as the person entitled to exercise the rights attaching to the units so requested, despite any notice to the contrary.

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

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

Effect of Washington Anti-Takeover Statute. We are subject to Section 23B.19 of the Washington Revised Statutes, an anti-takeover law (the “Anti-Takeover Statute”). In general, the Anti-Takeover Statute prohibits a target corporation from entering into a significant business transaction with an acquiring person for a period of five years following the acquiring person’s share acquisition unless

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

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

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

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

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

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

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

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

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

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

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

A receipt by an acquiring person or an affiliate or associate of an acquiring person of the benefit, directly or (g) indirectly, except proportionately as a shareholder of a target corporation, of loans, advances, guarantees, pledges, or other financial assistance or tax credits or other tax advantages provided by or through a target corporation.

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

(a) Every domestic corporation, if:

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

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

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

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

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

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

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

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

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

Effects of authorized but unissued common stock and blank check preferred stock. One of the effects of the existence of authorized but unissued common stock and undesignated preferred stock may be to enable our board of directors to make more difficult or to discourage an attempt to obtain control of our Company by means of a merger, tender offer, proxy contest or otherwise, and thereby to protect the continuity of management. If, in the due exercise of its fiduciary obligations, the board of directors were to determine that a takeover proposal was not in our best interest, such shares could be issued by the board of directors without shareholder approval in one or more transactions that might prevent or render more difficult or costly the completion of the takeover transaction by diluting the voting or other rights of the proposed acquirer or insurgent shareholder group, by putting a substantial voting block in institutional or other hands that might undertake to support the position of the incumbent board of directors, by effecting an acquisition that might complicate or preclude the takeover, or otherwise.

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

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

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

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

PLAN OF DISTRIBUTION

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

to or through underwriters, brokers or dealers;

directly to one or more other purchasers;

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

through agents on a best-efforts basis;

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

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

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

enter into transactions involving short sales of the shares of common stock by underwriters, brokers or dealers;

sell shares of common stock short and deliver the shares to close out short positions;

enter into option or other types of transactions that require the delivery shares of common stock to an underwriter, broker or dealer, who will then resell or transfer the shares of common stock under this prospectus; or

loan or pledge the shares of common stock to an underwriter, broker or dealer, who may sell the loaned shares or, in the event of default, sell the pledged shares.

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

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

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

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

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

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

Such sales may be effected:

• in transactions on any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale;

- in transactions in the over-the-counter market;

in block transactions in which the broker or dealer so engaged will attempt to sell the securities as agent but may position and resell a portion of the block as principal to facilitate the transaction, or in crosses, in which the same broker acts as an agent on both sides of the trade;

- through the writing of options; or
- through other types of transactions.

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

The securities may be offered to the public either through underwriting syndicates represented by one or more managing underwriters or directly by one or more of such firms. Unless otherwise set forth in the prospectus supplement, the obligations of underwriters or dealers to purchase the securities offered will be subject to certain conditions precedent and the underwriters or dealers will be obligated to purchase all the offered securities if any are purchased. Any public offering price and any discount or concession allowed or reallocated or paid by underwriters or dealers to other dealers may be changed from time to time.

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

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

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

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

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

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

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

To comply with the securities laws of some states, if applicable, the securities may be sold in these jurisdictions only through registered or licensed brokers or dealers. In addition, in some states the securities may not be sold unless they have been registered or qualified for sale or an exemption from registration or qualification requirements is available and is complied with.

There can be no assurance that we will sell all or any of the securities offered by this prospectus.

LEGAL MATTERS

Mitchell Silberberg & Knupp LLP, with an office at 11377 West Olympic Blvd., Los Angeles, California 90064, will pass upon the validity of the securities offered in this prospectus. As of December 28, 2015, an entity controlled by a principal of Mitchell Silberberg & Knupp owns 38,000 shares of our common stock.

EXPERTS

Gumbiner Savett Inc., independent registered public accounting firm, has audited our financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2014, as set forth in their report, which is incorporated by reference in the prospectus and elsewhere in this registration statement. Our financial statements are incorporated by reference in reliance on the report of Gumbiner Savett Inc., given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-3 under the Securities Act of 1933, as amended (“Securities Act”), with respect to the securities covered by this prospectus. This prospectus, which is a part of the registration statement, does not contain all of the information set forth in the registration statement or the exhibits and schedules filed therewith. For further information with respect to us and the securities covered by this prospectus, please see the registration statement and the exhibits filed with the registration statement. A copy of the registration statement and the exhibits filed with the registration statement may be inspected without charge at the Public Reference Room maintained by the SEC, located at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the Public Reference Room. The SEC also maintains an Internet website that contains reports, proxy and information statements and other information regarding registrants that file electronically with the SEC. The address of the website is <http://www.sec.gov>.

We are subject to the information and periodic reporting requirements of the Exchange Act and, in accordance therewith, we file periodic reports, proxy statements and other information with the SEC. Such periodic reports, proxy statements and other information are available for inspection and copying at the Public Reference Room and website of the SEC referred to above. We maintain a website at <http://www.clearsign.com>. You may access our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed pursuant to Sections 13(a) or 15(d) of the Exchange Act with the SEC free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. Our website and the information contained on that site, or connected to that site, are not incorporated into and are not a part of this prospectus.

INFORMATION INCORPORATED BY REFERENCE

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

Our Annual Report on Form 10-K for the fiscal year ended December 31, 2014, as filed with the SEC on February 26, 2015;

All information in our proxy statement filed with the SEC on March 31, 2015 and amended on April 1, 2015 to the extent incorporated by reference in our Annual Report on Form 10-K for the year ended December 31, 2014;

our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2015, June 30, 2015 and September 30, 2015, as filed with the SEC on May 14, 2015, August 13, 2015 and November 12, 2015, respectively; and

Our Current Reports on Form 8-K filed with the SEC on February 5, 2015, February 12, 2015, May 11, 2015 and August 5, 2015.

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

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

Disclosure of Commission Position on Indemnification

for Securities Act Liabilities

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

PART II**INFORMATION NOT REQUIRED IN PROSPECTUS****Item 14. Other Expenses of Issuance and Distribution.**

The following statement sets forth the expenses and costs expected to be incurred by ClearSign Combustion Corporation in connection with the distribution of its securities being registered in this registration statement. All amounts are estimates.

| | |
|-------------------------------------|----------|
| SEC registration fee | \$2,416 |
| Transfer agent's fees and expenses* | \$1,000 |
| Legal fees and expenses* | \$20,000 |
| Accounting fees and expenses* | \$2,000 |
| Miscellaneous fees and expenses* | \$14,000 |
| Total* | \$39,416 |

*Estimate

Item 15. Indemnification of Officers and Directors.

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

The Company's articles of incorporation provide that, to the fullest extent permitted by Washington law, the Company's directors will not be liable to the Company or its shareholders for monetary damages. This provision, however, does not eliminate or limit liability for acts or omissions that involve intentional misconduct or a knowing violation of law by a director, for conduct violating Revised Code of Washington section 23B.08.310 (approval of an unlawful distribution) or for any transaction from which the director will personally receive a benefit in money, property, or services to which the director is not legally entitled. Pursuant to section 23B.08.52 of the Revised Code of Washington, because the Company's articles of incorporation do not limit the obligation, the Company must indemnify a director who was wholly successful, on the merits or otherwise, in the defense of any proceeding to which the director was a party because of being a director against reasonable expenses incurred by the director in connection with the proceeding.

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

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

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

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

Item 16. Exhibits.

a) Exhibits.

| Exhibit No. | Description of Document |
|--------------------|---|
| 4.1 | Form of Common Stock Certificate (1) |
| 5.1 | Opinion of Mitchell Silberberg & Knupp LLP* |
| 23.1 | Consent of Gumbiner Savett Inc., Independent Registered Public Accounting Firm* |

- 24.1 Power of Attorney* (See Signature Page)
- 31.2 Consent of Mitchell Silberberg & Knupp LLP (included in Exhibit 5.1)*

*Filed herewith.

(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.

Item 17. Undertakings.

(a) The undersigned registrant hereby undertakes:

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

(i) To include any prospectus required by Section 10(a) (3) of the Securities Act of 1933, as amended;

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

provided, however, that:

Paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) of this section do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

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

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

(4) That, for the purpose of determining liability under the Securities Act of 1933, as amended, to any purchaser:

(i) If the registrant is relying on Rule 430B:

(A) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of

providing the information required by Section 10(a) of the Securities Act of 1933, as amended shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date; or

I-3

If the registrant is subject to Rule 430C, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a (ii) registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

- That, for the purpose of determining liability of the registrant under the Securities Act of 1933, as amended, to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this
- (5) registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:
- (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
 - (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
 - (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
 - (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, as amended, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in this registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended, may be permitted to directors, officers, and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission, such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for

indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer, or controlling person of the registrant in the successful defense of any action, suit, or proceeding) is asserted by such director, officer, or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question of whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

SIGNATURES

In accordance with the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and authorized this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Seattle, State of Washington, on December 29, 2015.

**CLEARSIGN
COMBUSTION
CORPORATION**

By: /s/ Stephen E. Pirnat
Chief Executive Officer

SIGNATURES AND POWER OF ATTORNEY

Know All Men By These Presents, that each person whose signature appears below constitutes and appoints Stephen E. Pirnat and James N. Harmon, and each of them singly, as his true and lawful attorney-in-fact and agent with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any or all amendments (including any pre-effective or post-effective amendments) to this registration statement or any related registration statement that is to be effective upon filing pursuant to Rule 462(b), and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection with the above premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent or his substitute or substitutes, may lawfully do or cause to be done by virtue thereof.

In accordance with the requirements of the Securities Act of 1933, as amended, this Registration Statement was signed by the following persons in the capacities and on the dates stated.

Dated: December 29, 2015 /s/ Stephen E. Pirnat
Stephen E. Pirnat
Chief Executive Officer and Director
(Principal Executive Officer)

Dated: December 29, 2015 /s/ James N. Harmon

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James N. Harmon
Chief Financial Officer
(Principal Financial and Accounting Officer)

Dated: December 29, 2015 /s/ David B. Goodson
David B. Goodson
Chief Science Officer and Director

Dated: December 29, 2015 /s/ Jeffrey L. Ott
Jeffrey L. Ott, Director

Dated: December 29, 2015 /s/ Scott P. Isaacson
Scott P. Isaacson, Director

Dated: December 29, 2015 /s/ Lon E. Bell
Lon E. Bell, Ph.D., Director

I-5