

CLEARSIGN COMBUSTION CORP
Form 424B5
February 26, 2018

**Filed pursuant to Rule 424(b)(5)
Registration No. 333-208784**

PROSPECTUS SUPPLEMENT
(To the Prospectus Dated January 7, 2016)

5,000,000 Shares of Common Stock

We are offering 5,000,000 shares of our common stock, par value \$0.0001 per share, pursuant to this prospectus supplement and accompanying prospectus.

Our common stock is listed on the NASDAQ Capital Market under the symbol CLIR.

On February 22, 2018, the last reported sale price of our common shares on the NASDAQ Capital Market was \$2.35. The aggregate market value of our outstanding voting common stock held by non-affiliates, based upon the closing price of our common stock on December 27, 2017 of \$3.90 per share, was \$58,355,954. We have not offered any securities during the 12 calendar month period that ends on, and includes, the date of this prospectus supplement.

	Per Share	Total ⁽²⁾
Public offering price	\$ 2.250	\$ 11,250,000
Underwriting discount and commission ⁽¹⁾	\$ 0.146	\$ 730,000
Proceeds to us before expenses	\$ 2.104	\$ 10,520,000

(1) The underwriter will be reimbursed \$75,000 on a non-accountable basis for its expenses incurred in this offering. See Underwriting for details.

(2) Assumes no exercise of the underwriter's over-allotment option described below.

Certain of our directors and officers purchased an aggregate of 144,222 shares of common stock offered in this offering at the public offering price.

An investment in our common stock involves a high degree of risk. See Risk Factors on page S-7 of this prospectus supplement for more information on these risks.

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

We have granted the underwriter an option for a period of 45 days to purchase up to an additional 750,000 of our shares of common stock at the public offering price, less the underwriting discount, to cover over-allotments, if any. If the underwriter exercises the option in full, the total underwriting discount will be \$839,500, and the total proceeds to us, before expenses, will be \$12,937,500.

We anticipate delivery of the shares will be made on or about February 27, 2018, subject to customary closing conditions.

National Securities Corporation

The date of this prospectus supplement is February 23, 2018.

TABLE OF CONTENTS

TABLE OF CONTENTS

	Page
Prospectus Supplement	
<u>ABOUT THIS PROSPECTUS SUPPLEMENT</u>	S-1
<u>DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS</u>	S-2
<u>PROSPECTUS SUPPLEMENT SUMMARY</u>	S-3
<u>RISK FACTORS</u>	S-7
<u>USE OF PROCEEDS</u>	S-9
<u>DETERMINATION OF OFFERING PRICE</u>	S-10
<u>MARKET PRICE OF OUR COMMON STOCK</u>	S-11
<u>CAPITALIZATION</u>	S-12
<u>DILUTION</u>	S-13
<u>UNDERWRITING</u>	S-14
<u>DESCRIPTION OF SECURITIES BEING OFFERED</u>	S-17
<u>LEGAL MATTERS</u>	S-18
<u>EXPERTS</u>	S-18
<u>WHERE YOU CAN FIND MORE INFORMATION</u>	S-18
<u>INFORMATION INCORPORATED BY REFERENCE</u>	S-19

	Page
Prospectus	
<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>	9
<u>PLAN OF DISTRIBUTION</u>	14
<u>LEGAL MATTERS</u>	16
<u>EXPERTS</u>	16
<u>WHERE YOU CAN FIND MORE INFORMATION</u>	17
<u>INFORMATION INCORPORATED BY REFERENCE</u>	18
<u>DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES</u>	18
<u>ACT LIABILITIES</u>	18

TABLE OF CONTENTS

ABOUT THIS PROSPECTUS SUPPLEMENT

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

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

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

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

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

In this prospectus supplement, unless otherwise stated or the context otherwise requires, the terms **ClearSign**, **we**, **us**, **our**, and the **Company** refer collectively to ClearSign Combustion Corporation.

TABLE OF CONTENTS

DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS

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

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

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

Third-Party Data

We obtained statistical data, market data and other industry data and forecasts used throughout this prospectus from publicly available information. While we believe that the statistical data, market data and other industry data and forecasts are reliable and we are responsible for all of the disclosure in this prospectus supplement, we have not independently verified the data.

TABLE OF CONTENTS

PROSPECTUS SUPPLEMENT SUMMARY

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

Our Business

We design and develop technologies for the purpose of improving key performance characteristics of combustion systems, including emission and operational performance, energy efficiency and overall cost-effectiveness. Our patented Duplex™ and Electrodynamic Combustion Control™ (ECC™) platform technologies enhance the performance of combustion systems in a broad range of markets, including the energy (upstream oil production and down-stream refining), commercial/industrial boiler, chemical, petrochemical, and power industries. Our Duplex technology, which is our primary technology, uses a porous ceramic tile above a standard burner to significantly reduce flame length and achieve very low emissions without the need for external flue gas recirculation, selective catalytic reduction, or excess air systems. To date, our operations have been funded primarily through sales of our equity securities. We have earned limited revenue since inception on January 23, 2008, the date of our incorporation in the state of Washington. We are headquartered at 12870 Interurban Avenue South, Seattle, Washington 98168 and have an office in Tulsa, Oklahoma. 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 prospectus supplement. Substantially all of our operations are located in the United States, though we are developing sales relationships outside of the United States in industrialized economies.

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, large-scale once through steam generators (OTSGs), enclosed ground flares, and packaged boilers.

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. 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 process heaters, enclosed ground flares, and OTSGs.

Our Proprietary Technology

Our Duplex burner technology typically consists of a traditional industrial burner and a porous ceramic tile. When the un-combusted 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 NOx-forming hot spots that are typically produced in an open flame are greatly eliminated and a dramatically shorter flame is produced. NOx, 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 and eliminates the possibility of flame impingement and reduces the likelihood of coking in a combustion chamber.

Our Duplex Plug & Play™ product is designed to provide a more simplified, pre-engineered and standardized direct burner replacement for traditional refinery process heaters. We believe that this product will reduce the customized engineering associated with typical retrofits and lend itself to mass production. The

S-3

TABLE OF CONTENTS

product derives its name from the fact that it is designed to allow a multi-burner heater or furnace to continue operating during installation rather than be shut down.

We have to date applied our Duplex technology through retrofits of existing burners. These often involve engineering around an existing burner architecture that can complicate the Duplex installation. Because of this, we believe that the retrofit market is best suited for larger projects and larger applications of Duplex.

We have now achieved emission results which exceeded current local Best Available Control Technology (BACT) levels in multiple installations in California related to three of our target industries. We intend to continue to demonstrate Duplex's capabilities through (i) working with local air quality officials to demonstrate the effectiveness of the technology, (ii) operating in-place units, (iii) engineering and testing with new customers and applications, (iv) pursuing additional lab research and development of new applications (e.g. packaged boilers) and next generation improvements to Duplex design and standardization, including the pursuit of more complete systems, similar to the Duplex Plug & Play, for application in other vertical markets, and (v) assisting our customers in making emission results available for designation as BACT by local regulatory bodies.

Our Target Markets

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

process heaters for petroleum refining,
heating systems in packaged boilers,
enclosed ground flares, and
larger-scale steam generation systems and power boilers.

In each segment, we are marketing 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.

Our target markets are greatly affected by air emission regulations and economic conditions, including the price and profitability related to crude oil and its processing. We believe that operators in all of our target markets are under intense pressure to meet current and proposed federal, state and local emissions standards. The standards applicable to our target markets have been developed over the past 50 years with broad political input. Due to the localized effects of poor air quality, we anticipate these standards to continue regardless of political leadership.

Emissions standards largely emanate from the Clean Air Act, which is administered by the Environmental Protection Agency (EPA) and regulates six common criteria air pollutants, including ground-level ozone.

TABLE OF CONTENTS

These regulations are enforced by state and local air quality districts as part of their compliance plans. As a precursor to ground-level ozone, NO_x is a regulated emission by local air quality districts in order to achieve the EPA limits.

The 8-hour ground-level ozone regulations have been reduced from 84 parts per billion (ppb) in 1997, to 75 ppb in 2008, and 70 ppb in 2015, with the requirement of realizing these levels approximately 25 years following the year of legislation. The areas of non-attainment related to this 1997 limit of 84 ppb are depicted below in the map on the left and the projected areas of non-attainment related to the 2015 limit of 70 ppb are depicted below in the map on the right.

Additionally, we believe that current emissions standards in Europe, China and Canada will continue to trend towards stricter air emission standards as these jurisdictions seek to achieve cleaner air. Existing and new emissions standards in such jurisdictions may create additional market opportunities for us.

Recent Developments

On November 20, 2017, we announced the launch of ClearSign Asia, Limited and we received a Letter of Intent (LOI) from TG CITIC Environment Investment Group (TG CITIC), which is a joint venture between Tangshan Iron and Steel Group Company Limited and CITIC Group Corporation Ltd. The LOI from TG CITIC indicates their interest in investing in ClearSign Asia, Limited as well as assisting in accelerating the marketing and promotion of our products for the Chinese market. The parties expect to reach a definitive agreement in 2018, however no assurance can be given that any definitive agreement will be entered into. Based in Hong Kong, ClearSign Asia, Limited will have exclusive rights in greater China and key markets in the Asia Pacific region to certain of our intellectual property.

Additional Information

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

S-5

TABLE OF CONTENTS

The Offering

Common stock offered by us pursuant to this prospectus supplement
5,000,000 shares of common stock.

Common Stock outstanding before this offering
15,608,853

Common stock outstanding after this offering
20,608,853⁽¹⁾

Price per share
\$2.25

Over-allotment option

We have granted the underwriter an option to purchase from us, for a period of 45 days after the date of this prospectus supplement, up to an additional 750,000 shares of common stock to cover over-allotments, if any.

Use of proceeds

We will use the proceeds from this offering for working capital, research and development, marketing and sales, and general corporate purposes.

NASDAQ Capital Market symbol

CLIR

Risk factors

See Risk Factors beginning on page S-7 of this prospectus supplement, as well as the other information included in or incorporated by reference in this prospectus supplement and the accompanying prospectus, for a discussion of risks you should carefully consider before investing in our securities.

Participation of officers and directors

Certain of our directors and officers participated in this offering. For further information relating to their participation, please see the section of this prospectus supplement titled Underwriting at page S-14.

(1) The number of shares of our common stock outstanding after this offering is based on 15,608,853 shares of common stock outstanding as of December 31, 2017 and excludes, as of that date:
993,860 shares of our common stock issuable upon exercise of stock options under our 2011 Equity Incentive Plan at a weighted average exercise price of \$4.81 per share;
2,495,784 shares of our common stock reserved for issuance under outstanding warrant agreements, at a weighted average exercise price of \$3.98 per share, including 2,395,471 shares reserved for issuance under outstanding warrant agreements at an exercise price of \$4.00 per share, expiring January 25, 2019, and publicly traded on the NASDAQ Capital Market under the symbol CLIRW ;
191,646 shares of our common stock reserved for future issuance under our 2011 Equity Incentive Plan; and
99,159 shares of our common stock reserved for future issuance under our 2013 Consultant Stock Plan.
Unless otherwise specifically stated, information throughout this prospectus supplement assumes that none of our outstanding options or warrants to purchase shares of our common stock are exercised and none of the over-allotment option granted to the underwriter is exercised.

TABLE OF CONTENTS

RISK FACTORS

Investing in our securities involves a high degree of risk. Before making an investment decision, you should carefully consider the risks described below, together with all of the other information included in this prospectus supplement, the accompanying prospectus, and the information incorporated by reference herein and therein.

*For a discussion of additional risks associated with our business, our intellectual property, government regulation, our industry and an investment in our securities, see the section titled *Risk Factors* in our most recent Annual Report on Form 10-K, as filed with the SEC on February 14, 2017, and any other subsequently filed document that is also incorporated or deemed to be incorporated by reference in this prospectus supplement.*

*If any of the risks described below, or those incorporated by reference into this prospectus supplement actually occur, our business, financial condition or results of operations could suffer. In that case, the trading price of our common stock may decline and you may lose all or part of your investment. The risks and uncertainties we have described are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our business, financial condition and results of operations. Certain statements below are forward-looking statements. See the information included under the heading *Disclosure Regarding Forward-Looking Statements*.*

Risks Related to this Offering

In making your investment decision, you should rely only on statements made in this prospectus in determining whether to purchase our securities.

You should carefully evaluate all of the information in this prospectus supplement. We have in the past, and may continue in the future, to receive media coverage, including coverage that is not directly attributable to statements made by our officers and employees, that incorrectly reports on statements made by our officers or employees or that is misleading as a result of omitting to state information provided by us or our officers or employees. You should rely only on the information contained in this prospectus supplement and the accompanying prospectus in determining whether to purchase our securities.

Management will have broad discretion as to the use of proceeds from this offering and we may use the net proceeds in ways with which you may disagree.

We intend to use the net proceeds of this offering for working capital, research and development, marketing and sales, and general corporate purposes. Our management will have broad discretion in the application of the net proceeds from this offering and could spend the proceeds in ways that do not improve our results of operations or enhance the value of our common stock or other securities. Accordingly, you will be relying on the judgment of our management on the use of net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. Our failure to apply these funds effectively could have a material adverse effect on our business, delay the development of our products and cause the price of our common stock or other securities to decline.

There may be future sales or other dilution of our equity securities, which may adversely affect the market price of our common stock.

We are generally not restricted from issuing additional shares of common stock, including securities that are convertible into or exchangeable for, or that represent the right to receive, common stock. After this offering, the market price of our common stock could decline as a result of sales of common stock or securities that are convertible into or exchangeable for, or that represent the right to receive, common stock.

S-7

TABLE OF CONTENTS

Investors in this offering will experience immediate and substantial dilution in the net tangible book value per share of our common stock.

The price at which our common stock is being offered is substantially higher than the net tangible book value per share of our common stock outstanding prior to this offering. Therefore, if you purchase our common stock in this offering, you will incur an immediate substantial dilution of \$1.60 in net tangible book value per share from the price you paid, based on our financial statements as of September 30, 2017. If outstanding options or warrants to purchase our common stock are exercised, you will experience additional dilution. For a further description of the dilution that you will experience immediately after this offering, see Dilution.

S-8

TABLE OF CONTENTS

USE OF PROCEEDS

We estimate that the net proceeds from the sale of our common stock in this offering will be approximately \$10.3 million, or approximately \$11.9 million if the underwriter exercises in full the option to purchase additional shares of common stock, in each case, after deducting underwriting discounts and commissions and our estimated expenses related to the offering. We intend to use the net proceeds from the sale of our common stock for working capital, research and development, marketing and sales, and general corporate purposes.

The amounts and timing of our actual expenditures will depend on numerous factors, including the factors described under **Risk Factors** in this prospectus supplement, the accompanying prospectus and in the documents incorporated by reference herein, as well as the amount of cash used in our operations. We may find it necessary or advisable to use the net proceeds for other purposes, and our management will have significant flexibility in applying the net proceeds of this offering.

Pending their use, we intend to invest the net proceeds of this offering in direct and guaranteed obligations of the United States, interest-bearing, investment-grade instruments or certificates of deposit.

S-9

TABLE OF CONTENTS

DETERMINATION OF OFFERING PRICE

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

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

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

S-10

TABLE OF CONTENTS**MARKET PRICE OF OUR COMMON STOCK**

Our common stock is listed on the NASDAQ Capital Market under the symbol CLIR.

The following table sets forth the quarterly range of high and low sale prices of our common stock since January 1, 2016 as reported by NASDAQ. As of February 21, 2018, we had 15,608,853 shares of common stock outstanding and approximately 139 shareholders of record.

	High	Low
2018		
January 1, 2018 through February 21, 2018	\$ 3.60	\$ 2.05
2017		
October 1, 2017 through December 31, 2017	\$ 4.70	\$ 1.75
July 1, 2017 through September 30, 2017	\$ 4.15	\$ 2.75
April 1, 2017 through June 30, 2017	\$ 4.30	\$ 3.30
January 1, 2017 through March 31, 2017	\$ 4.60	\$ 3.00
2016		
October 1, 2016 through December 31, 2016	\$ 6.13	\$ 3.16
July 1, 2016 through September 30, 2016	\$ 6.24	\$ 3.98
April 1, 2016 through June 30, 2016	\$ 5.58	\$ 3.75
January 1, 2016 through March 31, 2016	\$ 5.01	\$ 2.68

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.

S-11

TABLE OF CONTENTS**CAPITALIZATION**

The following table sets forth our capitalization as of September 30, 2017:

on an actual basis;

on a pro forma, as adjusted basis to give effect to our receipt of net proceeds of approximately \$10.3 million from the sale of the 5,000,000 shares of common stock we are offering at a public offering price of \$2.25 per share after deducting the underwriter's fees and commission and estimated offering expenses payable by us. You should consider this table in conjunction with our financial statements and the notes to those financial statements incorporated by reference into this prospectus supplement.

	As of September 30, 2017 (in thousands, except per share data)	
	Actual ⁽¹⁾ (unaudited)	As Adjusted ⁽²⁾
Cash and cash equivalents	\$3,511	\$ 13,845
Common stock, \$0.0001 par value; 62,500,000 shares of common stock authorized; 15,606,353 issued and outstanding at September 30, 2017, actual; 62,500,000 shares of common stock authorized; 20,606,353 issued and outstanding, as adjusted	2	2
Additional paid-in-capital	52,272	62,606
Accumulated deficit	(47,418)	(47,418)
Total shareholders' equity	\$4,856	\$ 15,190
Total capitalization	\$6,612	\$ 16,946

(1)

The information above excludes:

978,310 shares of our common stock issuable upon exercise of stock options under our 2011 Equity Incentive Plan at a weighted average exercise price of \$4.84 per share;

2,495,784 shares of our common stock reserved for issuance under outstanding warrant agreements, at a weighted average exercise price of \$3.98 per share, including 2,395,471 shares reserved for issuance under outstanding warrant agreements at an exercise price of \$4.00 per share, expiring January 25, 2019, and publicly traded on the NASDAQ Capital Market under the symbol CLIRW ;

202,648 shares of our common stock reserved for future issuance under our 2011 Equity Incentive Plan; and

101,634 shares of our common stock reserved for future issuance under our 2013 Consultant Stock Plan.

Assumes that 5,000,000 of our shares of common stock are sold in this offering at an offering price of \$2.25 per (2)share after deducting underwriting discounts and commissions and our estimated offering expenses. If the underwriters' over-allotment option is exercised in full, net proceeds will increase to \$11.9 million.

S-12

TABLE OF CONTENTS**DILUTION**

Our net tangible book value as of September 30, 2017 was approximately \$3.0 million, or \$0.19 per share of our common stock. Our net tangible book value per share represents our total tangible assets less total liabilities divided by the number of shares of our common stock outstanding on September 30, 2017. After giving effect to the sale by us of 5,000,000 shares of common stock at an offering price of \$2.25 per share, and after deducting the underwriting discount and commission and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of September 30, 2017 would have been approximately \$13.3 million, or \$0.65 per share of our common stock. This amount represents an immediate increase in net tangible book value of \$0.46 per share to our existing shareholders and an immediate dilution in net tangible book value of \$1.60 per share to new investors purchasing shares of our common stock in this offering.

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

Assumed offering price per share		\$ 2.25
Net tangible book value per share as of September 30, 2017	\$ 0.19	
Increase per share attributable to new investors in this offering	\$ 0.46	
Adjusted net tangible book value per share after this offering		\$ 0.65
Dilution in net tangible book value per share to new investors		\$ (1.60)

This table does not take into account further dilution to new investors that could occur upon the exercise of outstanding options and warrants having a per share exercise price less than the public offering price per share in this offering.

The number of shares of our outstanding common stock reflected in the discussion and table above is based on 15,606,353 shares of common stock outstanding as of September 30, 2017, and excludes as of that date:

978,310 shares of our common stock issuable upon exercise of stock options under our 2011 Equity Incentive Plan at a weighted average exercise price of \$4.84 per share;

2,495,784 shares of our common stock reserved for issuance under outstanding warrant agreements, at a weighted average exercise price of \$3.98 per share, including 2,395,471 shares reserved for issuance under outstanding warrant agreements at an exercise price of \$4.00 per share, expiring January 25, 2019, and publicly traded on the NASDAQ Capital Market under the symbol CLIRW ;

202,648 shares of our common stock reserved for future issuance under our 2011 Equity Incentive Plan; and

101,634 shares of our common stock reserved for future issuance under our 2013 Consultant Stock Plan.

To the extent that the outstanding options or warrants are exercised, you will experience further dilution. To the extent that the above issued options and warrants are exercised, the pro forma net tangible book value per share of our common stock after giving effect to this offering would be \$1.16 per share, and the dilution in net tangible book value per share to purchasers in this offering would be \$1.09 per share. In addition, we may choose to raise additional capital due to market conditions or strategic considerations. To the extent that additional capital is raised through the sale of securities, the issuance of those securities could result in further dilution to our shareholders.

TABLE OF CONTENTS

UNDERWRITING

We have entered into an underwriting agreement with the underwriter, National Securities Corporation. Subject to the terms and conditions of the underwriting agreement, we have agreed to sell to the underwriter, and the underwriter has agreed to purchase, at the public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus supplement, 5,000,000 shares of our common stock.

The underwriter is committed to purchase all the shares of common stock offered by us, other than those covered by the option to purchase additional shares described below, if they purchase any shares. The underwriting agreement provides that the underwriter's obligation to purchase shares of our common stock is subject to conditions contained therein, including the approval of certain legal matters by its counsel and the receipt of officers' certificates and legal opinions. A copy of the underwriting agreement has been filed as an exhibit to the Current Report on Form 8-K that we filed on February 26, 2018, and it is incorporated by reference into the registration statement of which this prospectus supplement is a part.

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

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

Underwriting Discount and Expenses

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

	Without over-allotment	With over-allotment
Public offering price	\$ 2.250	\$ 2.250
Underwriting discount to be paid to the underwriter	\$ 0.146	\$ 0.146
Non-accountable expense allowance	\$ 75,000	\$ 75,000
Net proceeds before other expenses	\$ 10,445,000	\$ 12,023,000

We estimate the total expenses payable by us for this offering to be \$916,000, which amount includes (i) the underwriting discount of \$730,000 (\$839,500 if the underwriter's over-allotment option is exercised in full), (ii) a non-accountable expense allowance of \$75,000, and (iii) other estimated expenses of the Company of approximately \$111,000, which includes legal, accounting, printing costs and various fees associated with the registration and listing of the shares being sold.

Over-allotment Option

We have granted to the underwriter an option, exercisable not later than 45 days after the date of this prospectus supplement, to purchase up to an additional 750,000 shares of our common stock at the public offering price, less the underwriting discount, set forth on the cover page of this prospectus supplement. The underwriter may exercise the option solely to cover over-allotments, if any, made in connection with this offering. If any additional shares of our common stock are purchased pursuant to the over-allotment option, the underwriter will offer these additional shares of our common stock on the same terms as those on which the other shares of common stock are being offered hereby.

S-14

TABLE OF CONTENTS

Purchases by Directors and Officers

The underwriter has agreed with the Company to sell an aggregate of 144,222 shares of common stock sold in this offering to directors and officers of the Company, including Lon Bell, Susanne Meline, Stephen Pirnat and Brian Fike, at the public offering price set forth on the cover page of this prospectus supplement.

Lock-Up Agreements

Our officers and directors have agreed that, for a period of 90 days from the date of this prospectus supplement, they will not sell, contract to sell, encumber, grant any option for the sale or otherwise dispose of any of our equity securities, without the consent of National Securities Corporation. The Company has agreed that, for a period of 90 days from the date of this prospectus supplement, it will not (a) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of our capital stock or any securities convertible into or exercisable or exchangeable for shares of our capital stock, (b) file or cause to be filed any registration statement with the SEC relating to the offering of any shares of our capital stock or any securities convertible into or exercisable or exchangeable for shares of our capital stock (except for registration statements on Form S-4 or Form S-8) or (c) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of our capital stock, whether any such transaction is to be settled by delivery of shares of our capital stock or such other securities, in cash or otherwise. These restrictions do not apply to (i) the issuance by us of shares upon the exercise of stock options or warrants or the conversion of securities convertible into shares of our common stock outstanding on the date of this prospectus supplement, (ii) the issuance by us of stock options, restricted stock units, shares of our capital stock under any equity compensation plan or agreement duly adopted by a majority of our non-employee directors or a committee comprised of non-employee directors, and (iii) the issuance by us of securities pursuant to acquisitions or strategic transactions approved by a majority of our disinterested directors, provided that such issuances are not primarily for the purpose of raising capital. If, in the case of clauses (i) and (ii), the shares are issued to a director or officer of the Company, such issued shares must be covered by the lock-up agreements executed by such person. The lock-up described herein covers 608,457 shares of our common stock.

Indemnification

We have agreed to indemnify the underwriter, its respective affiliates, officers, directors, employees and agents, and each person, if any, who controls such underwriter within the meaning of Section 15 of the Securities Act, against certain liabilities, including civil liabilities arising under the Securities Act, resulting from this offering and to contribute to payments that the underwriter may be required to make for these.

Price Stabilization, Short Positions and Penalty Bids

In connection with this offering, the underwriter may engage in transactions that stabilize, maintain or otherwise affect the price of our shares of common stock during and after the offering. Specifically, the underwriter may over-allot in connection with this offering by selling more shares of common stock than are set forth on the cover page of this prospectus supplement. This creates a short position in our offered shares for its own account. The short position may be either a covered short position or a naked short position. In a covered short position, the number of shares over-allotted by the underwriter is not greater than the number of shares that they may purchase in the over-allotment option. In a naked short position, the number of shares involved is greater than the number of shares in the over-allotment option. To close out a short position, the underwriter may elect to exercise all or part of the

over-allotment option. The underwriter may also elect to stabilize the price of our shares or reduce any short position by bidding for, and purchasing, shares of common stock in the open market.

The underwriter may also impose a penalty bid. This occurs when an underwriter or dealer, if any, repays selling concessions allowed to it for distributing a security in this offering because the underwriter repurchases that security in stabilizing or short covering transactions.

Finally, the underwriter may bid for, and purchase, our shares of common stock in market making transactions, including passive market making transactions as described below.

S-15

TABLE OF CONTENTS

These activities may stabilize or maintain the market price of our shares of common stock at a price that is higher than the price that might otherwise exist in the absence of these activities. The underwriter is not required to engage in these activities, and may discontinue any of these activities at any time without notice. These transactions may be effected on the Nasdaq Capital Market, in the over-the-counter market, or otherwise and, if commenced, may be discontinued at any time. Neither we nor the underwriter make any representation or prediction as to the effect that the transactions described above may have on the price of our common stock.

In connection with this offering, the underwriter and selling group members, if any, or their affiliates may engage in passive market making transactions in our shares of common stock immediately prior to the commencement of sales in this offering, in accordance with Rule 103 of Regulation M under the Exchange Act. Rule 103 generally provides that:

a passive market maker may not effect transactions or display bids for our shares of common stock in excess of the highest independent bid price by persons who are not passive market makers;
net purchases by a passive market maker on each day are limited to a percentage of the passive market maker's average daily trading volume in our shares of common stock during a specified prior period, and must be discontinued when the limit is reached; and

passive market making bids must be identified as such.

Electronic Distribution

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

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

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

S-16

TABLE OF CONTENTS

DESCRIPTION OF SECURITIES BEING OFFERED

We are offering 5,000,000 shares of our common stock, \$0.0001 par value.

We have 64,500,000 shares of capital stock authorized under our Articles of Incorporation, consisting of 62,500,000 shares of common stock and 2,000,000 shares of preferred stock. As of December 31, 2017, we had 15,608,853 shares of common stock outstanding and no shares of preferred stock outstanding. Our authorized but unissued shares of common stock and preferred stock are available for issuance without further action by our shareholders, unless such action is required by applicable law or the rules of any stock exchange or automated quotation system on which our securities may be listed or traded.

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 supplement will also be fully paid and non-assessable.

Please see the section of the accompanying prospectus titled "Description of the Securities that may be Offered" and "Anti-Takeover Effects of Certain Provisions of Washington Law and Our Charter Documents," which is incorporated herein by reference, for information relating to provisions included in our Articles of Incorporation or by-laws that would have the effect of delaying, deferring or preventing a change in control and that would operate only with respect to an extraordinary corporate transaction.

S-17

TABLE OF CONTENTS

LEGAL MATTERS

The validity of the issuance of the securities offered hereby will be passed upon for us by Mitchell Silberberg & Knupp, LLP, New York, New York. Certain legal matters related to the offering will be passed upon for the underwriter by Golenbock Eiseman Assor Bell & Peskoe LLP, New York, New York.

EXPERTS

The financial statements of ClearSign Combustion Corporation incorporated into this prospectus supplement by reference to our Annual Report on Form 10-K for the years ended December 31, 2016 and 2015, and for each of the years in the two-year period ended December 31, 2016 have been audited by Gumbiner Savett Inc., independent registered public accounting firm, and are incorporated by reference in reliance upon their report dated February 14, 2017, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly, and current reports, proxy statements and other information with the SEC. Our SEC filings are and will become available to the public over the Internet at the SEC's web site at www.sec.gov and on the investor relations page of our website at www.clearsigncombustion.com. Information on our web site is not part of this prospectus supplement or the accompanying prospectus. You may also read and copy any document we file with the SEC at its public reference facilities at 100 F Street N.E., Washington, D.C. 20549. You can also obtain copies of the documents upon the payment of a duplicating fee to the SEC. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference facilities.

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

S-18

TABLE OF CONTENTS

INFORMATION INCORPORATED BY REFERENCE

The SEC permits us to incorporate by reference the information contained in documents we file with the SEC, which means that we can disclose important information to you by referring you to those documents rather than by including them in this prospectus supplement. Information that is incorporated by reference is considered to be part of this prospectus supplement and you should read it with the same care that you read this prospectus supplement. We have filed with the SEC, and incorporate by reference in this prospectus supplement:

our Annual Report on Form 10-K for the year ended December 31, 2016 as filed with the SEC on February 14, 2017; the information specifically incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2016 from our Definitive Proxy Statement on Schedule 14A for our 2017 Annual Meeting of Shareholders, as filed with the SEC on March 17, 2017;

our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2017, June 30, 2017 and September 30, 2017 as filed with the SEC on May 11, 2017, August 14, 2017 and November 9, 2017, respectively;

our Periodic Reports on Form 8-K as filed with the SEC on January 26, 2017, February 14, 2017, March 15, 2017, April 13, 2017, April 21, 2017, May 5, 2017, May 11, 2017, June 27, 2017, September 8, 2017, November 2, 2017, January 22, 2018, February 13, 2018, February 16, 2018 and February 26, 2018.

the description of our common stock in our registration statement on Form 8-A filed with the SEC on April 23, 2012, including all amendments and reports filed for the purpose of updating such description.

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 supplement 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 supplement from the respective dates of filing of such documents. Any information that we subsequently file with the SEC that is incorporated by reference as described above will automatically update and supersede any previous information that is part of this prospectus supplement.

We are not, however, incorporating, any documents or information that we are deemed to furnish and not file in accordance with SEC rules. We maintain a website at www.clearsign.com. The information on our website is not considered part of or incorporated by reference in this prospectus supplement or the accompanying prospectus or any other document we file with or furnish to the SEC.

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.

TABLE OF CONTENTS

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 January 7, 2016.

TABLE OF CONTENTS

TABLE OF CONTENTS

	Page
<u>ABOUT THIS PROSPECTUS</u>	<u>1</u>
<u>DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS</u>	<u>2</u>
<u>OUR BUSINESS</u>	<u>3</u>
<u>RISK FACTORS</u>	<u>8</u>
<u>USE OF PROCEEDS</u>	<u>8</u>
<u>DILUTION</u>	<u>8</u>
<u>DESCRIPTION OF SECURITIES THAT MAY BE OFFERED</u>	<u>9</u>
<u>PLAN OF DISTRIBUTION</u>	<u>14</u>
<u>LEGAL MATTERS</u>	<u>16</u>
<u>EXPERTS</u>	<u>16</u>
<u>WHERE YOU CAN FIND MORE INFORMATION</u>	<u>17</u>
<u>INFORMATION INCORPORATED BY REFERENCE</u>	<u>18</u>
<u>DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES</u>	<u>18</u>
<u>ACT LIABILITIES</u>	<u>18</u>

i

TABLE OF CONTENTS

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.

TABLE OF CONTENTS

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.

TABLE OF CONTENTS

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

TABLE OF CONTENTS

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 NOx 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 NOx burner without FGR. OTSG systems typically operate with FGR to lower NOx 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 NOx 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.

4

TABLE OF CONTENTS

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.

5

TABLE OF CONTENTS

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.

6

TABLE OF CONTENTS

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*.

TABLE OF CONTENTS

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 purchases in the offering; and
- the amount of the immediate dilution from the public offering price which will be absorbed by such purchasers.

8

TABLE OF CONTENTS

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;

9

TABLE OF CONTENTS

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.

TABLE OF CONTENTS

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;

11

TABLE OF CONTENTS

- A sale, lease, exchange, mortgage, pledge, transfer, or other disposition or encumbrance, whether in one transaction or a series of transactions, to or with an acquiring person or an affiliate or associate of an acquiring person of assets of a target corporation or a subsidiary of a target corporation (i) having an aggregate market value equal to 5% or more of the aggregate market value of all the assets, determined on a consolidated basis, of the target corporation, (ii) having an aggregate market value equal to 5% or more of the aggregate market value of all the outstanding shares of the target corporation, or (iii) representing 5% or more of the earning power or net income, determined on a consolidated basis, of the target corporation;
- (b) The termination, while the corporation has an acquiring person and as a result of the acquiring person's acquisition of 10% or more of the shares of the corporation, of 5% or more of the employees of the target corporation or its subsidiaries employed in this state, whether at one time or over the five-year period following the share acquisition time;
- (c) The issuance, transfer, or redemption by a target corporation or a subsidiary of a target corporation, whether in one transaction or a series of transactions, of shares or of options, warrants, or rights to acquire shares of a target corporation or a subsidiary of a target corporation to or beneficially owned by an acquiring person or an affiliate or associate of an acquiring person except pursuant to the exercise of warrants or rights to purchase shares offered, or a dividend, distribution, or redemption paid or made pro rata to, all shareholders or holders of options, warrants, or rights to acquire shares of the target corporation, and except for involuntary redemptions permitted by the target corporation's charter or by the law of this state or the state of incorporation;
- (d) The liquidation or dissolution of a target corporation proposed by, or pursuant to an agreement, arrangement, or understanding, whether or not in writing, with an acquiring person or an affiliate or associate of an acquiring person;
- (e) A reclassification of securities, including, without limitation, any shares split, shares dividend, or other distribution of shares in respect of stock, or any reverse shares split, or recapitalization of a target corporation, or a merger or consolidation of a target corporation with a subsidiary of the target corporation, or any other transaction, whether or not with or into or otherwise involving an acquiring person, proposed by, or pursuant to an agreement, arrangement, or understanding, whether or not in writing, with an acquiring person or an affiliate or associate of an acquiring person, that has the effect, directly or indirectly, of increasing the proportionate share of the outstanding shares of a class or series of voting shares or securities convertible into voting shares of a target corporation or a subsidiary of the target corporation that is directly or indirectly owned by an acquiring person or an affiliate or associate of an acquiring person, except as a result of immaterial changes due to fractional share adjustments; or
- (f) A receipt by an acquiring person or an affiliate or associate of an acquiring person of the benefit, directly or indirectly, except proportionately as a shareholder of a target corporation, of loans, advances, guarantees, pledges, or other financial assistance or tax credits or other tax advantages provided by or through a target corporation.

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

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

TABLE OF CONTENTS

- (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.

TABLE OF CONTENTS

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;

TABLE OF CONTENTS

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

TABLE OF CONTENTS

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.

TABLE OF CONTENTS

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.

TABLE OF CONTENTS

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, September 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.