

CLEARSIGN COMBUSTION CORP

Form S-1/A

November 27, 2017

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As filed with the Securities and Exchange Commission on November 27, 2017

Registration No. 333-221467

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Amendment No. 1

to

FORM S-1

REGISTRATION STATEMENT

UNDER

THE SECURITIES ACT OF 1933

CLEARSIGN COMBUSTION CORPORATION

(Exact Name of Registrant as Specified in Its Charter)

Washington

3823

26-2056298

(State or other jurisdiction of  
incorporation or organization)

(Primary Standard Industrial  
Classification Code Number)

(I.R.S. Employer Identification No.)

12870 Interurban Avenue South

Seattle, Washington 98168

(206) 673-4848

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

Stephen E. Pirnat

Chief Executive Officer

ClearSign Combustion Corporation

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Seattle, Washington 98168

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As soon as practicable after the effective date of this Registration Statement.

(Approximate date of commencement of proposed sale to the public)

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box.

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

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

offering.

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company,” and “emerging growth company” in Rule 12b-2 of the Exchange Act:

|  |                           |
|--|---------------------------|
| Large accelerated filer  | Accelerated filer         |
| Non-accelerated filer<br>(Do not check if a smaller reporting company) | Smaller reporting company |
|  | Emerging growth company   |

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until this Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

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THE INFORMATION IN THIS PROSPECTUS IS NOT COMPLETE AND MAY BE CHANGED. THESE SECURITIES MAY NOT BE SOLD UNTIL THE REGISTRATION STATEMENT FILED WITH THE SECURITIES AND EXCHANGE COMMISSION IS EFFECTIVE. THIS PROSPECTUS IS NOT AN OFFER TO SELL THESE SECURITIES AND WE ARE NOT SOLICITING AN OFFER TO BUY THESE SECURITIES IN ANY STATE WHERE THE OFFER OR SALE IS NOT PERMITTED.

SUBJECT TO COMPLETION, DATED NOVEMBER 27, 2017

PRELIMINARY PROSPECTUS

3,400,000 Shares of Common Stock

Warrants to Purchase 3,400,000 Shares of Common Stock

ClearSign Combustion Corporation is offering shares of common stock, \$0.0001 par value per share and warrants to purchase shares of common stock. Each share of our common stock is being sold together with a warrant to purchase one share of common stock at a public offering price of \$        per share and \$        per warrant.

The shares of common stock and the warrants are immediately separable and will be issued separately in this offering. The underwriters have the option to purchase up to 510,000 additional shares of common stock and/or warrants to purchase shares of common stock solely to cover over-allotments, if any, at the price to the public less the underwriting discounts and commissions. The over-allotment option may be used to purchase shares of common stock, or warrants, or any combination thereof, as determined by the underwriters, but such purchases cannot exceed an aggregate of 15% of the number of shares of common stock and warrants sold in the primary offering. The over-allotment option is exercisable for 30 days from the date of this prospectus.

Our common stock and outstanding publicly traded warrants are currently listed on The NASDAQ Capital Market under the symbols "CLIR" and "CLIRW", respectively. On November 20, 2017, the last reported sale price of our common stock on The NASDAQ Capital Market was \$2.95 per share. There is no established trading market for the warrants offered pursuant to this prospectus and we do not expect a market to develop. In addition, we do not intend to apply for the listing of the warrants on any national securities exchange or quotation system. The warrants will be issued in registered form pursuant to a warrant agency agreement between us and VStock Transfer, LLC, as warrant agent.

Investing in our securities involves a high degree of risk. See "Risk Factors" beginning on page 8 for a discussion of information that should be considered in connection with an investment in our securities.

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

|  | Per Share<br>and<br>Related<br>Warrant | Total |
|--|--|-------|
| Public offering price(1)                     | \$                                     | \$    |
| Underwriting discounts and commissions(2)(3) | \$                                     | \$    |
| Proceeds to us (before expenses)             | \$                                     | \$    |

(1)

The public offering price and underwriting discount corresponds to (i) a public offering price per share of common stock of \$        and (ii) a public offering price per warrant of \$        .

(2)

We have also agreed to reimburse the underwriters for certain expenses. See "Underwriting."

(3)

We have granted a 30-day option to Ladenburg Thalmann & Co. Inc. (the “representative”) to purchase additional shares of common stock and/or warrants to purchase shares of common stock (up to 15% of the number of shares of common stock and warrants sold in the offering) solely to cover over-allotments, if any.

The underwriters expect to deliver the shares and warrants on or about \_\_\_\_\_, 2017.

Ladenburg Thalmann

The date of this prospectus is \_\_\_\_\_, 2017.

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

You should rely only on the information contained in this prospectus. We have not authorized anyone to provide you with additional or different information. The information contained in this prospectus is accurate only as of the date on the front cover of this prospectus, regardless of the time of delivery of this prospectus or of any sale of our securities. No dealer, salesperson or any other person is authorized in connection with this offering to give any information or make any representations about us, the securities offered hereby or any matter discussed in this prospectus, other than those contained in this prospectus and, if given or made, the information or representations must not be relied upon as having been authorized by us. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any security other than the securities offered by this prospectus, or an offer to sell or a solicitation of an offer to buy any securities by anyone in any circumstance in which the offer or solicitation is not authorized or is unlawful.

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### Prospectus Summary

This summary highlights selected information contained elsewhere in this prospectus and does not contain all the information that you need to consider in making your investment decision. You should carefully read this entire prospectus and the documents incorporated by reference in this prospectus, including the financial statements and the notes thereto, before deciding whether to invest in our securities. You should pay special attention to the “Risk Factors” and “Special Note Regarding Forward-Looking Statements and Other Information Contained in this Prospectus” sections of this prospectus to determine whether an investment in our securities is appropriate for you.

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

### About ClearSign Combustion Corporation

We 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 with an office in Tulsa, Oklahoma and our telephone number is (206) 673-4848. Our website can be accessed at [www.clearsign.com](http://www.clearsign.com). The information contained on or that may be obtained from our website is not a part of this report. 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.

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### 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 NO<sub>x</sub>-forming hot spots that are typically produced in an open flame are greatly eliminated and a dramatically shorter flame is produced. NO<sub>x</sub>, 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 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.

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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. These regulations are enforced by state and local air quality districts as part of their compliance plans. As a precursor to ground-level ozone, NOx 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.

Non-attainment areas under the 1997 limit of 84 ppb  
Source: EPA, August 2016

Projected non-attainment areas under the 2015 limit of 70 ppb  
Source: URS, August 2015

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, LTD, Hong Kong, our wholly owned subsidiary, as well as receipt of a Letter of Intent (LOI) from TG CITIC Environment Investment Group (TG CITIC), which is a joint venture between Tangsteel and CITIC. The LOI from TG CITIC indicates their interest and intent in investment in ClearSign Asia, LTD 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. Based in Hong Kong, ClearSign Asia, LTD will have exclusive rights in greater China and key markets in the Asia Pacific region to certain ClearSign Combustion Corporation (USA) intellectual property.

### Risk Factors

An investment in our securities involves a high degree of risk. You should carefully consider the risks described under “Risk Factors” beginning on page 8 of this prospectus, as well as other information included in or incorporated by reference into this prospectus, including our financial statements and the notes thereto, before making an investment decision. Some of these risks are:

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- We are a company with a limited operating history and our future profitability and cash flow are uncertain;
- If we do not receive additional financing when and as needed in the future, we may not be able to continue our research and development efforts or commercialization efforts and our business may fail;
- If our technology does not achieve market acceptance, our business could fail;
- Our efforts may never demonstrate the feasibility of our products;
- Changes to environmental regulations could make our technology less desirable;
- If we are unable to keep up with rapid technological changes, our products may become obsolete;
- Our technology and industrial applications have not yet been safety tested;
- Many of our potential competitors have greater resources, and it may be difficult to compete against them; and
- 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.

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THE OFFERING

The following summary contains basic information about our securities and is not intended to be complete. It does not contain all the information that may be important to you. For a more complete understanding of our securities, please refer to the section of this prospectus entitled “Description of Capital Stock.”

Issuer

ClearSign Combustion Corporation, a Washington corporation.

Common stock offered

3,400,000 shares of common stock.

Warrants offered

Warrants to purchase up to 3,400,000 shares of common stock. Each share of our common stock is being sold together with a warrant to purchase one share of our common stock. Each warrant will have an exercise price equal to \_\_\_\_\_, will be immediately exercisable and will expire on the fifth anniversary of the original issuance date.

Offering price per share of common stock and related warrant

\$ \_\_\_\_\_.

Over-allotment option

The underwriters have the option to purchase up to \_\_\_\_\_ additional shares of common stock, and/or warrants to purchase shares of common stock solely to cover over-allotments, if any, at the price to the public less the underwriting discounts and commissions. The over-allotment option may be used to purchase shares of common stock, or warrants, or any combination thereof, as determined by the underwriters, but such purchases cannot exceed an aggregate of 15% of the number of shares of common stock and warrants sold in the primary offering. The over-allotment option is exercisable for 30 days from the date of this prospectus.

Description of warrants

The warrants will be exercisable beginning on the date of issuance and expire on the 5-year anniversary of the date of issuance at an initial exercise price per share equal to \_\_\_\_\_, subject to appropriate adjustment in the event of recapitalization events, stock dividends, stock splits, stock combinations, reclassifications, reorganizations or similar events affecting our common stock.

Common stock outstanding prior to this offering

15,606,353 shares of common stock(1)(2)

Common stock outstanding after this offering

19,006,353 shares of common stock(1)(2)

Use of Proceeds

We intend to use the net proceeds from our sale of common stock in this offering for working capital, research and development, marketing and sales, and general corporate purposes. See “Use of Proceeds” for additional information.

Market and trading symbol for the common stock

Our common stock trades on The NASDAQ Capital Market under the symbol “CLIR”.

No listing of warrants

We do not intend to apply for listing of the warrants on any securities exchange or trading system.

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(1)

The number of shares of our common stock to be outstanding after this offering is based on the number of shares outstanding as of September 30, 2017 and, 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.

Unless otherwise specifically stated, information throughout this prospectus assumes that none of our outstanding options or warrants to purchase shares of our common stock are exercised.

(2)

Unless otherwise indicated, the number of shares of common stock presented in this prospectus excludes shares issuable pursuant to the exercise of the underwriters’ over-allotment option.

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The following summary statements of operations data for the years ended December 31, 2016 and 2015 and the balance sheet data as of December 31, 2016 and 2015 have been derived from our audited financial statements that are included in the documents incorporated by reference into this prospectus. The summary statements of operations data for the nine-month periods ended September 30, 2017 and 2016 and the balance sheet data as of September 30, 2017 are derived from our unaudited financial statements that are included in the documents incorporated by reference into this prospectus. The historical financial data presented below is not necessarily indicative of our financial results in future periods, and the results for the nine-month period ended September 30, 2017 are not necessarily indicative of our operating results to be expected for the full fiscal year ending December 31, 2017 or any other period. You should read the summary financial data in conjunction with those financial statements and the accompanying notes and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in the documents incorporated by reference into this prospectus. Our financial statements are prepared and presented in accordance with United States generally accepted accounting principles, or U.S. GAAP. Our unaudited financial statements have been prepared on a basis consistent with our audited financial statements and include all adjustments, consisting of normal and recurring adjustments that we consider necessary for a fair presentation of the financial position and results of operations as of and for such periods.

**STATEMENT OF OPERATIONS:**

|   | For the Years Ended<br>December 31, |                | For the Nine Months Ended<br>September 30, (unaudited) |                |
|---|-------------------------------------|----------------|--|----------------|
|   | 2016                                | 2015           | 2017   | 2016           |
| Sales   | \$ 621,000                          | \$ 61,000      | \$ 360,000   | \$ 260,000     |
| Cost of goods sold  | 485,000                             | 50,000         | 266,000  | 47,000         |
| Gross profit  | 136,000                             | 11,000         | 94,000   | 213,000        |
| Operating Expenses:   |                                     |                |  |                |
| Research and Development                                      | 4,831,000                           | 2,932,000      | 3,644,000  | 3,767,000      |
| General and Administrative                                    | 6,510,000                           | 5,021,000      | 3,569,000  | 5,342,000      |
| Total Operating Expenses                                      | 11,341,000                          | 7,953,000      | 7,213,000  | 9,109,000      |
| Other Income  | 32,000                              | 44,000         | 32,000   | 30,000         |
| Net loss  | \$ (11,173,000)                     | \$ (7,898,000) | \$ (7,087,000)   | \$ (8,866,000) |
| Net loss per common share, basic and diluted                  | \$ (0.86)                           | \$ (0.63)      | \$ (0.46)  | \$ (0.69)      |
| Weighted average common shares outstanding, basic and diluted | 12,928,715                          | 12,461,515     | 15,358,655   | 12,914,665     |

**BALANCE SHEET DATA:**

|                            | December 31 |              | September 30, |
|----------------------------|-------------|--------------|---------------|
|                            | 2016        | 2015         | 2017          |
| Working capital            | \$ 355,000  | \$ 9,564,000 | \$ 2,691,000  |
| Total assets               | 3,786,000   | 14,202,000   | 6,612,000     |
| Cash and cash equivalents  | 1,259,000   | 10,985,000   | 3,511,000     |
| Total shareholders’ equity | 2,244,000   | 12,578,000   | 4,856,000     |

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### RISK FACTORS

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

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

#### Risks Related to Our Business

We are a company with a limited operating history and our future profitability is uncertain. We anticipate future losses and negative cash flow and we may never be profitable.

We are a company with a limited operating history and limited revenues to date. We have incurred losses since our inception and expect to experience operating losses and negative cash flow for the foreseeable future. As of September 30, 2017, we had a total accumulated deficit of approximately \$47.4 million. We anticipate our losses will continue to increase from current levels because we expect to incur additional costs and expenses related to prototype development, consulting costs, laboratory development costs, marketing and other promotional activities, the addition of engineering and manufacturing personnel, and our continued efforts to form relationships with strategic partners.

We may never generate significant revenue and we may never be profitable.

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

Our business is capital-intensive, and requires capital investments in order for it to develop. Our cash on hand will likely not be sufficient to meet all of our future needs and we will likely require substantial additional funds in excess of our current financial resources for research, development and commercialization of our technology, to obtain and maintain patents and other intellectual property rights in our technology, and for working capital and other purposes, the timing and amount of which are difficult to ascertain. Until our technology generates revenues sufficient to support our operations, we plan to obtain the necessary working capital for operations through the sale of our securities, but we may not be able to obtain financing in amounts sufficient to fund our business plans. Furthermore, if our target customers are slow to adopt our technology, we may require additional investment capital in order to continue our operations. If we cannot obtain additional funding when and as needed, our business might fail.

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

We are continuing to develop our technology, which is being tested in the field by various customers and markets. If we are unable to effectively develop and timely promote our technology, gain recognition in our market segments, and develop a critical level of successful sales and product installations, we may not be able to successfully achieve sales revenue and our results of operations and financial condition would then suffer. Our ability to achieve future revenue will depend significantly upon achieving a critical mass of market awareness and sales to potential customers of our products. While we plan to achieve this awareness over time, there can be no assurance that awareness of our company and technology will develop in a manner or pace that is necessary for us to achieve profitability in the near term.

Further we cannot predict the rate of adoption or acceptance of our technology by potential customers. While we may be able to effectively demonstrate the feasibility of our technology, this does not guarantee the industrial combustion and power generation market will accept it, nor can we control the rate at which such acceptance may be achieved. In certain of our market segments, there is a well-established

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channel with a limited number of companies engaged in reselling to our target customers. Failure to achieve productive relations with a sufficient number of these prospective partners may impede adoption of our technology. Additionally, some potential customers in our target industries are historically risk-averse and have been slow to adopt new technologies. If our technology is not accepted in the industrial combustion and power generation market, we may not earn enough by selling or licensing our technology to support our operations, recover our research and development costs or become profitable and our business could fail.

Our efforts may never demonstrate the feasibility of our product.

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

Changes to environmental regulations could make our technology less desirable.

The negative environmental impacts of industrial activity have given rise to significant environmental regulation in industrialized countries. These regulations are important incentives in the adoption of technologies like ours. To the extent that environmental regulations in the United States and in other industrialized countries are modified in the future, or even relaxed, our technology may not produce the results required, or may even be unnecessary, to comply with the modified regulations. For example, although the Trump administration has indicated that it plans to pursue the reduction of environmental regulations in order to promote economic activity and to eliminate or reduce perceived needless environmental regulations, the administration's statements to date have primarily referenced elimination of regulations associated with greenhouse gas emissions, an area unrelated to our technologies, and the approval of oil pipelines, a step that may benefit our business. However, if the Environmental Protection Agency relaxes the clean air regulations our technologies are designed to address, our business and results of operations could be materially adversely affected.

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

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

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

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

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

We cannot guarantee that any research and development partnership we enter into will be successful.

We intend to form research and development arrangements to develop our technology within targeted segments. Collaborative arrangements involve risks that participating parties may disagree on business decisions and strategies. These disagreements could result in delays, additional costs, risks of litigation, and failure of the development of our technology within the combustion market segment. Success of any collaborative arrangements we enter into will depend in part on whether those with whom we collaborate fulfill their contractual obligations satisfactorily. If a party with whom we collaborate fails to perform its contractual obligations satisfactorily, we may be unable to make the additional investments or provide the added services that would be required to compensate for that failure. If we are unable to adequately address any such performance issues, our reputation may be materially adversely affected and we may be exposed to legal liability. Our inability to successfully maintain collaborative relationships, once we enter into them, or to enter into new collaborative arrangements, could have a material adverse effect on our results of operations.

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

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

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

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

We will depend on approval from various local, state and federal agencies to implement and operate our technology. There is no assurance that these agencies will approve our technology.

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



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

We have not fully developed our products, cost of goods or pricing. As a result, we cannot reliably predict our profit margins. Our operating costs could increase significantly compared to those we currently anticipate due to unanticipated results from the development process, application of our technology to unique or difficult processes, regulatory requirements and particular field implementations. Further, we envision our pricing to be highly dependent on the benefits that our customers believe they will achieve using our products. Accordingly, we cannot predict whether or when we will achieve profitability, and if achieved, the amount of such profit margins.

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

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

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

A loss of one or more of our current officers or key employees could severely and negatively impact our operations.

Of particular note, the loss of services of Stephen E. Pirnat, Chief Executive Officer and President, Dr. Donald W. Kendrick, Chief Technology Officer, or Dr. Roberto Ruiz, Chief Operating Officer could significantly harm our business. We have no present intention of obtaining key-man life insurance on any of our executive officers or management. Additionally, competition for highly skilled technical, managerial and other personnel is intense. As our business develops, we might not be able to attract, hire, train, retain and motivate the highly skilled executives and employees we need to be successful. If we fail to attract and retain the necessary technical and managerial personnel, our business will suffer and might fail.

### Risks Related to Owning Our Securities

The public market for our securities is volatile. This may affect not only the ability of our investors to sell their securities, but the price at which they can sell their securities.

We completed the initial public offering of our common stock in April 2012. Since that time, our common stock (CLIR: NASDAQ) has traded as low as \$2.45 per share and as high as \$11.75 per share based upon daily closing prices, and day-to-day trading has been volatile at times. Further, in conjunction with a shareholder rights offering we completed on January 25, 2017, we sold warrants (CLIRW: NASDAQ), the day-to-day trading of which has also been volatile to date. This volatility may continue or increase in the future. The market price for the securities may be significantly affected by factors such as progress in the development of our technology, agreements with research facilities or co-development partners, commercialization of our technology, variations in quarterly and yearly operating results, general trends in the alternative energy industry, and changes in state or federal regulations affecting us and our industry. Furthermore, in recent years the stock market has experienced extreme price and volume fluctuations that are unrelated or disproportionate to the operating performance of the affected companies. Such broad market fluctuations may adversely affect the market price of our securities.

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

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

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

We will require additional financing to fund research, development and commercialization of our technology, to obtain and maintain patents and other intellectual property rights in our technology, and for working capital and other purposes. We may not be able to obtain financing on favorable terms, if at all. If we raise additional funds by issuing equity securities, the percentage ownership of our then-current shareholders will be reduced. Further, we may have to offer new investors in our equity securities rights that are superior to the holders of common stock, which could adversely affect the market price and the voting power of shares of our common stock. If we raise additional funds by issuing debt securities, the holders of these debt securities would similarly have some rights senior to those of the holders of shares of common stock, and the terms of these debt securities could impose restrictions on operations and create a significant interest expense for us which could have a materially adverse effect on our business.

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

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

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

As of September 30, 2017, we had outstanding options and warrants for the purchase of 978,310 and 2,495,784 shares of common stock, respectively. Under the ClearSign Combustion Corporation 2011 Equity Incentive Plan and the ClearSign Combustion Corporation 2013 Consultant Stock Plan (collectively, the “Plans”), we have the ability to grant awards of shares or options to employees, officers, directors, independent contractors and agents. Furthermore, as of September 30, 2017, we have reserved an additional 304,282 shares of common stock for such awards and the Plans provide that this number may increase quarterly by a collective amount of up to 11% of the number of shares issued by us each quarter. Certain holders may sell these shares in the public markets from time to time, without limitations on the timing, amount or method of sale. If our stock price rises, the holders may exercise their warrants and options and sell a large number of shares. This could cause the market price of our common stock to decline.

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

As a public company reporting to the Securities and Exchange Commission, we incur significant legal, accounting, investor relations, printing, board compensation, and other expenses that we did not incur as a private company. These costs totaled \$939,000 in 2016. We are subject to the reporting requirements of the Securities Exchange Act of 1934 and the Sarbanes-Oxley Act of 2002 (with the exception of the requirement of auditor attestation of internal control over financial reporting from which we are currently excluded as a smaller reporting company), as well as rules subsequently implemented by the Commission that impose significant requirements on public companies, including requiring establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. In addition, there are significant corporate governance and executive compensation-related provisions in the Dodd-Frank Wall Street Reform and Protection Act that as we grow could increase our legal and financial compliance costs, make some activities more difficult, time-consuming or costly and may also place undue strain on our personnel, systems and resources. Our management and other personnel continually devote a substantial amount of time to these compliance initiatives. In addition, these rules and regulations may make it more difficult and more expensive for us to obtain director and officer liability insurance, and we may be required to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. As a result, it may be more difficult for us to attract and retain qualified people to serve on our board of directors, our board committees or as executive officers.

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

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

- authorize our board of directors to issue preferred stock without shareholder approval and to designate the rights, preferences and privileges of each class; if issued, such preferred stock would increase the number of outstanding shares of our capital stock and could include terms that may deter an acquisition of us;
- limit who may call shareholder meetings;
- do not provide for cumulative voting rights; and
- provide that all vacancies may be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum, unless the vacant office is to be held by a director elected by the holders of one or more classes or series of shares entitled to vote thereon, in which case the vacancy can be filled only by the vote of the holders of such class or series.

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

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Risks Related to this Offering

In making your investment decision, you should not rely on an October 2017 news report, which included a quote attributed to our chairman and CEO. You should rely only on statements made in this prospectus in determining whether to purchase our securities.

In an October 23, 2017 news story reported on Forbes.com, our chairman and CEO was quoted as saying “We view the global market potential of Duplex Plug and Play as significant due to the fact that it solves unmet needs on both the environmental and operational level in a cost-effective manner that no other burner or environmental control can offer... and we expect additional orders in the short to mid-term.” Our chairman and CEO did not agree to be interviewed for the news story and the quote originally appeared in a press release dated September 19, 2017. We did not authorize or participate in the preparation of such news story in any way, nor did we provide or verify any of the information included in such news story. The information in such news story should not be considered by prospective investors in isolation or at all. Prospective investors are cautioned to consider the risks and uncertainties disclosed in this Risk Factors section and elsewhere in this prospectus.

You should carefully evaluate all of the information in this prospectus. We have in the past, and may continue to receive, media coverage, including coverage that is not directly attributable to statements made by our officers and employees, incorrectly reports on statements made by our officers or employees or 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 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 product candidates and cause the price of our common stock or other securities to decline.

The offering price will be set by our Board of Directors and does not necessarily indicate the actual or market value of our common stock or other securities.

Our Board of Directors will approve the offering price and other terms of this offering after considering, among other things: the number of shares authorized in our articles of incorporation; the current market price of our common stock or other securities; trading prices of our common stock or other securities over time; the volatility of our common stock or other securities; our current financial condition and the prospects for our future cash flows; the availability of and likely cost of capital of other potential sources of capital; and market and economic conditions at the time of the offering. The offering price is not intended to bear any relationship to the book value of our assets or our past operations, cash flows, losses, financial condition, net worth or any other established criteria used to value securities. The offering price may not be indicative of the fair value of the common stock, warrants or other securities.

The warrants may not have any value.

The warrants will be exercisable for five years from the closing date at an initial exercise price per share of \$ . In the event that the price of a share of our common stock does not exceed the exercise price of the warrants during the period when the warrants are exercisable, the warrants may not have any value.

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The warrants are subject to an issuer call.

If, after the date that is \_\_\_\_\_ after the closing date, (i) the volume weighted average price for each of 30 consecutive trading days (the "Measurement Period"), which Measurement Period commences after the date that is after the closing date, exceeds \_\_\_\_\_ % of the exercise price (subject to adjustment for forward and reverse stock splits, recapitalizations, stock dividends and the like after the initial exercise date), (ii) the average daily volume for such Measurement Period exceeds \$ \_\_\_\_\_ per trading day and, (iii) the warrant holder is not in possession of any material non-public information which was provided by us, then we may, within one trading day of the end of such Measurement Period, call for cancellation of all or any portion of the warrants for which an exercise notice has not yet been delivered for consideration equal to \$0.001 per warrant share. Our right to call the warrants shall be exercised ratably among the holders based on the then outstanding warrants. You may be unable to reinvest your proceeds from the call in an investment with a return that is as high as the return on the warrants would have been if they had not been called. A warrant does not entitle the holder to any rights as common shareholders until the holder exercises the warrant for shares of our common stock.

Until you acquire shares of our common stock upon exercise of your warrants, the warrants will not provide you any rights as a common shareholder. Upon exercise of your warrants, you will be entitled to exercise the rights of a common shareholder only as to matters for which the record date occurs on or after the exercise date.

There is no public market for the warrants to purchase shares of our common stock being offered in this offering. There is no established public trading market for the warrants being offered in this offering, and we do not expect a market to develop. In addition, we do not intend to apply to list the warrants on any national securities exchange or other nationally recognized trading system, including the NASDAQ Capital Market. Without an active market, the liquidity of the warrants will be limited.

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

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

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

- Other factors discussed in the “Risk Factors” section of this prospectus.

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

#### 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, we have not independently verified the data.

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USE OF PROCEEDS

Based on an assumed offering price of \$2.95 per share of common stock (the last reported sale price of our common stock on the NASDAQ Capital Market on November 20, 2017) and \$0.001 per warrant, we estimate the gross proceeds from the sale of 3,400,000 shares of common stock and warrants to purchase 3,400,000 shares of common stock, prior to deducting underwriting discounts and commissions and the estimated offering expenses payable by us, will be approximately \$10.0 million (approximately \$11.5 million if the over-allotment option granted to the underwriters is exercised in full). We will only receive additional proceeds from the exercise of the warrants issuable in connection with this offering if the warrants are exercised and the holders of such warrants pay the exercise price in cash upon such exercise and do not utilize the cashless exercise provision of the warrants.

A \$0.25 increase (decrease) in the assumed public offering price of \$2.95 per share of our common stock and related warrant would increase (decrease) the expected net cash proceeds of the offering to us by approximately \$0.8 million. An increase (decrease) of 500,000 in the assumed number of shares sold in this offering would increase (decrease) the expected net cash proceeds of the offering to us by approximately \$1.4 million, assuming a public offering price of \$2.95 per share of common stock and related warrant.

We currently intend to use the net proceeds of this offering for working capital, research and development, marketing and sales, and general corporate purposes.

The amounts that will actually be spent by us for any specific purpose may vary significantly, and will depend on a number of factors including but not limited to the pace of progress of our commercialization and development efforts, actual needs with respect to product testing, development and research, market conditions, and changes in or revisions to our marketing strategies. In addition, we may use a portion of any net proceeds to acquire complementary products, technologies or businesses; however, we do not have any commitments for any acquisitions of this nature at this time. We will have significant discretion in the use of any net proceeds. Investors will be relying on the judgment of our management regarding the application of the proceeds of any sale of our securities.

Pending its 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.



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## MARKET PRICE OF OUR COMMON STOCK

Our common stock is traded on The NASDAQ Capital Market under the symbol “CLIR.” The table below shows the high and low sales closing prices for our common stock for the periods indicated, as reported by NASDAQ.

|   | Price Ranges |         |
|---|--------------|---------|
|   | High         | Low     |
| Fiscal Year Ended December 31, 2017 (through November 20, 2017) |              |         |
| First Quarter   | \$ 4.55      | \$ 3.05 |
| Second Quarter  | 4.25         | 3.30    |
| Third Quarter   | 4.00         | 2.90    |
| Fourth Quarter  | 3.55         | 2.45    |
| Fiscal Year Ended December 31, 2016                             |              |         |
| First Quarter   | \$ 4.90      | \$ 2.98 |
| Second Quarter  | 5.28         | 3.75    |
| Third Quarter   | 6.09         | 4.14    |
| Fourth Quarter  | 6.08         | 3.40    |
| Fiscal Year Ended December 31, 2015                             |              |         |
| First Quarter   | \$ 7.62      | \$ 4.97 |
| Second Quarter  | 5.90         | 4.74    |
| Third Quarter   | 7.23         | 3.44    |
| Fourth Quarter  | 6.41         | 4.44    |

The closing price of our common stock on November 20, 2017 was \$2.95 per share and there were 141 holders of record of our common stock, excluding shareholders for whom shares are held in “nominee” or “street name” as of that date.

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DIVIDEND POLICY

We have never paid cash dividends on our securities and we do not anticipate paying any cash dividends on our shares of common stock in the foreseeable future. We intend to retain any future earnings for reinvestment in our business. Any future determination to pay cash dividends will be at the discretion of our board of directors, and will be dependent upon our financial condition, results of operations, capital requirements and such other factors as our board of directors deems relevant.

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## CAPITALIZATION

The following table sets forth our actual cash and cash equivalents and capitalization, each as of September 30, 2017:

- on an actual basis; and
- on a pro forma as adjusted basis to give effect to the sale of 3,400,000 shares of common stock at an assumed offering price of \$2.95 per share (the last reported sale price of our common stock on the NASDAQ Capital Market on November 20, 2017) and 3,400,000 warrants at an offering price of \$0.001 per warrant.

You should consider this table in conjunction with our financial statements and the notes to those financial statements incorporated by reference into this prospectus.

|   | As of September 30, 2017<br>(in thousands, except per<br>share data) |                   |
|---|--|-------------------|
|   | Actual(1)<br>(unaudited)   | As<br>Adjusted(2) |
| Cash and cash equivalents   | \$ 3,511   | \$ 12,564         |
| Shareholders' equity:   |  |                   |
| Common stock, par value \$0.0001 per share: 62,500,000<br>shares of common stock authorized; 15,606,353 issued and<br>outstanding at September 30, 2017, actual; 62,500,000<br>shares of common stock authorized; 19,006,353 issued and<br>outstanding, as adjusted | 2  | 2                 |
| Additional paid in capital  | 52,272   | 61,325            |
| Accumulated deficit   | (47,418)   | (47,418)          |
| Total shareholders' equity  | \$ 4,856   | \$ 13,909         |
| Total capitalization  | \$ 6,612   | \$ 15,665         |

(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.

(2)

Assumes that 3,400,000 of our shares of common stock are sold in this offering at an assumed offering price of \$2.95 per share (the last reported sale price of our common stock on the NASDAQ Capital Market on November 20, 2017) and 3,400,000 warrants at an offering price of \$0.001 per warrant, 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 \$10.4 million.

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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. Assuming that we issue all of the 3,400,000 shares of common stock at an assumed offering price of \$2.95 per share (the last reported sale price of our common stock on the NASDAQ Capital Market on November 20, 2017) and 3,400,000 warrants at an offering price of \$0.001 per warrant, and after deducting the commissions and estimated offering expenses payable by us, our net tangible book value as of September 30, 2017 would have been approximately \$12.1 million, or \$0.64 per share of our common stock. This amount represents an immediate increase in net tangible book value of \$0.45 per share to our existing shareholders and an immediate dilution in net tangible book value of \$2.31 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 public 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 combined public offering price per share and related warrant | \$ 2.95 |
| Net tangible book value per share as of September 30, 2017           | \$ 0.19 |
| Increase per share attributable to new investors in this offering    | \$ 0.45 |
| Adjusted net tangible book value per share after this offering       | \$ 0.64 |
| Dilution in net tangible book value per share to new investors       | \$ 2.31 |

Each \$0.25 increase (decrease) in the assumed combined public offering price of \$2.95 per share and related warrant would increase (decrease) our as adjusted net tangible book value after this offering by \$0.8 million, or \$0.04 (\$0.05) per share, and the dilution per share to new investors by \$0.20 (0.21) per share, assuming that the number of shares of our common stock and related warrants offered by us, as set forth above, remains the same and after deducting the estimated underwriting discount and estimated offering expenses payable by us. We may also increase or decrease the number of shares of our common stock and related warrants we are offering from the assumed number of shares of our common stock and related warrants set forth above. An increase (decrease) of 500,000 in the assumed number of shares and/or warrants sold in this offering would increase (decrease) our as adjusted net tangible book value after this offering by \$1.4 million, or \$0.05 (\$0.06) per share, and the dilution per share to new investors by \$0.06 (\$0.05) per share, assuming that the combined public offering price of \$2.95 per share of our common stock and related warrant remain the same. The information discussed above is illustrative only and will adjust based on the actual public offering price, the actual number of shares and warrants that we offer in this offering, and other terms of this offering determined at pricing.

This table does not take into account further dilution to new investors that could occur upon the exercise of outstanding options and warrants, including the warrants offered in this offering, 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



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

Unless otherwise specifically stated, information throughout this prospectus assumes that none of our outstanding warrants to purchase shares of our common stock are exercised.

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### BUSINESS

#### Introduction

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 uses a porous ceramic tile above a burner to significantly reduce flame length and achieve very low emissions without the need for external flue gas recirculation, selective catalytic reduction, or excess air systems. Our ECC technology introduces a computer-controlled high voltage electric field into a combustion volume in order to better control gas-phase chemical reactions and improve system performance and cost-effectiveness. To date, our operations have been funded primarily through sales of our equity securities. We have earned limited revenue since inception on January 23, 2008. We are headquartered in Seattle, Washington with an office in Tulsa, Oklahoma.

We have recently begun commercializing our Duplex technologies and our technologies have now been tested and verified by independent third parties. Based on the results of our laboratory and field testing as well as our initial commercialized installations in multiple applications, our proprietary technology platforms improve emissions control performance and operational performance for many types of industrial and commercial combustion systems. As a result, our technologies may reduce costs associated with the construction (including refurbishment and upgrade), operation and maintenance of these combustion systems as compared to legacy combustion systems.

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.

#### Recent Developments

On November 20, 2017, we announced the launch of ClearSign Asia, LTD, Hong Kong, our wholly owned subsidiary, as well as receipt of a Letter of Intent (LOI) from TG CITIC Environment Investment Group (TG CITIC), which is a joint venture between Tangsteel and CITIC. The LOI from TG CITIC indicates their interest and intent in investment in ClearSign Asia, LTD 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. Based in Hong Kong, ClearSign Asia, LTD will have exclusive rights in greater China and key markets in the Asia Pacific region to certain ClearSign Combustion Corporation (USA) intellectual property.

#### Corporate History

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

#### 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



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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, steam generation, and enclosed ground flares.

We are pursuing development of our technologies to enable future sales. Our initial target markets center on the energy sector, including upstream crude oil production through the use of OTSGs and wellhead enclosed flares and downstream oil refineries through the use of process heaters and boilers. In recent years, the energy sector has been significantly affected by the volatile market price of crude oil and marginal economic growth. Crude oil prices have stabilized during 2016 and 2017 and enjoyed appreciation with the general post-election upswing in certain commodities and improved economic outlook. According to the U.S. Energy Information Administration, the spot price of West Texas intermediate crude oil in the last five years has ranged from approximately \$110 per barrel to approximately \$25 per barrel, with 2016 prices reaching a low of \$27 per barrel and October 2017 prices approximating \$50 per barrel. Regardless of the effect of crude oil prices, based upon our experience and feedback from current and prospective customers, we believe that the market continues to validate the appeal of our Duplex technology to the energy sector due to the technology’s ability to lower emissions and maintain certain operational efficiencies.

Operators in all of our target markets are under intense pressure to meet current and proposed federal, state and local pollution 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 expect these standards to continue to become more stringent regardless of political leadership. As an illustration, air pollution emission standards are most stringent in the states of California and Texas, historically politically leaning in opposite directions. As a result, these standards are a significant driver in our development and sales efforts and our Duplex technology can provide a unique, cost-effective pollution control solution for operators in comparison to competing products. 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. These regulations are enforced by state and local air quality districts as part of their compliance plans. As a precursor to ground-level ozone, NOx 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.

Non-attainment areas under the 1997 limit of 84 ppb  
Source: EPA, August 2016

Projected non-attainment areas under the 2015 limit of 70 ppb  
Source: URS, August 2015

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.



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We have noted that local air quality districts in EPA designated “severe non-attainment zones” in California are uncertain as to how they will achieve the 2015 standard. As such, we believe that local regulators are in search of additional means beyond those included in the current regulations to comply with the impending standards. For example, although NOx emissions from refineries and other oil production and processing operations are highly regulated since they are historically a significant source of stationary NOx emissions, enclosed ground flares have not historically been viewed as a source requiring the same level of regulation. We believe that our Duplex technology is uniquely able to address the emissions challenges being faced by oil producers and other industries as those challenges relate to both current and reasonably predictable future local air emission standards.

### Our Technologies

In the process of attempting to develop our ECC technology beyond laboratory scale for a potential process heater design in 2013, we developed Duplex, which is a simplified application for gaseous fuel. While we continued to pursue development of our ECC technology through laboratory testing, in 2014 we began to pursue field development and conditional sales of our Duplex technology. We engaged in a number of field development projects in which we successfully demonstrated the technology operating with thermal output of up to 62 million BTU/hr in an OTSG and pursued business development and marketing activities with established entities that use steam generators, process heaters, enclosed flares, boilers, and other combustion systems as well as original equipment manufacturers.

We have had several field test projects in three of our five target markets using our Duplex technology: one related to wellhead enclosed flares, four related to process heaters in the oil refining industry, and three related to OTSGs in the enhanced oil recovery industry. We believe that the successful completion of these field development projects, which resulted from years of research and development work, are fundamental to the commercialization of our Duplex product. We reported our first meaningful product sales of \$621,000 during the second half of 2016 from the installation of our Duplex technology through retrofits in a wellhead enclosed flare for a major California oil producer, an enhanced oil recovery OTSG, and two refinery process heater projects. Furthermore, we entered into an agreement to supply the oil producer customer with 5 additional wellhead enclosed flare retrofits for \$900,000 and in the first quarter of 2017 we delivered two units generating sales revenue of \$360,000. Our laboratory research currently focuses on enhancing our Duplex products and includes the development of a packaged boiler application that enhances operational performance by eliminating flue gas recirculation.

### Product Applications of Duplex

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.

### Process Heaters in the Oil Refining Industry

We have completed laboratory testing and our first field test at a Texas oil refinery of a new burner product for refinery and industrial process heater applications. To date we have successfully retrofitted two process heaters with the standard Duplex and one with the Duplex Plug & Play™ design. We have two additional installations in process. The Duplex Plug & Play design provides 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 product derives its name from the fact that it is designed to allow quick and easy installation into a multi-burner heater or furnace and possibly allow the heater to continue operating during installation rather than be shut down. If field testing continues to confirm this design attribute, the ability to install the Duplex Plug & Play while the remaining burner system is operational will allow customers to limit down time and shorten the sales cycle often prolonged by annual or semi-annual scheduled maintenance. We plan to continue field testing of additional configurations and burner sizes to further enhance the performance and dependability of the product. If successful, we believe that this product, our first complete burner product, will be suitable for licensing and potential manufacturing arrangements with original equipment manufacturers (OEMs) with established manufacturing and distribution capabilities.

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### Wellhead Enclosed Ground Flares

A major California oil producer approached us in early 2016 to address a unique emission compliance need relating to wellhead enclosed ground flares. We developed a Duplex application, completed the wellhead enclosed ground flare retrofit and received payment in the third quarter of 2016, thereby recognizing \$260,000 of revenue. This was an important milestone because it demonstrated a broad application of our Duplex technology. As a result, we entered into an agreement to supply this oil producer with five additional wellhead enclosed flare retrofits for \$900,000, with two units completed in the first quarter of 2017. Of the remaining units, two are expected to be completed in the 4th quarter of 2017 and the last unit is expected soon thereafter, all depending on the oil producer customer's schedule. We previously received 40% of the contract amount as an initial payment on all units, which is standard for the industry for this stage of completion. These funds, net of costs through quarter end, are reflected as contract liabilities on our balance sheet. These sales will be recognized as each of the remaining three units are installed and accepted by the customer and the performance obligations are completed.

Based upon discussions with local regulators and regulatory reports, we believe that flare emissions are a potential target for increased regulation, in part based upon the success of our installations to date. In anticipation of this, we are pursuing potential customers with target ground flare applications that would benefit from our proven installations.

### OTSGs in Enhanced Oil Recovery Industry

We have successfully installed our Duplex technology in two OTSG projects in the enhanced oil recovery industry in Southern California. In March 2017, we entered into an agreement to complete a third installation for this customer fueled by oil field waste gas. We believe that our successful installations in the OTSG market to date are gaining regulator acceptance by the Southern California regulatory authorities and, as a result, market acceptance.

### Duplex's Emission Results and Licensing

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 five target industries. We intend to continue to demonstrate Duplex 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 business plan contemplates licensing our technology after we prove commercial viability and generate interest from OEMs. Licensing would significantly change the makeup of our sales mix, sales recognition, and margins.

Licensing our technology within one or an array of selected vertical markets (e.g. burners for refinery process heaters or packaged boilers) could dramatically accelerate the global sales and market adoption rate of our technology.

However, in order to create channel flexibility and meet end user demand, we intend to continue to pursue end user customers through direct sales, sub-contractors, or channel partners. While we are currently pursuing various licensing arrangements, we have no agreements at this time and do not anticipate entering into any such agreements prior to completing the field development projects discussed above and completing a meaningful number of installations and sales. We believe that the continuing development of Duplex, the completion of sales and an increase in end-users will enhance our ability to license our technology.

### Development of ECC

We are continuing to pursue development of our patented ECC technology through laboratory research where we have demonstrated certain favorable attributes of our proprietary technology operating at lab scales. Results are promising, and certain derivative product expressions are being tested and successfully validated. Industry interest on specific product expressions, unrelated to current industrial

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combustion products are being explored with a variety of potential partners. The company has no time-line or estimate for completion. Additionally, the spin-off products are expected to complement the existing line of Duplex related products offering enhancements in both performance, stability, and/or could be standalone product expressions themselves. Further, foreign markets have expressed continuing interest in pursuing co-development of the ECC platform for use in environmental solutions.

### 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<sub>x</sub>-forming hot spots that are typically produced in an open flame are greatly eliminated and a dramatically shorter flame is produced. NO<sub>x</sub>, a regulated pollutant comprised largely of nitrogen oxide and nitrogen dioxide, is greatly reduced to levels of 5ppm or below depending on the specific application without any external fans or associated power, thereby minimizing harmful emissions while improving system efficiency. A shorter flame allows for operation of the furnace at a higher capacity. We believe Duplex's radiant heat transfer enhances thermal efficiency as it eliminates the possibility of flame impingement and reduces the likelihood of 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 or proximate to 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.

The basic components of both systems are either available "off the shelf" or require manufacturing techniques that are well within the current capabilities of existing technologies. 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. We also believe our technologies 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.

### The Combustion Markets

#### Overview

We compete in the combustion and emissions control markets. According to the U.S. Department of Energy, in 2011, two-thirds of the energy used in U.S manufacturing is converted via boilers, furnaces, and process heaters, our core market focus. Based on the June 2016 Frost & Sullivan Market Assessment Report, we estimate that our addressable target market over the next ten years in the United States is up to \$3.6 billion, comprised of up to \$1.7 billion from the industrial/commercial/institutional boiler segment, up to \$0.8 billion from the refinery segment, up to \$0.8 billion from the large industrial segment, up to \$0.2 billion from the flare segment, and up to \$100 million from the enhanced oil recovery (EOR) segment.

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, based on the testing and the field installations completed to date, 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:

- ICI Boiler Segment

- Refinery and Petrochemical Segment

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Large Industrial Segment

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- Flare Segment

- Enhanced Oil Recovery (EOR) Segment

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.

Market Entry

We believe that our technologies could be applied to a wide range of systems in which there is a flame. While this implies many potential market opportunities, it also requires that we exercise a disciplined approach in comparatively evaluating those opportunities in order to select and prioritize those applications that are cost effective and afford the best mix of time and cost required for development relative to revenue potential. We also aim to select applications in which our technologies either offer immediate, clear, meaningful, and measurable advantages relative to competing technologies or address unmet market needs.

We have pursued retrofitting existing systems to improve their performance as we believe that provides us the quickest path to market. This is because (1) the installed base of existing combustion systems is far greater than the annual number of newly built systems, (2) integrating our technology into a retrofit is less complex than integrating our technology into a new combustion system designed by an OEM, (3) the design cycle of a retrofit application is far shorter, and (4) we believed that with the previously challenging economic and energy industry market conditions, less costly retrofits are more attractive to many segments of the energy market than new capital equipment and infrastructure builds to comply with environmental regulations and derive cost efficiencies.

Since we have completed initial retrofit projects in three vertical market installations, we believe that pursuit of new, stand-alone products, such as the Duplex Plug & Play, will enable us to substantially increase our sales to a meaningful level through licensing or other business arrangements with OEMs. Upon broader adoption of the Duplex Plug & Play, we will pursue OEMs or other means to license the product in order to take advantage of the manufacturing and distribution capabilities of more established market participants. We are planning to develop a stand-alone product for application in the packaged boiler market and intend to investigate the value of developing additional stand-alone products.

Sales and Marketing Plan

Partnership Strategy and Field Development. We believe that our technologies have the potential to transform industries that rely on combustion and that our technologies are broadly applicable in large, scalable, global markets. We intend to form strategic partnerships and/or license agreements with key incumbents who are currently participating in our targeted market segments. We expect to maintain our existing capabilities to serve our end-user customers via our current channel partners and subcontractors.

These targeted market segment territories include: North America, Europe, and China and encompass:

- End users of OEM products and services interested in incorporating our technology in order to address their operational and or enviromental needs;

- Large OEMs interested in our technology either as licensees or as distributors;

- Government regulators such as California's South Coast Air Quality Management District, (SCAQMD), and other regulators charged with protecting the public health including the development of low emission and potentially disruptive environmental control technologies. Project funding was recently awarded to ClearSign and a refinery partner to demonstrate Duplex as a candidate for Best Available Control technology for certain types of process heaters and boilers.

We currently are pursuing field development programs of our Duplex burner products. These programs are aimed at our target industrial combustion markets.

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**Pricing Strategy.** Our target markets are characterized by well-established competitors in mature businesses. As a result, competitive pricing rather than pricing based on broad product value is the standard for these markets. Since we believe that our technology will provide greater economic value in comparison to our competitors, we plan to price our technology based upon the value that we believe it will provide in reduced air pollution control costs, including fines, and reduced maintenance and operating costs.

**Channel Structure and Path to Market.** Our path to market could involve any combination of (1) licensing our technologies for either one-time or periodic licensing fees for a period of time within specific fields of use and/or territories, (2) sale of our intellectual property rights within specific fields of use and/or territories, or (3) manufacturing the components required to enable our technologies and/or supplying a complete burner package through strategic subcontracting agreements. Since our solutions consist largely of off-the-shelf components, we do not anticipate that we will require a large manufacturing capacity. To the extent we will require production of specific hardware (electrodes, for example), we plan to rely on outside contract manufacturers, which we believe are widely available and for which a competitive market exists.

### **Competition and Barriers to Entry**

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

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

These systems include low NOX burners, electrostatic precipitators, bag houses, selective catalytic reduction systems and various types of scrubbers. The companies that provide these systems are well established and their combustion and emissions control technologies are based on mature, well-understood technologies that are proven in the market. However, we believe the further development of their technologies will be limited largely to marginal performance improvements. As a consequence of this relatively slow pace of adopting innovation, we believe current technology offerings from the large competitors have become largely commoditized, and differentiation between suppliers is very often based on price. This provides both an opportunity and a barrier to more nimble, disruptive companies.

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

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

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

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

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

However, we believe that our technology would be an attractive alternative to the products and solutions offered by companies with which we seek to compete. In particular, we believe that our technology could offer a unique cost-effective means to reduce many pollutants at the source while improving



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operational efficiency. We believe our technology could be capable of reducing the requirement for costly legacy equipment, offering customers the prospect of a positive return on their investment in the form of enhanced efficiency and productivity while reducing emissions to the levels of existing air pollution control technologies. In particular, we believe our technology could offer the following advantages when compared with the next best alternatives.

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

- enhance mixing with none of the additional pressure drop or power requirements that swirlers demand; and

- reduce NOX without reducing turndown or narrowing the burner operating window as staged combustion does or requiring expensive post combustion treatments with chemical additives such as catalytic reduction requires.

**Improving flame shape.** The main goal of virtually all process combustion is to transfer heat to raise steam or enable a chemical reaction, and to do so as efficiently as possible. Conventional technology uses buoyancy (the natural tendency for a flame and heat to rise opposite to the force of gravity) and momentum (fuel mixed with air and forced through a nozzle, as in a torch) as the only tools to shape flames. Unfortunately, momentum effects die out over distance from their source and buoyancy always operates counter to the gravitational field. Moreover, momentum and buoyancy effects often drive wayward flames into process tubes where they cause overheating and potential failure. In contrast, we believe that our technology eliminates flame impingement by shortening the combustion flame.

**Enhancing heat-transfer and process efficiency.** The main objective of industrial combustion in furnaces and boilers is to transfer heat to a process fluid. Conventional combustion techniques do their best to optimize flame shape to achieve this end, but we believe conventional combustion techniques have no additional means for enhancing heat transfer. In contrast, we believe that our technology could enhance heat transfer to the process tube with radiation from the solid Duplex tile, which is a more effective radiator than a conventional flame.

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

While we believe that our technology could offer the advantages discussed above, we do not currently represent a significant competitive presence in our industry.

### Research and Development Program

Our research and development program includes pilot-scale research and participating customer site demonstrations. The experience and industry contacts of our management, board of directors, and consultants with potential customers in the petroleum, petrochemical, and industrial steam applications industries inform our research program. These are supported by field development agreements, research agreements, and memoranda of understanding with potential development partners, customers and research institutions. Our research and development activities make use of employees and consultants that are experts in the areas of industrial combustion, statistical experimental design, gas turbines, fluid mechanics, physics of particles and ions, and electric fields. We spent \$4,831,000 and \$2,932,000 on research and development for the years ended December 31, 2016 and 2015, respectively.

We have tested our Duplex and ECC technologies in our laboratory at capacities representative of industrial equipment. We have installed our Duplex technology on a retrofit basis in numerous field test sites, including our Duplex Plug & Play product. Our research and development activities include the following: (1) Scale up to commercially relevant sizes, (2) Site demonstration at full scale, (3) Complete first installation, (4) Complete further installations to refine the product, its installation, and its reliability, and (5) Enhancement of our intellectual property portfolio.

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### Intellectual Property Protection

We are pursuing an aggressive intellectual property strategy including:

- Aggressive invention and ideation. Thus far we have identified numerous specific inventions that we believe to be novel and patentable. We are pursuing a proven ideation process to enhance and continue these discoveries.
- Development of a strong patent portfolio. 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 September 30, 2017, we have filed approximately 49 patent applications with the U.S. Patent and Trademark Office (USPTO) along with a number of applications with foreign regulatory bodies related to our Duplex and ECC technologies, which remain pending. We have been granted 4 U.S. patents related to our Duplex technology and 34 U.S. patents related to our ECC technology along with patents in other foreign jurisdictions. 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.

### Government Regulation

Government approval is not required in order for us to sell the principal products or services that we are developing. However, government regulation, particularly environmental regulation, is likely to play an important role in shaping our product mix and offerings. Our Duplex technology includes enhancement of the combustion process and reduction of certain emissions at a lower cost than current air pollution control devices. Field implementation of our technology requires permits from various local, state and federal agencies that regulate mechanical and electrical infrastructure and fire and air pollution control.

We believe that we offer major advances in emissions and efficiency reductions. We believe emissions regulations could enhance market demand for technology if such regulations require a reduction in criteria pollutants such as NOX, SOX, and CO, or others such as CO<sub>2</sub>, or mercury. In such cases, possible legislation on greenhouse gases, boiler MACT rules, or general reductions in required criteria pollutant levels could serve our business objectives. Although the timing of such regulations is uncertain, the general trend over the last decades continues to be government-mandated reduction for all criteria pollutants and the addition of new emissions to those regulated. Ultimately, it may be possible for our technology to achieve EPA BACT (Best Available Control Technology) designation. Although field development testing of our Duplex technology is ongoing, in December 2015 the South Coast Air Quality Management District governing the greater Los Angeles area designated Duplex as a Best Available Retrofit Control Technology in the field of refinery process heaters and boilers. We believe the availability of our technology, by itself, could accelerate the government's willingness to adopt more stringent environmental regulations. Further, efficiency improvements include enhanced mixing, lower excess air requirements, and improved heat transfer to the process. We believe such efficiency improvements could generate market demand regardless of the existing regulatory framework because they could result in savings to businesses that adopt our technology.

Although the Trump administration has indicated that it plans to pursue the reduction of environmental regulations in order to promote economic activity and to eliminate or reduce perceived needless environmental regulations, the statements and actions to date have primarily referenced elimination of regulations associated with greenhouse gas emissions, an area with secondary benefit to our technologies, and the approval of oil pipelines, a step that may benefit our business and that of our customers in the energy sector. At this time, we are not aware of any current or proposed federal, state or local environmental compliance regulations that would have a material detrimental effect on our business objectives. We do not anticipate any major expenditures to be required in order for our technology to comply with any environmental protection statutes.

### Employees

As of October 31, 2017, we had 16 full-time employees. None of these employees are covered by a collective bargaining agreement, and we believe our relationship with our employees is good.



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### DESCRIPTION OF SECURITIES

The following is a brief description of our capital stock. This summary does not purport to be complete in all respects. This description is subject to and qualified entirely by the terms of our Articles of Incorporation, as amended and our bylaws, copies of which have been filed with the SEC and are also available upon request from us.

#### Description of Securities We Are Offering in this Offering

We are offering up to shares of 3,400,000 our common stock and warrants to purchase up to 3,400,000 shares of our common stock (together with the shares of common stock underlying such warrants). Each warrant entitles its holder to purchase one share of Common Stock at an exercise price of \$ .

The common stock and warrants are immediately separable and will be issued independent of each other. Upon issuance, each security may be transferred independent of any other security, subject to applicable law and transfer restrictions.

#### Description of Warrants Included in this Offering

The material terms and provisions of the warrants we are offering pursuant to this prospectus are summarized below. This summary of some provisions of the warrants is not complete. For the complete terms of the warrants, you should refer to the form of warrant filed as an exhibit to the registration statement of which this prospectus is a part.

Pursuant to a warrants agency agreement between us and VStock Transfer, LLC (or other warrant agent engaged by us), as warrant agent, the warrants will be issued in book-entry form and shall initially be represented only by one or more global warrants deposited with the warrant agent, as custodian on behalf of The Depository Trust Company, or DTC, and registered in the name of Cede & Co., a nominee of DTC, or as otherwise directed by DTC.

Each share of common stock will be issued with a warrant to purchase one share of our common stock, which will be immediately exercisable and expire on the fifth anniversary of the date of issuance. Each whole warrant is exercisable to purchase one share of our common stock at an exercise price of \$ per share at any time prior to expiration.

The warrants issued in this offering will each be governed by the terms of a global warrant certificate deposited with DTC. The holder of a warrant will not be deemed a holder of our underlying common stock until the warrant is exercised, except as set forth in the warrant.

Subject to limited exceptions, a holder of warrants will not have the right to exercise any portion of its warrants if the holder (together with such holder's affiliates, and any persons acting as a group together with such holder or any of such holder's affiliates) would beneficially own a number of shares of our common stock in excess of 4.99% (or, at the election of the holder prior to issuance of any warrants, 9.99%) of the shares of our common stock then outstanding after giving effect to such exercise, or Beneficial Ownership Limitation; provided, however, that upon notice to us, the holder may increase or decrease the Beneficial Ownership Limitation, provided that in no event shall the Beneficial Ownership Limitation exceed 9.99% and any increase in the Beneficial Ownership Limitation will not be effective until the 61st day after notice of such increase from the holder to us.

The exercise price and the number of shares issuable upon exercise of the warrants is subject to appropriate adjustment in the event of recapitalization events, stock dividends, stock splits, stock combinations, reclassifications, reorganizations or similar events affecting our common stock. The holders of warrants must pay the exercise price in cash upon exercise of the warrants, unless such holders are utilizing the cashless exercise provision of the warrants, which is only available in certain circumstances such as if the underlying shares are not registered with the SEC pursuant to an effective registration statement. We intend to use commercially reasonable efforts to have the registration statement of which this prospectus forms a part, effective when the warrants are exercised.

In addition, in the event we consummate a merger or consolidation with or into another person or other reorganization event in which our common shares are converted or exchanged for securities, cash or other property, or we sell, lease, license, assign, transfer, convey or otherwise dispose of all or substantially

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all of our assets or we or another person acquire 50% or more of our outstanding shares of common stock (a “fundamental transaction”), then following such event, the holders of the warrants will be entitled to receive upon exercise of the warrants the same kind and amount of securities, cash or property which the holders would have received had they exercised the warrants immediately prior to such fundamental transaction. Any successor to us or surviving entity is required to assume the obligations under the warrants. Notwithstanding the foregoing, in the event of a fundamental transaction, the holders will have the option, which may be exercised within 30 days after the consummation of the fundamental transaction, to require the company or the successor entity purchase the warrant from the holder by paying to the holder an amount of cash equal to the Black Scholes value of the remaining unexercised portion of the warrant on the date of the consummation of the fundamental transaction. However, if the fundamental transaction is not within the company’s control, including not approved by the company’s Board of Directors or the consideration is not in all stock of the successor entity, the holder will only be entitled to receive from the company or any successor entity, as of the date of consummation of such fundamental transaction, the same type or form of consideration (and in the same proportion), at the Black Scholes value of the unexercised portion of the warrant, that is being offered and paid to the holders of common stock of the company in connection with the fundamental transaction, whether that consideration be in the form of cash, stock or any combination thereof, or whether the holders of common stock are given the choice to receive from among alternative forms of consideration in connection with the fundamental transaction.

Upon the holder’s exercise of a warrant, we will issue the shares of our common stock issuable upon exercise of the warrant within two trading days following our receipt of a notice of exercise, provided that payment of the exercise price has been made (unless exercised via the “cashless” exercise provision).

Prior to the exercise of a warrant, holders of the warrants will not have any of the rights of holders of our common stock purchasable upon exercise, including the right to vote, except as set forth therein.

Holders of warrants may exercise the warrants only if the issuance of the shares of our common stock upon exercise of the warrants is covered by an effective registration statement, or an exemption from registration is available under the Securities Act and the securities laws of the state in which the holder resides. We intend to use commercially reasonable efforts to have the registration statement of which this prospectus forms a part effective when the warrants are exercised. The holders of warrants must pay the exercise price in cash upon exercise of the warrants unless there is not an effective registration statement or, if required, there is not an effective state law registration or exemption covering the issuance of the shares of our common stock underlying the warrants (in which case, the warrants may only be exercised via a “cashless” exercise provision).

If, after the date that is \_\_\_\_\_ after the closing date, (i) the volume weighted average price for each of 30 consecutive trading days (the “Measurement Period”), which Measurement Period commences after the date that is after the closing date, exceeds \_\_\_\_\_ % of the exercise price (subject to adjustment for forward and reverse stock splits, recapitalizations, stock dividends and the like after the initial exercise date), (ii) the average daily volume for such Measurement Period exceeds \$ \_\_\_\_\_ per trading day and, (iii) the warrant holder is not in possession of any material non-public information which was provided by us, then we may, within one trading day of the end of such Measurement Period, call for cancellation of all or any portion of the warrants for which an exercise notice has not yet been delivered for consideration equal to \$0.001 per warrant share. Our right to call the warrants shall be exercised ratably among the holders based on the then outstanding warrants. You may be unable to reinvest your proceeds from the call in an investment with a return that is as high as the return on the warrants would have been if they had not been called.

We do not intend to apply for listing of the warrants on any securities exchange or other trading system.

**Authorized Capitalization**

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 September 30, 2017, we had 15,606,353 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

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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. If the approval of our shareholders is not so required, our board of directors may determine not to seek shareholder approval.

### Common Stock

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 and the shares of common stock issued upon exercise of the warrants offered by this prospectus will also be fully paid and non-assessable.

### Preferred Stock

Our Articles of Incorporation permits 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, powers, preferences and other rights of the shares and to fix the qualifications, limitations and restrictions thereof. The issuance of preferred stock could adversely affect the rights of holders of our common stock, including with respect to voting, dividends and liquidation and, by issuing shares of preferred stock with certain voting, conversion and/or redemption rights. Such issuance of preferred stock may have the effect of delaying, deferring or preventing a change of control. Preferred stock could be issued quickly with terms calculated to delay or prevent a change in control of our company or to make removal of management more difficult. Additionally, the issuance of preferred stock may decrease the market price of our common stock.

### Stock Options and Warrants

As of September 30, 2017, the following were outstanding:

- 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.

### 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.

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Effect of Washington Anti-Takeover Statute. Assuming that the registration statement of which this prospectus is a part is declared effective, we will be subject to Section 23B.19 of the Washington Revised Statutes, an anti-takeover law (the “Anti-Takeover Statute”). In general, the Anti-Takeover Statute prohibits a target corporation from entering into a significant business transaction with an acquiring person for a period of five years following the acquiring person’s share acquisition unless

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

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

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

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

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

(a)

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

(b)

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

(c)

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

(d)

The issuance, transfer, or redemption by a target corporation or a subsidiary of a target corporation, whether in one transaction or a series of transactions, of shares or of options, warrants, or rights to acquire shares of a target corporation or a subsidiary of a target

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corporation to or beneficially owned by an acquiring person or an affiliate or associate of an acquiring person except pursuant to the exercise of warrants or rights to purchase shares offered, or a dividend, distribution, or redemption paid or made pro rata to, all shareholders or holders of options, warrants, or rights to acquire shares of the target corporation, and except for involuntary redemptions permitted by the target corporation's charter or by the law of this state or the state of incorporation;

(e)

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

(f)

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

(g)

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

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

(a)

Every domestic corporation, if:

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

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

(b)

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

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

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

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

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

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

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**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 all vacancies may be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum.

**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 proposed to be considered at the special meeting.

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## UNDERWRITING

We have entered into an underwriting agreement dated \_\_\_\_\_, 2017 with Ladenburg Thalmann & Co. Inc., as the representative of the underwriters (the “representative”) named below and the sole book-running manager of this offering. Subject to the terms and conditions of the underwriting agreement, the underwriters have agreed to purchase the number of our securities set forth opposite its name below.

| Underwriter                   | Number<br>of<br>Shares | Number of<br>Warrants |
|-------------------------------|------------------------|-----------------------|
| Ladenburg Thalmann & Co. Inc. |                        |                       |
| Total                         |                        |                       |

A copy of the underwriting agreement will be filed as an exhibit to the registration statement of which this prospectus is part.

We have been advised by the underwriters that they propose to offer the shares of common stock and related warrants directly to the public at the public offering price set forth on the cover page of this prospectus. Any securities sold by the underwriters to securities dealers will be sold at the public offering price less a selling concession not in excess of \$ \_\_\_\_\_ per share. The underwriting agreement provides that the underwriters’ obligation to purchase the securities we are offering is subject to conditions contained in the underwriting agreement.

No action has been taken by us or the underwriters that would permit a public offering of shares of common stock and related warrants in any jurisdiction outside the United States where action for that purpose is required. None of our securities included in this offering may be offered or sold, directly or indirectly, nor may this prospectus or any other offering material or advertisements in connection with the offer and sales of any of the securities offering hereby 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 are advised to inform themselves about and to observe any restrictions relating to this offering of securities and the distribution of this prospectus. This prospectus is neither an offer to sell nor a solicitation of any offer to buy the securities in any jurisdiction where that would not be permitted or legal.

The underwriters have advised us that they do not intend to confirm sales to any account over which they exercise discretionary authority.

## Underwriting Discount and Expenses

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

|  | Per<br>Share(1) | Per<br>Warrant(1) | Total(1) |
|--|-----------------|-------------------|----------|
| Public offering price  |                 |                   |          |
| Underwriting discount to be paid to the underwriters by us (7.0%)(2) |                 |                   |          |
| Proceeds to us (before expenses)                                     |                 |                   |          |

(1)

The public offering price and underwriting discount corresponds to (i) a public offering price per share of common stock of \$ \_\_\_\_\_ and (ii) a public offering price per warrant of \$ \_\_\_\_\_.

(2)

We have granted a 30-day option to the representative to purchase up to \_\_\_\_\_ additional shares of common stock (up to 15% of the shares of common stock) and/or additional warrants exercisable for up to an additional \_\_\_\_\_ shares of common stock (up to 15% of the warrants sold in this offering) at the public offering price per share of common stock and the public offering price per warrant set forth above less the underwriting discounts and commissions solely to cover over-allotments, if any.

We estimate the total expenses payable by us for this offering to be approximately \$ \_\_\_\_\_, which amount includes (i) the underwriting discount of \$ \_\_\_\_\_ (\$ \_\_\_\_\_ if the underwriters' over-allotment option is exercised in full) and (ii) reimbursement of the accountable expenses of the representative equal to

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\$ including the legal fees of the representative being paid by us and (iii) other estimated company expenses of approximately \$ which includes legal, accounting, and printing costs and various fees associated with the registration and listing of our shares.

The securities we are offering are being offered by the underwriters subject to certain conditions specified in the underwriting agreement.

**Over-allotment Option**

We have granted to the representative an option exercisable not later than 30 days after the date of this prospectus to purchase up to a number of additional shares of common stock and/or warrants equal to 15% of the number of shares of common stock sold in the primary offering and/or 15% of the warrants sold in the primary offering at the public offering price per share of common stock and the public offering price per warrant set forth on the cover page hereto less the underwriting discounts and commissions. The representative may exercise the option solely to cover overallotments, if any, made in connection with this offering. If any additional shares of common stock and/or warrants are purchased, the representative will offer these shares of common stock and/or warrants on the same terms as those on which the other securities are being offered.

**Determination of Offering Price**

Our common stock is listed on the NASDAQ Capital Market under the symbol "CLIR." On November 20, 2017, the last reported sale price for our common stock was \$2.95 per share. The price of our common stock on the NASDAQ Capital Market during recent periods will only be one of many factors in determining the public offering price. Other factors to be considered include our history, our prospects, the industry in which we operate, the previous experience of our executive officers and the general condition of the securities markets at the time of this offering. All share and warrant numbers of the securities being offered included in this prospectus are based on an assumed public offering price per share of common stock of \$2.95, the last reported sale price for our common stock on the NASDAQ Capital Market on November 20, 2017. We do not intend to apply for listing of the warrants offered hereby on any securities exchange or trading system.

**Lock-up Agreements**

Our officers, directors, each of their respective affiliates and associated partners, and certain shareholders have agreed with the representative to be subject to a lock-up period of 90 days following the date of this prospectus. This means that, during the applicable lock-up period, such persons may not offer for sale, contract to sell, sell, distribute, grant any option, right or warrant to purchase, pledge, hypothecate or otherwise dispose of, directly or indirectly, any shares of our common stock or any securities convertible into, or exercisable or exchangeable for, shares of our common stock. The lock-up period is subject to an additional extension to accommodate for our reports of financial results or material news releases. Certain limited transfers are permitted during the lock-up period if the transferee agrees to these lock-up restrictions. We have also agreed, in the underwriting agreement, to similar lock-up restrictions on the issuance and sale of our securities until , 2018, although we will be permitted to issue stock options or stock awards to directors, officers and employees under our existing plans. The representative may, in its sole discretion and without notice, waive the terms of any of these lock-up agreements.

**Transfer Agent and Registrar**

The transfer agent and registrar for our common stock is VStock Transfer, LLC.



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### Stabilization, Short Positions and Penalty Bids

The underwriters may engage in syndicate covering transactions stabilizing transactions and penalty bids or purchases for the purpose of pegging, fixing or maintaining the price of our common stock:

- Syndicate covering transactions involve purchases of securities in the open market after the distribution has been completed in order to cover syndicate short positions. Such a naked short position would be closed out by buying securities in the open market. A naked short position is more likely to be created if the underwriters are concerned that there could be downward pressure on the price of the securities in the open market after pricing that could adversely affect investors who purchase in the offering.

- Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specific maximum.

- Penalty bids permit the underwriters to reclaim a selling concession from a syndicate member when the securities originally sold by the syndicate member are purchased in a stabilizing or syndicate covering transaction to cover syndicate short positions.

These syndicate covering transactions, stabilizing transactions, and penalty bids may have the effect of raising or maintaining the market prices of our securities or preventing or retarding a decline in the market prices of our securities. As a result the price of our common stock may be higher than the price that might otherwise exist in the open market. Neither we nor the underwriters make any representation or prediction as to the effect that the transactions described above may have on the price of our common stock. These transactions may be effected on the NASDAQ Capital Market, in the over-the-counter market or on any other trading market and, if commenced, may be discontinued at any time.

In connection with this offering, the underwriters also may engage in passive market making transactions in our common stock in accordance with Regulation M during a period before the commencement of offers or sales of shares of our common stock in this offering and extending through the completion of the distribution. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for that security. However, if all independent bids are lowered below the passive market maker's bid that bid must then be lowered when specific purchase limits are exceeded. Passive market making may stabilize the market price of the securities at a level above that which might otherwise prevail in the open market and, if commenced, may be discontinued at any time.

Neither we, nor the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the prices of our securities. In addition, neither we nor the underwriters make any representation that the underwriters will engage in these transactions or that any transactions, once commenced will not be discontinued without notice.

### Indemnification

We have agreed to indemnify the underwriters against certain liabilities, including certain liabilities arising under the Securities Act or to contribute to payments that the underwriters may be required to make for these liabilities.

### LEGAL MATTERS

Cooley LLP, with an office at 1700 Seventh Avenue, Suite 1900, Seattle, Washington 98101, will pass upon the validity of the shares of common stock and warrants offered by this prospectus. The underwriter is being represented by Ellenoff Grossman & Schole LLP of New York, New York in connection with the offering.

### EXPERTS

The financial statements of ClearSign Combustion Corporation incorporated in this prospectus 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.



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### 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](http://www.sec.gov) and on the investor relations page of our website at [www.clearsigncombustion.com](http://www.clearsigncombustion.com). Information on our web site is not part of this 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 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 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.

### INCORPORATION 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. Information that is incorporated by reference is considered to be part of this prospectus and you should read it with the same care that you read this prospectus. We have filed with the SEC, and incorporate by reference in this prospectus:

- 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 and November 2, 2017; and
- 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 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.

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](http://www.clearsign.com). The information on our website is not considered part of or incorporated by reference in this prospectus or any other document we file with or furnish to the SEC.

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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.

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3,400,000 Shares of Common Stock  
Warrants to Purchase 3,400,000 Shares of Common Stock

ClearSign Combustion Corporation

PROSPECTUS

Ladenburg Thalmann

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## PART II

## INFORMATION NOT REQUIRED IN PROSPECTUS

## ITEM 13. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

The following table sets forth the various expenses to be incurred in connection with the sale and distribution of our common stock being registered hereby, all of which will be borne by us (except any underwriting discounts and commissions and expenses incurred for brokerage, accounting, tax or legal services or any other expenses incurred in disposing of the shares). All amounts shown are estimates except the SEC registration fee and FINRA Fee.

|  |            |
|--|------------|
| SEC Filing Fee                         | \$ 2,864   |
| FINRA Fee                              | \$ 3,950   |
| Printing Expenses*                     | \$ 15,000  |
| Accounting Fees and Expenses*          | \$ 15,000  |
| Legal Fees and Expenses*               | \$ 225,000 |
| Transfer Agent and Registrar Expenses* | \$ 5,000   |
| Miscellaneous*                         | \$ 8,186   |
| Total                                  | \$ 275,000 |

\*

Estimated.

## ITEM 14. INDEMNIFICATION OF DIRECTORS AND OFFICERS

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

The Company's Bylaws further provide that each person who was, is or is threatened to be made a party to or is otherwise involved in any threatened, pending or completed action, suit, claim or proceeding, whether civil, criminal, administrative or investigative and whether formal or informal, by reason of the fact that he or she is or was a director or officer of the Company or was serving at the Company's request as a director, officer, partner, trustee, employee or agent of another entity, shall be indemnified and held harmless against all losses, claims, damages, liabilities and expenses actually and reasonably incurred or suffered in connection with the proceeding. This indemnification right continues even after the individual has ceased to be a director or officer or to serve at the Company's request as a director, officer, partner, trustee, employee or agent of another entity. However, if the person indemnified initiates the proceeding, he or she shall be entitled to indemnification only if the proceeding was authorized or ratified by the Company's board of directors. No indemnification will be provided for acts or omissions finally adjudged to be intentional misconduct or a knowing violation of law, for conduct finally adjudged to be in violation of Revised Code of Washington section 23B.08.310, for any transaction with respect to which it was finally adjudged that the indemnitee personally received a benefit in money, property or services to which the

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indemnitee was not legally entitled or if the Company is otherwise prohibited by applicable law from paying indemnification. The Company must advance expenses to an indemnitee for an indemnification obligation so long as the Company receives an undertaking by or on behalf of the indemnitee to repay all amounts so advanced if it is determined by a final judicial decision from which there is no further right to appeal that the indemnitee is not entitled to be indemnified.

Under our Director and Officer Insurance Policy, our directors and officers are provided liability coverage of \$15 million subject to retention. The policy has a one year term with annual renewal possible. The policy may be terminated by the insured if there is a merger or acquisition which includes a change in ownership of 50% of the voting shares. Upon such an occurrence, the policy will remain in effect until the end of the policy period; however, only for claims taking place prior to the acquisition. We may elect to then obtain “run off” insurance for a period of between one and six years at an annual premium negotiated with the insurer at that time. The policy is a claim made policy. It covers only those claims made during the policy term. If an act giving rise to a claim occurs during the policy term, but the claim is not reported within 90 days of – of the termination or expiration policy, the claim will not be covered.

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

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

**ITEM 15. RECENT SALES OF UNREGISTERED SECURITIES**

From November 9, 2014 to November 9, 2017, we issued 24,250 shares of common stock pursuant to our 2013 Consultant Stock Plan, with a per share value ranging from \$3.50 to \$10.26, in exchange for services. The issuances of these securities were deemed to be exempt from registration under the Securities Act in reliance upon Section 4(a)(2) of the Securities Act (or Regulation D promulgated thereunder).

**ITEM 16. EXHIBITS**

| Exhibit<br>No. | Description of Document   |
|----------------|---|
| 1.1            | Form of Underwriting Agreement**  |
| <u>3.1</u>     | <u>Articles of Incorporation of ClearSign Combustion Corporation, amended on February 2, 2011(1)</u>                        |
| <u>3.2</u>     | <u>Articles of Amendment to Articles of Incorporation of ClearSign Combustion Corporation filed on December 22, 2011(1)</u> |
| <u>3.3</u>     | <u>Bylaws of ClearSign Combustion Corporation(2)</u>  |
| <u>4.1</u>     | <u>Form of Common Stock Certificate(3)</u>  |
| <u>4.2</u>     | <u>Common Stock Purchase Warrant, issued to MDB Capital Group LLC on April 24, 2012(1)</u>                                  |

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| Exhibit No.  | Description of Document  |
|--------------|--|
| <u>4.3</u>   | .. <u>Warrant issued to Brean Capital LLC on March 5, 2014(4)</u>  |
| <u>4.4</u>   | .. <u>Warrant Agent Agreement and Form of Warrant Certificate(5)</u>   |
| 4.5          | Form of Warrant Agent Agreement and Form of Warrant Certificate**  |
| 5.1          | Opinion of Cooley LLP regarding the validity of the common stock being registered**                                    |
| <u>10.1</u>  | .. <u>Dealer Manager and Placement Agent Agreement date December 7, 2016(6)</u>  |
| <u>10.2</u>  | .. <u>Office Lease Agreement(1)</u>  |
| <u>10.3</u>  | .. <u>First Amendment to Office Lease Agreement dated December 17, 2013(4)</u>   |
| <u>10.4</u>  | .. <u>Form of Confidentiality and Proprietary Rights Agreement(3)</u>  |
| <u>10.5</u>  | .. <u>ClearSign Combustion Corporation 2011 Equity Incentive Plan(1)</u>   |
| <u>10.6</u>  | .. <u>Form of Director and Officer Indemnification Agreement(1)</u>  |
| <u>10.7</u>  | .. <u>ClearSign Combustion Corporation 2013 Consultant Stock Plan(2)</u>   |
| <u>10.8</u>  | .. <u>Employment Agreement dated February 3, 2015 between the registrant and Stephen E. Pirnat(4)</u>                  |
| <u>10.9</u>  | .. <u>Separation Agreement and General Release dated May 11, 2017 between the registrant and James N. Harmon(7)</u>    |
| <u>10.10</u> | .. <u>Consulting Agreement dated May 11, 2017 between the registrant and James N. Harmon(7)</u>                        |
| <u>10.11</u> | .. <u>Separation Agreement and General Release dated September 7, 2017 between the registrant and Andrew U. Lee(8)</u> |
| <u>10.12</u> | .. <u>Consulting Agreement dated September 7, 2017 between the registrant and Andrew U. Lee(8)</u>                     |
| <u>23.1</u>  | .. <u>Consent of Gumbiner Savett Inc., Independent Registered Public Accounting Firm*</u>                              |
| 23.2         | Consent of Cooley LLP (included in Exhibit 5.1 filed herewith)**   |
| <u>24.1</u>  | .. <u>Power of Attorney (see signature page hereto)*</u>   |

\*  
Filed herewith.

\*\*  
To be filed by subsequent amendment.

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

(2)  
Incorporated by reference from the registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2013, filed with the Securities and Exchange Commission on May 6, 2013.

(3)  
Incorporated by reference from the registrant's Annual Report on Form 10-K filed with the Securities and Exchange Commission on February 26, 2015.

(4)  
Incorporated by reference from the registrant's Annual Report on Form 10-K filed with the Securities and Exchange Commission on March 11, 2014.

(5)

Incorporated by reference from the registrant's Current Report on Form 8-K/A filed with the Securities and Exchange Commission on January 24, 2017.

(6)

Incorporated by reference from the registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on December 7, 2016.

(7)

Incorporated by reference from the registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on May 11, 2017.

(8)

Incorporated by reference from the registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on September 7, 2017.

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ITEM 17. UNDERTAKINGS

Insofar as indemnification for liabilities arising under the Securities Act may be permitted as to directors, officers and controlling persons of the registrant pursuant to the provisions described in Item 14, or otherwise, we have been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, we will, unless in the opinion of our counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes:

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

(i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933;

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

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

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

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

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

(5) To provide to the underwriters at the closing specified in the underwriting agreement, certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

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(6) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus as filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(7) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Seattle, State of Washington, on this 27th day of November, 2017.

CLEARSIGN  
COMBUSTION  
CORPORATION

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

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Dated: November 27, 2017 /s/ Stephen E. Pirnat  
Stephen E. Pirnat  
Chief Executive Officer and Director

Dated: November 27, 2017 /s/ Brian G. Fike  
Brian G. Fike  
Interim Chief Financial Officer

Dated: November 27, 2017 \*  
Jeffrey L. Ott, Director

Dated: November 27, 2017 \*  
Scott P. Isaacson, Director

Dated: November 27, 2017 \*  
Lon E. Bell, Ph.D., Director

/s/ Stephen E. Pirnat

\*By: Stephen E. Pirnat  
Attorney-in-fact