CLEARSIGN COMBUSTION CORP
Form 10-K
March 12, 2019

**UNITED STATES**

**SECURITIES AND EXCHANGE COMMISSION**

**Washington, D.C. 20549**

**FORM 10-K**

**(Mark One)**

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

**For the fiscal year ended December 31, 2018**

**OR**

.. **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

**For the transition period from _____ to _____**

**Commission file number 001-35521**

**CLEARSIGN COMBUSTION CORPORATION**

(Exact name of registrant as specified in its charter)

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

**12870 Interurban Avenue South**

**Seattle, Washington 98168**

(Address of principal executive offices)

(Zip Code)

**(206) 673-4848**

(Registrant's telephone number, including area code)

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

| **Title of each class** | **Name of each exchange on which registered** |
|---|---|
| Common Stock, par value $.0001 | The Nasdaq Stock Market LLC |

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

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

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

Yes x No ¨

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes x No ¨.

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a 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 x | Smaller reporting company x |
| | 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 13(a) of the Exchange Act. ¨

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

Yes ¨ No x

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

As of June 30, 2018, the aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the last sale price of the common equity was $41,000,000.

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

As of March 12, 2019, the registrant has 26,697,261 shares of common stock, par value $.0001, issued and outstanding.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the registrant's proxy statement for the 2019 Annual Meeting of Shareholders are incorporated herein by reference in Part III of this Annual Report on Form 10-K to the extent stated herein. Such proxy statement will be filed with the Securities and Exchange Commission within 120 days of the registrant's fiscal year ended December 31, 2018.

**Combustion Corporation**

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

This Annual Report on Form 10-K contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 and the provisions of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements give our current expectations or forecasts of future events. You can identify these statements by the fact that they do not relate strictly to historical or current facts. You can find many (but not all) of these statements by looking for words such as "approximates," "believes," "hopes," "expects," "anticipates," "estimates," "projects," "intends," "plans," "would," "should," " or other similar expressions in this report. In particular, these include statements relating to future actions; prospective products, applications, customers and technologies; future performance or results of any products; anticipated expenses; and future 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 materially from those discussed in the forward-looking statements include, but are not limited to:

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

Forward-looking statements may appear throughout this report, including without limitation, the following sections: Item 1"Business," Item 1A "Risk Factors," and Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations." The forward-looking statements are based upon management's beliefs and assumptions and are made as of the date of this report. We undertake no obligation to publicly update or revise any forward-looking statements included in this report. You should not place undue reliance on these forward-looking statements.

Unless otherwise stated or the context otherwise requires, the terms "ClearSign," "we," "us," "our" and the "Company" refer to ClearSign Combustion Corporation and its wholly-owned subsidiary, ClearSign Asia Limited.

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**PART I**

**ITEM 1: 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. We believe that our patented Duplex™ technology is capable of enhancing the performance of combustion systems in a broad range of markets, including the energy (upstream oil production and down-stream refining), institutional commercial and industrial boiler, chemical, and petrochemical industries. Our Duplex technology, which is our primary technology, uses a porous ceramic matrix at a distance to 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. To date, our operations have been funded primarily through sales of our equity securities. We have earned nominal revenue since inception in 2008.

Duplex has been successfully installed in 11 commercial projects across four different combustion applications. In addition, we have two ongoing projects that, if successful, will increase our installed project base and number of distinct applications. Based on the results of our laboratory and field testing, as well as our initial commercialized installations in different applications, we believe that this proprietary technology is capable of improving emissions control performance and operational performance for many types of industrial and commercial combustion systems. As a result, we also believe that Duplex may reduce costs associated with the construction (including refurbishment and upgrade), operation and maintenance of these combustion systems as compared to combustion systems that use no or alternative technology to enhance combustion and control emissions.

Based on the results of our testing and initial 11 field installations, we believe that Duplex compares 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), external flue gas recirculation 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 flares, institutional commercial and industrial boilers and other similar equipment.

**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. The information contained on or that may be obtained from our website is not a part of this report. We currently operate in the United States and through a wholly owned subsidiary in the People's Republic of China.

**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. Combustion systems are used to provide heat for all manner of industrial processes, including boilers, furnaces, kilns and gas turbines. In order to maximize energy efficiency while keeping pace with regulatory guidelines for air pollution emissions, operators of combustion 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 Duplex technology, to date we have limited the introduction of Duplex to petroleum refining process heaters, steam generation, and enclosed flares.

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 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 $108 per barrel to approximately $26 per barrel, with 2018 prices ranging from $44 to $77 per barrel and February 2019 prices approximating $55 per barrel. Regardless of the effect of crude oil price volatility, based upon our experience and feedback from current and prospective customers, we believe that the value of our Duplex technology to the energy sector continues to be validated because of the technology's ability to cost-effectively lower emissions and drive certain operational efficiencies.

We believe operators in all of our domestic target markets are under 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. We believe this to be the case in the U.S. and worldwide in most major developed and developing countries. 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. We believe that our Duplex technology can provide a unique, cost-effective pollution control solution for operators in comparison to all known 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 pollutant 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*

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 and other future EPA requirements. Because of this uncertainty, we believe that local regulators are in search of additional means beyond those included in the current regulations to comply with the impending standards. 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 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.

Additionally, we believe that current emissions standards in Europe, the Middle East, other parts of Asia 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.

**Our Technologies**

In the process of attempting to develop our initial Electrodynamic Combustion Control™ (ECC) technology beyond laboratory scale for a potential process heater design in 2013, we developed Duplex, which has broad applications for gaseous fuels. While we continue to pursue development of our ECC technology through laboratory testing, in 2014 we began to pursue field evaluation and sales of our Duplex technology. We have since completed a number of field evaluation 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 with original equipment manufacturers (OEMs).

We have completed 11 field projects in three of our five target markets using our Duplex technology: six related to wellhead enclosed flares, two 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 evaluation projects, which resulted from years of research and development work, is 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 of 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 five additional wellhead enclosed flare retrofits for $900,000 and in 2017 we delivered three units generating sales revenue of $540,000. The remaining two units were completed and installed in the first quarter of 2018, generating sales revenue of $360,000. An additional OTSG unit was also completed and invoiced during 2018. Our laboratory research currently focuses on enhancing our Duplex products and includes the development of an institutional commercial and industrial boiler application that enhances operational performance by eliminating flue gas recirculation.

**Product Applications of Duplex**

To date, we have deployed our Duplex technology through retrofits and replacements of existing burners. Retrofits often involve engineering around an existing burner architecture that can complicate the Duplex installation, whereas replacements are more straightforward, especially after the introduction of our Duplex Plug & Play® technology in February 2017. Because of this, we believe that the retrofit and replacement markets are ideally suited for larger projects and larger applications of Duplex.

*Process Heaters in the Oil Refining Industry*

To date, we have successfully retrofitted two process heaters with the standard Duplex and one demonstration unit with the Duplex Plug & Play design. 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. 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 larger size Duplex Plug & Play devices, as well as alternate multi-burner configurations 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 OEMs having established manufacturing and distribution capabilities.

*Wellhead Enclosed Flares*

A major California oil producer approached us in early 2016 to address a unique emission compliance need relating to wellhead enclosed flares. This was an important milestone because it demonstrated the broad application of our Duplex technology. A total of six units have been completed for enclosed flares to date.

Based upon discussions with local regulators and examination of regulatory reports, we believe that enclosed flare emissions are a potential target for increased regulation, in part because the success of our installations to date has shown regulators and the EPA that establishing NOx emissions standards for enclosed flares is possible. In anticipation of this, we are pursuing potential customers with target enclosed flare applications that would benefit from our technology.

*OTSGs for Enhanced Oil Recovery Industry*

We have successfully installed our Duplex technology in three OTSG projects in the enhanced oil recovery industry in California. We believe that these successful installations are gaining regulator acceptance by the Southern California regulatory authorities and, as a result, market acceptance.

*Industrial Commercial Boilers*

There are a large number of boiler manufacturers producing many styles of boiler equipment for many different applications. Boilers are used in many industrial applications, as well as in commercial and residential applications at much smaller scales. We are currently actively working on commercial boiler applications for two distinct types of industry standard commercial boilers – fire tube and water tube boilers. For fire tube products, we have recently developed our own prototype burner replacement product similar in concept to our Duplex Plug and Play device for process heaters. This product has achieved excellent results after testing in a typical commercial fire tube boiler produced by one of the industry's largest suppliers. Water tube boilers are larger and more varied in their designs, so our approach has been to retrofit existing equipment with our Duplex technology rather than to design a replacement burner product. These field projects are ongoing. We anticipate significant progress during 2019 in testing this equipment. If the testing is successful, our goal will be to partner with established OEMs in the water tube and fire tube boiler industry for wider deployment of our Duplex technology.

**Duplex's Emission Results and Licensing**

We have now achieved emission results in multiple applications that 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. institutional commercial and industrial 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 end users and OEMs. We believe licensing would significantly change the makeup of our sales mix, sales cycles, and margins. Licensing our technology within one or an array of selected vertical markets (e.g. burners for refinery process heaters or institutional commercial and industrial 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 evaluation projects discussed above and completing a sufficient number of installations and direct sales. We believe that the continuing development of Duplex, additional sales and an increase in the number of end user installations will enhance our ability to license our technology.

**Development of ECC**

We are continuing to pursue opportunities for our patented ECC technology through laboratory research where we have demonstrated certain favorable attributes of this proprietary technology operating at lab scales. We are also developing certain derivative product expressions that are being tested and validated both by the Company and by independent third parties

**Technical Components of our Duplex and ECC Technologies**

Our Duplex burner technology consists of an industrial burner and a porous ceramic matrix. When the unreacted mix of gaseous fuel and air is directed at the ceramic matrix, the mixture ignites and burns within the matrix itself. Because the fuel and air have more time to mix, the homogeneous mixture mitigates NOx- forming hot spots that are

typically produced. The mixing and combustion in the ceramic matrix results in a dramatically shorter flame. NOx, 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 from the ceramic matrix enhances thermal efficiency, and it eliminates the possibility of flame impingement and reduces the likelihood of carbon deposits forming on the inside surfaces of the process tubes (coking) or failure of process tubes.

Our ECC technology 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 shape and location to best suit the specific geometry of a given installation.

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 suppliers. Thus, our products can be readily available and scalable for high volume demand.

**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 a 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 institutional commercial and industrial 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. Based on the testing and the field installations completed to date, however, we believe that our Duplex technology offers 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:

- institutional commercial and industrial boiler segment
- refinery and petrochemical segment
- large industrial segment
- enclosed flare segment
- 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 into existing standard system designs, and (b) new system designs.

**Market Entry**

We believe that our Duplex technology can 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 with our Duplex technology 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 believe 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 replacement products, such as the Duplex Plug & Play, will enable us to substantially increase our sales through licensing or other business arrangements with OEMs. Assuming that broader adoption of the Duplex Plug & Play occurs, our plan is to 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 successfully completed and demonstrated in our lab a stand-alone low emissions packaged boiler and are currently pursuing opportunities to install the product in the field with suitable customers.

The operational success we have experienced with demonstration units in the wellhead enclosed flare, oil refining and enhanced oil recovery sectors has allowed us to capitalize on these recent product development results by refocusing our personnel and resources toward enhancing and productizing our Duplex technology in order to generate revenue. The success in these initial areas has also allowed us to work on developing our Duplex technology for installation in both fire tube and water tube boilers. A demonstration project on boilers is currently underway with a Chinese partner and research on this application continues in our laboratory.

**Sales and Marketing Plan**

*Partnership Strategy and Field Development*. We believe that our technologies have the potential to transform many 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.

Our 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 environmental needs;

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

- support from government regulators such as California's South Coast Air Quality Management District (SCAQMD) and other regulators charged with protecting the public health, which support includes providing funds for the development of low emission and potentially disruptive environmental control technologies. Project funding from SCAQMD 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.

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

*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) selling 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, 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 which 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, Eclipse and Maxon (all four are subsidiaries of Honeywell), John Zink Hamworthy Combustion (a subsidiary of Koch Industries and including Coen), General Electric, Haldor Topsøe, Hitachi, Linde, Zeeco and Fives Group, among others.

These systems include low and ultra-low $NO_X$ burners, selective and non-selective catalytic reduction systems and other pollution control technologies. 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. We believe the further development of their technologies, however, 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 technologies are viewed as a cost of doing business, and as a means to operate within regulatory requirements and avoid fines. Unlike most other kinds of capital equipment that provide an economic return through enhanced productivity or efficiency, we believe customers of traditional emissions control equipment do not otherwise expect any positive return on these investments. We believe the Duplex suite of products offers customers the unique opportunity to realize a return on investment, thereby further differentiating the Company’s technologies from the competition.

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 relationships with their customers, they may prefer to continue to do business with one another.

We believe, however, that our Duplex 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 Duplex technology could offer a unique cost-effective means to reduce many pollutants at the source while improving operational efficiency. We believe our Duplex technology could be capable of reducing the requirement for 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 levels below or equivalent to existing air pollution control technologies. In particular, we believe our Duplex technology could offer the following advantages when compared with the next best alternatives.

*Emissions Reduction from Combustion Sources.* Current technology reduces emissions by manipulating mixing of fuel and air, staging combustion in two or more zones, inefficient operation due to external recirculating flue gas or high excess air or post-combustion treatment of $NO_X$ using selective catalytic reduction. In contrast, we believe our Duplex technology can:

- enhance mixing with none of the additional pressure drop or power requirements,
- eliminate external flue gas recirculation and/or high excess air, thereby improving thermal efficiency and reducing fuel consumption, and
- reduce NOx without impacting burner stability and safety, as some staged combustion does, or requiring expensive post-combustion treatments with chemical additives such as catalytic reduction requires.

*Enhancing heat-transfer and process efficiency.* The main goal of virtually all industrial combustion is to transfer heat to raise process fluid temperatures or enable a chemical reaction, and to do so as efficiently as possible. Conventional low NOx and ultra-low NOx combustion techniques involve long and sometimes unruly flames, which may lead to flame impingement on process tubes, decreases throughput, increases maintenance requirements and could pose a safety risk. We believe conventional combustion techniques have no additional practical means for enhancing heat transfer. In contrast, we believe that our technology's ability to produce short, compact flames eliminates the potential for flame impingement and therefore allows improved throughput of the process heaters or boilers. In addition, we believe that our technology could enhance heat transfer to the process tubes as radiation properties from the solid Duplex matrix provide more effective radiation than a conventional flame.

Compared to our competitors, we believe our technology could provide customers with a lower total cost of ownership by reducing capital and operating expenses and increasing in energy efficiency.

**Research and Development Program**

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 evaluation 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 and heat transfer.

We have tested our Duplex and ECC technologies in our laboratory at commercially relevant capacities. We have installed our Duplex technology on a retrofit and new build basis in numerous field evaluation sites, including our Duplex Plug & Play™ product. Our research and development activities include the following: (1) scale-up to commercial sizes for various product expressions suited to our five target markets. (2) collaborate with strategic end users for site demonstrations at full scale, (3) complete the first installation, (4) complete further installations to optimize the product, its installation, and its reliability, and (5) enhance our intellectual property portfolio.

**Intellectual Property Protection**

We have generated inventions that we believe to be patentable subject matter and for which we have been seeking protection through patent application filings. As of December 31, 2018, we have 70 patent grants and another 92 patents pending. The earliest year in which any of our patents will expire is 2031. In terms of the technology breakdown of our patent portfolio, we have been granted 27 patents related to our Duplex technology and 43 patents related to our ECC technology. In terms of the geographic breakdown of our patent portfolio, 44 patent grants have been issued by the U.S. Patent and Trademark Office (USPTO) with 59 patent applications pending. We have been issued 26 patents from foreign regulatory bodies related to our Duplex and ECC technologies, including 19 in China. We have 33 patent applications pending in various foreign jurisdictions. We maintain an active review process to monitor relevant new inventions to expand our intellectual property protection globally.

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 regulation, particularly environmental regulation is likely to play an important role in shaping our product mix and offerings. Field implementation of our technologies 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 reductions and efficiency improvements. We also believe emissions regulations could enhance market demand for technology if such regulations require a reduction in pollutants such as $NO_X$, CO and $CO_2$. In such cases, possible legislation on greenhouse gases, boiler Maximum Available Control Technology (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. Ultimately, it may be possible for our technology to achieve BACT designation. We believe the availability of our technology, by itself, may accelerate the government's willingness to adopt more stringent environmental regulations. Further, we believe efficiency improvements, combined with the elimination of flame impingement, could generate market demand regardless of the existing regulatory framework because they could result in savings to businesses that adopt our technology.

Although the current U.S. 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 February 28, 2019, we had 16 full-time employees and 2 part-time employees. Our employees are not covered by collective bargaining agreements, and we believe our relationship with our employees is good.

**ITEM 1A: RISK FACTORS**

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

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

**Risks Related to Our Business**

***We are a company with a limited operating history and our future profitability is uncertain. We anticipate future losses and negative cash flows 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 flows for the foreseeable future. As of December 31, 2018, we had a total accumulated deficit of approximately $59.5 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 because our target customers are, in general, slow to adopt new technologies, we anticipate that we will 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. 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 implemented and tested in the field by customers in various markets. If we are unable to effectively develop and demonstrate our technology in a timely fashion, 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 acceptance and 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 market will accept it, nor can we control the rate at which such acceptance may be achieved. In certain of our market segments, there is a well-established channel with a limited number of companies engaged in reselling to our target customers. Failure to achieve productive relations with a sufficient number of these prospective partners may impede adoption of our 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 widely adopted in the industrial combustion 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. If federal, state or local regulatory agencies relax 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, or that may be 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.

***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 for some industrial applications has not been safety tested yet.***

There is inherent danger in dealing with the combustion process. There is additional danger in modifying this process in ways that are new and have only been implemented on a limited basis at 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 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 to reduce certain emissions at a lower cost of ownership 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.

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

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 have technology similar to ours, we are aware certain potential competitors are developing 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 Dr. Colin J. Deller, our President, Dr. Donald W. Kendrick, our Chief Technology Officer, or Stephen Sock, our Senior Vice President of Sales, could significantly harm our business. We have no present intention to obtain 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.

***There are many risks we are exposed to by doing business in China.***

We are exposed to risks of doing business in China. As a result, the economic, political, legal and social conditions in China could have a material adverse effect on our business. In addition, the legal system in China has inherent uncertainties that may limit the legal protections available in the event of any claims or disputes that we may have with third parties, including our ability to protect the intellectual property we use in China. As China's legal system is still evolving, the interpretation of many laws, regulations and rules is not always uniform and enforcement of these laws, regulations and rules involve uncertainties, which may limit the remedies available in the event of any claims or disputes with third parties. Some of the other risks related to doing business in China include:

· the Chinese government exerts substantial influence over the manner in which we must conduct our business activities;

· restrictions on currency exchange may limit our ability to receive and use our cash effectively;

· the Chinese government may favor local businesses and make it more difficult for foreign businesses to operate in China on an equal footing, or generally;

· there are uncertainties related to the enforcement of contracts with certain parties; and

· more restrictive rules on foreign investment could adversely affect our ability to expand our operations in China.

As a result of our growing operations in China, these risks could have a material adverse effect on our business, results of operations and financial condition.

Furthermore, the U.S. Foreign Corrupt Practices Act and similar foreign anti-corruption laws generally prohibit companies and their intermediaries from making improper payments or providing anything of value to improperly influence foreign government officials for the purpose of obtaining or retaining business or obtaining an unfair advantage. While we make every attempt to comply with these laws, our operations outside the United States may increase the risk of violating such laws. Violations of these laws may result in severe criminal or civil sanctions, could disrupt our business and result in a material adverse effect on our reputation, business and results of operations or financial condition.

**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 $0.88 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. 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.

***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 our 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 and results of operations.

***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 continue to develop our products, to market our products, 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 a small number of 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 February 28, 2019, we had outstanding options and warrants for the purchase of 2,039,377 and 100,313 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 December 31, 2018, we have reserved an additional 1,496,167 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.

***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 $1,423,000 in 2018. 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 non-accelerated filer 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.

**ITEM 1B: UNRESOLVED STAFF COMMENTS.**

None.

**ITEM 2: PROPERTIES.**

Our principal office is located at 12870 Interurban Avenue South, Seattle, Washington with satellite offices located in Tulsa, Oklahoma and Beijing, China. At our principal office in Seattle, we currently lease approximately 9,425 square feet of office and laboratory space, which is suitable and adequate for our current operations, under a triple net lease

which expires in March 2020. Monthly minimum rent is approximately $12,000. The Company also has triple net operating leases for office space located in Tulsa, Oklahoma and Beijing, China. The term of the lease for the Tulsa location began in September 2016 and will expire in August 2019. The monthly minimum rent for our Tulsa location is approximately $2,100. The term of the lease for the Beijing location began in November 2018 and will expire in November 2020. The monthly minimum rent for our Beijing location is approximately $6,000 (37,000RMB).

**ITEM 3: LEGAL PROCEEDINGS.**

From time to time we may become involved in various lawsuits and legal proceedings which arise in the ordinary course of business. Litigation is subject to inherent uncertainties and an adverse result in any such matter may harm our business. As of the date of this report, we are not a party to any material pending legal proceedings.

**ITEM 4: MINE SAFETY DISCLOSURES.**

Not applicable.

**PART II**

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

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

According to our transfer agent, as of March 11, 2019 we had approximately 141 shareholders of record. These numbers do not include an indeterminate number of holders whose shares are held by brokers in street name. Our stock transfer agent is VStock Transfer, LLC, 18 Lafayette Place, Woodmere, NY 11598.

***Recent Issuances of Unregistered Securities***

On December 31, 2018, we issued 2,500 shares of common stock, having a per share value of $1.44, the closing price of our common stock on October 30, 2018, the date of grant, from our 2013 Consultant Stock Plan to our investor relations firm, Firm IR Group, LLC, for services provided in the three months ended December 31, 2018. We relied on Section 4(a)(2) of the Securities Act of 1933, as amended, and Regulation D promulgated thereunder to issue the stock.

***Equity Compensation Plan Information***

See Item 12, Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters, for information about our equity compensation plans.

**ITEM 6: SELECTED FINANCIAL DATA.**

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

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

*The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the audited consolidated financial statements and related notes included elsewhere in this Annual Report on Form 10-K. In addition to historical information, this discussion and analysis here and throughout this Form 10-K contains forward-looking statements that involve risks, uncertainties and assumptions. Our actual results may differ materially from those anticipated in these forward-looking statements due to a number of factors, including but not limited to, the risks described in the section titled "Risk Factors".*

**OVERVIEW**

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 Duplex technology is currently in field development and we continue to conduct laboratory research with our ECC technology. We have generated nominal revenues from operations to date to meet operating expenses.

We have incurred losses since inception totaling $59,511,000 and we expect to experience operating losses and negative cash flow for the foreseeable future. We have historically financed our operations primarily through issuances of equity securities. Since inception, we have raised approximately $72.0 million in gross proceeds through the sale of our equity securities.

In order to generate meaningful revenues, our technologies must be fully developed, gain market recognition and acceptance and develop a critical level of successful sales and product installations. In addition, management believes that the successful growth and operation of our business is dependent upon our ability to obtain adequate sources of funding through co-development agreements, strategic partnering agreements, or equity or debt financing to adequately support research and development efforts, protect intellectual property, form relationships with strategic partners and provide for working capital and general corporate purposes. There can be no assurance that we will be successful in achieving our long-term plans, or that such plans, if consummated, will result in profitable operations or enable us to continue in the long-term as a going concern.

Our costs include employee salaries and benefits, compensation paid to consultants, materials and supplies for research, costs associated with development activities including materials, sub-contractors, travel and administration, legal and accounting expenses, sales and marketing costs, general and administrative expenses, and other costs associated with an early stage, publicly-traded technology company. We currently have 16 full-time employees and 2 part-time employees. We anticipate increasing the number of employees required to support our activities in the areas of research and development, sales and marketing, and general and administrative functions. We also expect to incur consulting expenses related to technology development, using third party expertise and resources is more cost effective than maintaining full time resources, commensurate with our current levels and we expect to incur increasing expenses to protect our intellectual property.

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

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

We cannot assure that our technologies will be accepted, that we will ever earn revenues sufficient to support our operations, or that we will ever be profitable. Furthermore, we have no committed source of financing and we cannot assure that we will be able to raise money as and when we need it to continue our operations. If we cannot raise funds as and when we need them, we may be required to scale back our development plans by reducing expenditures for employees, consultants, business development and marketing efforts or to otherwise severely curtail, or even to cease, our operations.

**Critical Accounting Policies**

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

Revenue Recognition and Cost of Goods Sold. Effective January 1, 2017, the Company retroactively adopted ASU No. 2014-09 which has as its core principle that an entity should recognize revenue to depict the transfer of promised goods and services to customers in an amount that reflects the consideration to which the entity expects to be entitled in the exchange for those goods or services. The Company reviews each contract to identify contract rights, performance obligations, and transaction prices, including the allocation of prices to separate performance obligations. Revenues and costs of sales are recognized once the goods or services are delivered to the customer's control and performance obligations are satisfied. Typically, the Company's customer contracts include performance obligations related to emission levels or other metrics that are measured at project completion. Since this is the singular performance obligation and cannot be achieved until the air emissions and operational performance have been successfully tested, revenue related to the contracts is recognized upon project completion.

Product Warranties. The Company warrants all installed products against defects in materials and workmanship for a period specified in each contract by replacing failed parts. Accruals for product warranties are based on historical warranty experience and current product performance trends, and are recorded at the time revenue is recognized as a component of cost of sales. The warranty liabilities are reduced by material and labor costs used to replace parts over the warranty period in the periods in which the costs are incurred. The Company periodically assesses the adequacy of its recorded warranty liabilities and adjusts the amounts as necessary and such adjustments could be material in the future if estimates differ significantly from actual warranty expense. The warranty liabilities are included in accrued liabilities in the balance sheets.

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

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

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

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

**Results of Operations**

**Comparison of the Years Ended December 31, 2018 and 2017**

*Revenue, Cost of Goods Sold, and Gross Profit*. The Company reported annual revenue of $530,000 in 2018 earned from installations of Duplex units at two enclosed ground flares and one OTSG, and recognized gross profit for the year of $103,000. The Company reported revenue of $540,000 from installation of Duplex units at three enclosed ground flares and a gross profit of $160,000 in 2017. We anticipate gross margins will normalize in the range of 50%, assuming an increase in volume of sales.

*Operating Expenses*. Operating expenses decreased by $198,000 to $9,674,000 in 2018 compared to $9,872,000 in operating expenses in 2017, a decrease of approximately 2%. The Company decreased its research and development (R&D) expenses by $660,000 to $4,052,000 for 2018 compared to $4,712,000 for 2017. R&D expenses decreased due primarily to a $443,000 decrease both in consulting costs related to the evaluation of our Duplex technology and laboratory related costs, all of which totaled $1,191,000 in 2018 as compared to $1,634,000 in 2017. The field testing decrease was offset in part by a small increase in general R&D costs. General & Administrative (G&A) expenses increased by $462,000 to $5,622,000 for 2018 compared to $5,160,000 for 2017. This increase is due to various activities, including costs of approximately $364,000 incurred in resolving a proposed solicitation of our shareholders and a write-off of approximately $322,000 of capitalized pending patents that were projected to be unnecessarily costly and could be disposed without degrading the quality of other intellectual property.

*Loss from Operations*. Due to the decrease in operating expenses, our loss from operations decreased during 2018 by $141,000 to $9,571,000, compared to $9,712,000 in 2017, a decrease of approximately 1%.

*Net Loss*. Primarily as a result of the decrease in operating expenses, our net loss for 2018 was $9,500,000 as compared to a net loss of $9,680,000 for 2017, resulting in a $180,000 decrease in the net loss or approximately 2%.

**Liquidity and Capital Resources**

At December 31, 2018, our cash and cash equivalent balance totaled $8,949,000 compared to $1,247,000 at December 31, 2017, which we believe will be adequate to support our operations for at least the next 12 months from the date of issuance of this report. Although we are pursuing sales and co-development agreements, there is no assurance that we will be successful in entering into any such agreements or, if we do enter into such agreements, that they will provide

adequate funds to support our operations and to commercialize our technology. To the extent sales and co-development agreement funding is insufficient for these purposes, we may undertake offerings of our securities, debt financing, selling or licensing our developed intellectual or other property, or other alternatives. From inception, the Company's operations have been funded primarily through the sale of its common stock. In order to continue business operations beyond twelve months from the date of issuance of this report, the Company currently anticipates that it will need to raise additional capital. However, there can be no assurances that the Company will be able to secure any such additional financing on acceptable terms and conditions.

At December 31, 2018, our current assets were in excess of current liabilities resulting in working capital of $14,774,000 compared to $263,000 at December 31, 2017. The increase in working capital resulted primarily from a $7,702,000 increase in cash and cash equivalents, a $6,923,000 increase in short-term investments with maturities of twelve months or less, and a decrease of $266,000 in accrued compensation, offset by an increase of $134,000 in prepaid expenses and other assets.

Operating activities for 2018 resulted in cash outflows of $8,384,000 which were due primarily to the loss for the period of $9,500,000, offset by share based compensation from the Company's employee and consultant equity plans of $224,000, services and compensation paid with common stock of $242,000, abandonment of capitalized patent costs of $322,000 and depreciation and amortization expense of $271,000. Operating activities for 2017 resulted in cash outflows of $8,258,000 which were due primarily to the loss for the period of $9,680,000, offset by share-based compensation from the Company's employee and consultant equity plans of $369,000, services and compensation paid with common stock of $342,000, and depreciation and amortization expense of $297,000.

Investing activities for 2018 and 2017 resulted in cash outflows of $7,425,000 and $421,000, respectively. On December 31, 2018, we had investments of $6,923,000 of cash in short-term U.S. Treasury securities. Development of capitalized patents and other intangible assets resulted in cash outflows of $408,000 and $327,000, respectively. Acquisition of fixed assets for 2018 and 2017, resulted in cash outflows of $94,000, in each of 2018 and 2017.

Financing activities for 2018 resulted in $23,511,000 of cash inflows from the underwritten offering of our common stock that we completed on February 27, 2018, which provided gross proceeds of $12.9 million and net cash proceeds of $11.9 million and the private offering of our common stock that we completed on July 20, 2018, which provided gross proceeds of $11.7 million and net cash proceeds of $11.6 million. Financing activities for 2017 resulted in $8,667,000 of cash inflows from the shareholder rights offering and sale of units we completed on January 25, 2017, which provided gross proceeds of $9.6 million and net cash proceeds of $8.7 million.

**Off-Balance Sheet Transactions**

We do not have any off-balance sheet transactions.

**ITEM 7A: QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

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

**ITEM 8: CONSOLIDATED FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**

**ClearSign Combustion Corporation and Subsidiary**

**INDEX TO CONSOLIDATED FINANCIAL STATEMENTS**


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**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Board of Directors and Stockholders of

ClearSign Combustion Corporation

**Opinion on the Financial Statements**

We have audited the accompanying consolidated balance sheets of ClearSign Combustion Corporation and subsidiary (the "Company") as of December 31, 2018 and 2017, and the related consolidated statements of operations, stockholders' equity and cash flows, for each of the two years in the period ended December 31, 2018, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2018, in conformity with accounting principles generally accepted in the United States of America.

**Basis for Opinion**

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures

included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

**Liquidity**

As more fully described in Note 1 to the consolidated financial statements, the Company has incurred significant losses and negative cash flows since its inception. The Company’s continued operations are dependent upon its ability to raise additional funds through equity or debt financing and attain profitable operations.

/s/ Gumbiner Savett Inc.

We have served as the Company's auditor since 2011

Santa Monica, California

March 12, 2019

**ClearSign Combustion Corporation and Subsidiary**

**Consolidated Balance Sheets**

| | December 31, 2018 | 2017 |
|---|---|---|
| ASSETS | | |
| Current Assets: | | |
| Cash and cash equivalents | $8,949,000 | $1,247,000 |
| Short-term investments | 6,923,000 | - |
| Contract assets | 39,000 | 184,000 |
| Prepaid expenses and other assets | 500,000 | 366,000 |
| Total current assets | 16,411,000 | 1,797,000 |
| Fixed assets, net | 457,000 | 498,000 |
| Patents and other intangible assets, net | 1,759,000 | 1,856,000 |
| Other assets | 10,000 | 10,000 |
| Total Assets | $18,637,000 | $4,161,000 |
| LIABILITIES AND STOCKHOLDERS' EQUITY | | |
| Current Liabilities: | | |
| Accounts payable and accrued liabilities | $1,080,000 | $768,000 |
| Current portion of lease liabilities | 216,000 | 159,000 |
| Accrued compensation and taxes | 341,000 | 607,000 |
| Total current liabilities | 1,637,000 | 1,534,000 |
| Long Term Liabilities: | | |
| Long term lease liabilities | 91,000 | 195,000 |
| Total liabilities | 1,728,000 | 1,729,000 |
| Commitments and conttingencies | | |
| Stockholders' Equity: | | |
| Preferred stock, $0.0001 par value, zero shares issued and outstanding | - | - |
| Common stock, $0.0001 par value, 26,697,261 and 15,608,853 shares issued and outstanding at December 31, 2018 and December 31, 2017, respectively | 3,000 | 2,000 |
| Additional paid-in capital | 76,417,000 | 52,441,000 |
| Accumulated deficit | (59,511,000) | (50,011,000) |
| Total stockholders' equity | 16,909,000 | 2,432,000 |
| Total Liabilities and Stockholders' Equity | $18,637,000 | $4,161,000 |

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

**ClearSign Combustion Corporation and Subsidiary**

**Consolidated Statements of Operations**

| | For the Years Ended December 31, | |
|---|---|---|
| | 2018 | 2017 |
| Sales | $530,000 | $540,000 |
| Cost of goods sold | 427,000 | 380,000 |
| Gross profit | 103,000 | 160,000 |
| Operating expenses: | | |
| Research and development | 4,052,000 | 4,712,000 |
| General and administrative | 5,622,000 | 5,160,000 |
| Total operating expenses | 9,674,000 | 9,872,000 |
| Loss from operations | (9,571,000 ) | (9,712,000 ) |
| Other income: | | |
| Interest income | 71,000 | 32,000 |
| Net loss | $(9,500,000 ) | $(9,680,000 ) |
| Net loss per share - basic and fully diluted | $(0.42 ) | $(0.63 ) |
| Weighted average number of shares outstanding - basic and fully diluted | 22,856,210 | 15,421,095 |

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

**ClearSign Combustion Corporation and Subsidiary**

**Consolidated Statements of Stockholders' Equity**

| | Common Stock | | Additional | Accumulated | Total Stockholders' |
|---|---|---|---|---|---|
| | Shares | Amount | Paid-In Capital | Deficit | Equity |
| Balances at January 1, 2017 | 12,983,938 | $ 1,000 | $ 42,574,000 | $ (40,331,000) | $ 2,244,000 |
| Shares issued in rights offering ($3.03 per share) | 2,395,471 | 1,000 | 7,257,000 | - | 7,258,000 |
| Warrants issued in rights offering ($0.97 per warrant) | - | - | 2,324,000 | - | 2,324,000 |
| Issuance costs of rights offering | - | - | (915,000) | - | (915,000) |
| Shares issued in payment of accrued compensation ($3.60 per share) | 136,110 | - | 490,000 | - | 490,000 |
| Shares issued for services ($4.85 per share) | 5,000 | - | 24,000 | - | 24,000 |
| Shares issued for services ($3.50 per share) | 5,000 | | 18,000 | | 18,000 |
| Shares issued for 2017 board services ($3.60 per share) | 83,334 | - | 300,000 | - | 300,000 |
| Share based compensation | - | - | 369,000 | - | 369,000 |
| Net loss | - | - | - | (9,680,000) | (9,680,000) |
| Balances at December 31, 2017 | 15,608,853 | 2,000 | 52,441,000 | (50,011,000) | 2,432,000 |
| Shares issued in stock offerings ($2.25 per share) | 10,963,543 | 1,000 | 24,667,000 | - | 24,668,000 |
| Issuance costs of offerings | - | - | (1,157,000) | - | (1,157,000) |
| Shares issued for services ($3.50 per share) | 7,500 | - | 26,000 | - | 26,000 |
| Shares issued for services ($1.44 per share) | 2,500 | - | 4,000 | - | 4,000 |
| Shares issued for 2018 board service ($1.85 per share) | 114,865 | - | 212,000 | - | 212,000 |
| Share Based Compensation | - | - | 224,000 | - | 224,000 |
| Net loss | - | - | - | (9,500,000) | (9,500,000) |
| Balances at December 31, 2018 | 26,697,261 | $ 3,000 | $ 76,417,000 | $ (59,511,000) | $ 16,909,000 |

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

**ClearSign Combustion Corporation**

**Consolidated Statements of Cash Flows**

| | For the Years Ended December 31, | |
|---|---|---|
| | 2018 | 2017 |
| Cash flows from operating activities: | | |
| Net loss | $ (9,500,000) | $ (9,680,000) |
| Adjustments to reconcile net loss to net cash used in operating activities: | | |
| Common stock issued for services | 242,000 | 342,000 |
| Share based compensation | 224,000 | 369,000 |
| Depreciation and amortization | 271,000 | 297,000 |
| Abandonment and impairment of capitalized patent costs | 322,000 | - |
| Change in operating assets and liabilities: | | |
| Contract assets | 145,000 | (184,000) |
| Accounts receivable | - | 103,000 |
| Prepaid expenses and other assets | (134,000) | 169,000 |
| Accounts payable and accrued liabilities | 312,000 | 13,000 |
| Accrued compensation and taxes | (266,000) | 428,000 |
| Contract liabilities | - | (115,000) |
| Net cash used in operating activities | (8,384,000) | (8,258,000) |
| | | |
| Cash flows from investing activities: | | |
| Acquisition of fixed assets | (94,000) | (94,000) |
| Disbursements for patents and other intangible assets | (408,000) | (327,000) |
| Investment in short-term treasury bills | (6,923,000) | - |
| Net cash used in investing activities | (7,425,000) | (421,000) |
| | | |
| Cash flows from financing activities: | | |
| Proceeds from issuance of common stock and units of common stock and warrants for cash, net of offering costs | 23,511,000 | 8,667,000 |
| Net cash provided by financing activities | 23,511,000 | 8,667,000 |
| | | |
| Net increase (decrease) in cash and cash equivalents | 7,702,000 | (12,000) |
| Cash and cash equivalents, beginning of year | 1,247,000 | 1,259,000 |
| Cash and cash equivalents, end of year | $ 8,949,000 | $ 1,247,000 |

**Supplemental disclosure of non-cash operating activities:**

During the year ended December 31, 2017, the Company issued 136,110 shares of common stock to its officers in satisfaction of $490,000 of accrued compensation at December 31, 2016.

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

**ClearSign Combustion Corporation and Subsidiary**

**Notes to Consolidated Financial Statements**

**Note 1 – Organization and Description of Business**

ClearSign Combustion Corporation (ClearSign or the Company) designs and develops technologies for the purpose of improving key performance characteristics of combustion systems, including emission and operational performance, energy efficiency and overall cost-effectiveness. The Company's primary technologies include its Duplex technology, which achieves very low emissions without the need of external flue gas recirculation, selective catalytic reduction, or higher excess air operation, and its Electrodynamic Combustion Control or ECC technology, which introduces a computer-controlled electric field into the combustion region that may better control gas-phase chemical reactions and improve system performance and cost-effectiveness. The Company is headquartered in Seattle, Washington and was incorporated in the state of Washington in 2008. On July 28, 2017, the Company incorporated a subsidiary, ClearSign Asia Limited, in Hong Kong to represent the Company's business and technological interests throughout Asia. Through ClearSign Asia Limited, the Company has established a Wholly Foreign Owned Enterprise (WFOE) in China – ClearSign Combustion (Beijing) Environmental Technologies Co., LTD.

Unless otherwise stated or the context otherwise requires, the terms ClearSign and the "Company" refers to ClearSign Combustion Corporation and its wholly-owned subsidiary, ClearSign Asia Limited.

Liquidity

The Company's technologies are currently in field development and have generated nominal revenues from operations to date to meet operating expenses. In order to generate meaningful revenues, the technologies must be fully developed, gain market recognition and acceptance, and develop a critical level of successful sales and product installations. The Company has historically financed its operations primarily through issuances of equity securities, including $11.9 million in proceeds, net of offering costs, from a stock offering completed on February 27, 2018 and $11.6 million in proceeds, net of offering costs, from a stock offering completed on July 20, 2018. The Company has incurred losses since its inception totaling $59,511,000 and expects to experience operating losses and negative cash flows for the foreseeable future. Management believes that the successful growth and operation of the Company's business is dependent upon its ability to obtain adequate sources of funding through co-development agreements, strategic partnering agreements, or equity or debt financing to adequately support research and development efforts, protect intellectual property, form relationships with strategic partners, and provide for working capital and general corporate purposes. There can be no assurance that the Company will be successful in achieving its long-term plans as set forth above, or that such plans, if consummated, will result in profitable operations or enable the Company to continue in the long-term as a going concern.

**Note 2 – Summary of Significant Accounting Policies**

Principles of Consolidation

The accompanying consolidated financial statements include the accounts of ClearSign and its subsidiary. Intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates

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

Revenue Recognition and Cost of Sales

The Company recognizes revenue and related cost of goods sold in accordance with FASB ASC 606 *Revenue from Contracts with Customers* (ASC 606). Revenues and cost of goods sold are recognized once the goods or services are delivered to the customer's control and performance obligations are satisfied. Typically, the Company's contracts with customers have performance obligations regarding air emissions and operational performance that are satisfied upon completion of service. Since this is the singular performance obligation and cannot be achieved until the air emissions and operational performance have been successfully tested, revenue related to the contracts is recognized upon project completion.

The Company's contracts generally include progress payments from the customer upon completion of defined milestones. As these payments are received they are offset against accumulated project costs and recorded as either contract assets or contract liabilities. Upon completion of the performance obligations and acceptance by the customer the projects can be recorded as revenue.

The Company's contracts with customers contain no variable considerations or incentives or discounts that would cause revenue to be allocated or adjusted over time. Therefore, no separate methods of evaluating the contracts other than consideration of the price at achievement of the performance objectives was used in satisfying the review requirements of ASC 606.

Contract acquisition costs and practical expedients

For contracts that have a duration of less than one year, the Company follows ASC 606, practical expedients and expenses those costs when incurred; for contracts with a life exceeding one year, the Company records those costs when performance obligations related to the contract are completed. The Company generally expenses sales commissions when earned. The Company records those costs within general and administrative expenses.

Product Warranties

The Company warrants all installed products against defects in materials and workmanship for a period specified in each contract by replacing failed parts. Accruals for product warranties are based on historical warranty experience and current product performance trends, and are recorded at the time revenue is recognized as a component of cost of sales. The warranty liabilities are reduced by material and labor costs used to replace parts over the warranty period in

the periods in which the costs are incurred. The Company periodically assesses the adequacy of its recorded warranty liabilities and adjusts the amounts as necessary, and such adjustments could be material in the future if estimates differ significantly from actual warranty expense. The warranty liabilities are included in accrued liabilities in the balance sheets.

Cash and Cash Equivalents

Highly liquid investments purchased with an original maturity of three months or less are considered cash equivalents. Cash is maintained with a commercial bank where accounts are generally guaranteed by the Federal Deposit Insurance Corporation up to $250,000. The Company's deposits may at times exceed this limit. The Company also maintains a cash balance in China. Accounts at such banks are insured up to $75,000 (500,000RMB). The Company has not experienced losses in such accounts and believes it is not exposed to any significant credit risk on cash and cash equivalents.

Short-Term Investments

Short-term investments consist of U.S. Treasury bills with original maturities of twelve months or less and greater than three months. These short-term investments are classified as held to maturity and are recorded on an amortized cost basis which approximates fair value.

Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable are recorded at the invoiced amount. An allowance for doubtful accounts is established, as necessary, based on past experience and other factors which, in management's judgment, deserve current recognition in estimating bad debts. The determination of the collectability of amounts due from customer accounts requires the Company to make judgments regarding future events and trends. Allowances for doubtful accounts are determined based on assessing the Company's portfolio on an individual customer and on an overall basis. This process consists of a review of historical collection experience, current aging status of the customer accounts, and the financial condition of the Company's customers. Based on a review of these factors, the Company may establish or adjust the allowance for specific customers and the accounts receivable portfolio as a whole.

Fixed Assets and Leases

Fixed assets are recorded at cost. Leases are recorded in accordance with FASB ASC 842 *Leases*. For those leases with a term greater than one year, the Company recognizes on the balance sheet at the time of lease inception or modification a right-of-use asset and a lease liability, initially measured at the present value of the lease payments. Lease costs are recognized in the income statement over the lease term on a straight-line basis. Operating leases with a term of 1 year or less are recognized on a straight line basis over the term. Depreciation is computed using the straight-line method over the estimated useful lives of the respective assets. Leasehold improvements are depreciated over the life of the lease or their useful life, whichever is shorter. All other fixed assets are depreciated over two to four years. Maintenance and repairs are expensed as incurred.

Patents and Trademarks

Patents and trademarks are recorded at cost. Amortization is computed using the straight-line method over the estimated useful lives of the assets once they are awarded.

Impairment of Long-Lived Assets

The Company tests long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable through the estimated undiscounted cash flows expected to result from the use and eventual disposition of the assets. In that event, a loss is recognized based on the amount by which the carrying amount exceeds the fair value of the long-lived assets. Fair value is determined based on the present value

of estimated expected cash flows using a discount rate commensurate with the risks involved, quoted market prices, or appraised values depending upon the nature of the assets. Loss on long-lived assets to be disposed of is determined in a similar manner, except that fair values are reduced for the cost of disposal.

Fair Value of Financial Instruments

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

- Level 1 – Quoted prices in active markets for identical assets or liabilities;
- Level 2 – Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; and
- Level 3 – Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The Company's financial instruments primarily consist of cash and cash equivalents, short-term investments, accounts payable and accrued expenses. As of the balance sheet dates, the estimated fair values of the financial instruments were not materially different from their carrying values as presented on the balance sheets. This is primarily attributable to the short-term maturities of these instruments.

The Company did not identify any other non-recurring assets and liabilities that are required to be presented in the balance sheets at fair value.

Research and Development

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

In 2018, the Company received $44,000 to partially fund specific research and development activity relating to its ECC technology. Since these funds were provided without expectation of reciprocation, except notification of research results, the funds received were offset against the related research and development costs incurred.

Income Taxes

The Company accounts for income taxes using an asset and liability approach which allows for the recognition and measurement of deferred tax assets based upon the likelihood of realization of tax benefits in future years. Under the asset and liability approach, deferred taxes are provided for the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. A valuation allowance is provided for deferred tax assets if it is more likely than not these items will either expire before the Company is able to realize their benefits, or that future deductibility is uncertain. Tax benefits from an uncertain tax position are recognized only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities based on the technical merits of the position. The tax benefits recognized in the consolidated financial statements from such a position are measured based on the largest benefit that has a greater than 50 percent likelihood of being realized upon ultimate resolution.

Stock-Based Compensation

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

Foreign Operations

The accompanying consolidated financial statements as of December 31, 2018 and 2017 include assets amounting to approximately $199,000 and $0, respectively, relating to operations of the Company in China. It is always possible unanticipated events in foreign countries could disrupt the Company's operations.

Foreign Currency

The functional currency of ClearSign Asia Limited is the U.S. dollar. The Company remeasures the transactions denominated in Chinese Yuan at the average exchange rate in effect during the period. At the end of each reporting period, the Company remeasures ClearSign Asia Limited's monetary assets and liabilities to the U.S. dollar using exchange rates in effect at the end of the reporting period. The Company remeasures its non-monetary assets and liabilities at historical exchange rates. The Company records gains and losses related to remeasurement in other income (expense), net in the consolidated statements of operations. Foreign currency exchange gain (losses) has not been significant in any period presented and the Company has not undertaken any hedging transactions related to foreign currency exposure.

Net Loss per Common Share

Basic loss per share is computed by dividing loss available to common stockholders by the weighted-average number of common shares outstanding. Diluted loss per share is computed similar to basic loss per share except that the denominator is increased to include additional common shares available upon exercise of stock options and warrants using the treasury stock method, except for periods for which no common share equivalents are included because their effect would be anti-dilutive. At December 31, 2018 and 2017, potentially dilutive shares outstanding amounted to 3,376,061 and 3,489,644, respectively.

Recently Adopted Standards

In May 2017 the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2017-09 *Scope of Modification Accounting, clarifies Topic 718, Compensation – Stock Compensation*, which requires a company to apply modification accounting to changes in the terms or conditions of a share-based payment award unless all of the following criteria are met: (1) the fair value of the modified award is the same as the fair value of the original award immediately before the modification. The ASU indicates that if the modification does not affect any of the inputs to the valuation technique used to value the award, the entity is not required to estimate the value immediately before and after the modification; (2) the vesting conditions of the modified award are the same as the vesting conditions of the original award immediately before the modification; and (3) the classification of the modified award as an equity instrument or a liability instrument is the same as the classification of the original award immediately before the modification. The ASU is effective for all entities for fiscal years beginning after December 15, 2017, including interim periods within those years. The Company currently does not have any modifications to existing stock compensation agreements and will be able to calculate the impact of the ASU once modifications arise.

Recently Issued Accounting Pronouncements

In June 2018 FASB issued ASU No. 2018-07 *Compensation-Stock Compensation.* The amendments in this Update expand the scope of Topic 718 to include share based payment transactions for acquiring goods and services from nonemployees. An entity should apply the requirements of Topic 718 to nonemployee awards except for specific guidance on inputs to an option pricing model and the attribution of cost (that is, the period of time over which share-based payment awards vest and the pattern of cost recognition over that period). The amendments specify that Topic 718 applies to all share-based payment transactions in which a grantor acquires goods or services to be used or consumed in a grantor's own operations by issuing share-based payment awards. The amendments also clarify that Topic 718 does not apply to share-based payments used to effectively provide (1) financing to the issuer or (2) awards granted in conjunction with selling goods or services to customers as part of a contract accounted for under Topic 606, Revenue from Contracts with Customers. The ASU is effective for all entities for fiscal years beginning after December 15, 2018, including interim periods within those years. The Company currently does not believe this

amendment applies to any of its transactions at this time.

In November 2018 FASB issued ASU 2018-18 *Topic 808 Collaborative Arrangements,* The amendments in this Update make targeted improvements to generally accepted accounting principles (GAAP) for collaborative arrangements as follows: (1) clarify that certain transactions between collaborative arrangement participants should be accounted for as revenue under Topic 606 when the collaborative arrangement participant is a customer in the context of a unit of account. In those situations, all the guidance in Topic 606 should be applied, including recognition, measurement, presentation, and disclosure requirements; (2) add unit-of-account guidance in Topic 808 to align with the guidance in Topic 606 (that is, a distinct good or service) when an entity is assessing whether the collaborative arrangement or a part of the arrangement is within the scope of Topic 606; (3) require that in a transaction with a collaborative arrangement participant that is not directly related to sales to third parties, presenting the transaction together with revenue recognized under Topic 606 is precluded if the collaborative arrangement participant is not a customer. For public business entities, the amendments in this Update are effective for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. The Company currently does not believe this amendment applies.

Management does not believe that any other recently issued, but not yet effective, authoritative guidance, if currently adopted, would have a material impact on the Company’s consolidated financial statement presentation or disclosures.

**Note 3 – Fixed Assets**

Fixed assets are summarized as follows:

| | December 31, 2018 | 2017 |
|---|---|---|
| Machinery and equipment | $853,000 | $801,000 |
| Office furniture and equipment | 186,000 | 167,000 |
| Leasehold improvements | 150,000 | 147,000 |
| Right of use asset-operating leases | 637,000 | 518,000 |
| Accumulated depreciation and amortization | (1,369,000) | (1,135,000) |
| | $457,000 | $498,000 |

The Company has a triple net operating lease for office and laboratory space in Seattle, Washington through March 2020 with rent of approximately $12,000 per month plus triple net operating costs. The Company also has a triple net operating lease for office space in Tulsa, Oklahoma through August 2019 with monthly rent of approximately $2,000 per month plus triple net operating costs. Both leases include lessee renewal options for three years at the then prevailing market rate. The Company has an operating lease for office space in Beijing, China through November 2020 with a monthly rent of approximately $6,000.

Lease costs for the years ended December 31, 2018 and 2017 and other quantitative disclosures are as follows:

| | **For the years ended December 31,** | |
|---|---|---|
| | **2018** | **2017** |
| Lease cost: | | |
| Operating lease cost | $ 218,000 | $ 214,000 |
| Short-term lease cost | - | 47,000 |
| Total lease cost | $ 218,000 | $ 261,000 |
| | | |
| Other information: | | |
| Cash paid for amounts included in the measurement of lease liabilities: | | |
| Operating cash flows from operating leases | | $ 181,000 |
| | | |
| Right-of-use assets obtained in exchange for new operating lease liabilities | | |
| For operating lease: | | |
| Weighted average remaining lease term (in years) | | 1.47 |
| Weighted average discount rate | | 5.56 % |

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Minimum future payments under the Company's leases at December 31, 2018 and their application to the corresponding lease liabilities are as follows:

| | Discounted lease liability payments | Payments due under lease agreements |
|---|---|---|
| 2019 | 216,000 | 221,000 |
| 2020 | 91,000 | 92,000 |
| Total | $ 307,000 | $ 313,000 |

**Note 4 – Patents and Other Intangible Assets**

Patents and other intangible assets are summarized as follows:

| | December 31, 2018 | 2017 |
|---|---|---|
| Patents | | |
| Patents pending | $1,202,000 | $1,167,000 |
| Issued patents | 761,000 | 930,000 |
| | 1,963,000 | 2,097,000 |
| Trademarks | | |
| Trademarks pending | 55,000 | 41,000 |
| Registered trademarks | 23,000 | 23,000 |
| | 78,000 | 64,000 |
| Other | 8,000 | 8,000 |
| | 2,049,000 | 2,169,000 |
| Accumulated amortization | (290,000 ) | (313,000 ) |
| | $1,759,000 | $1,856,000 |

Future amortization expense associated with awarded patents and registered trademarks as of December 31, 2018 is estimated as follows:

| | |
|---|---|
| 2019 | $169,000 |

| | |
|---|---|
| 2020 | 142,000 |
| 2021 | 88,000 |
| 2022 | 62,000 |
| 2023 | 32,000 |
| Thereafter | 7,000 |
| | $500,000 |

In 2018, the Company reassessed its patent portfolio in order to ensure that both the cost-effectiveness and the value created through the intellectual property portfolio were maximized and to focus resources on its most promising patents. Those patents considered to be the most beneficial were retained and those pending patents projected to be unnecessarily costly that could be disposed of without meaningfully degrading the quality of the remaining intellectual property portfolio were abandoned. As a result, during the year ended December 31, 2018, the Company recorded impairment loss of $322,000 of capitalized patents costs. There was no such impairment loss recognized during the year ended December 31, 2017.

**Note 5 – Sales, Contract Assets and Contract Liabilities**

During 2018, the Company recognized revenue totaling $360,000 from completed flare projects, $128,000 of revenue from completion of a once through steam generator (OTSG) project and revenue of $42,000 from a small project. To date, all of the Company's sales have been Duplex products sold in the United States. At December 31, 2018, the Company had contract assets of $39,000 and contract liabilities of $0.

**Note 6 – Product Warranties**

A summary of the Company's warranty liability activity, which is included in accrued liabilities in the accompanying balance sheets as of December 31, 2018 and 2017, is as follows:

| | 2018 | 2017 |
|---|---|---|
| Warranty liability, beginning of year | $181,000 | $213,000 |
| Accruals | 51,000 | 69,000 |
| Payments | (32,000 ) | (114,000) |
| Adjustments and other | 57,000 | 13,000 |
| Warranty liability, end of year | $257,000 | $181,000 |

**Note 7 - Income Taxes**

Through December 31, 2018, the Company incurred net operating losses for federal tax purposes of approximately $55,000,000. The net operating loss carry forwards may be used to reduce taxable income through the years 2028 to 2038. The availability of the Company's net operating loss carry forwards is subject to limitation if there is a change in the ownership of the Company's stock of 50% or more.

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

2018 2017

| | | |
|---|---|---|
| Expected tax benefit at 21% | $(1,970,000) | $(3,291,000) |
| Tax Reform | | 6,210,000 |
| Change in valuation allowance | 1,890,000 | (3,070,000) |
| Other | 80,000 | 151,000 |
| Provision for income taxes | $- | $- |

The net deferred tax asset at December 31, 2018 and 2017 was $11,910,000 and $10,020,000, respectively. In assessing the potential realization of these deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will be realized. The ultimate realization of deferred tax assets is dependent upon the Company attaining future taxable income during the periods in which those temporary differences become deductible. At December 31, 2018 and 2017, management was unable to determine if it is more likely than not that the Company's deferred tax assets will be realized and has therefore recorded an appropriate valuation allowance against deferred tax assets at such dates. Significant components of the deferred tax assets (liabilities), are approximately as follows:

| | 2018 | 2017 |
|---|---|---|
| Net operating loss carry forwards | $11,540,000 | $9,860,000 |
| Accrued liabilities | 280,000 | 210,000 |
| Stock compensation | (50,000) | (90,000) |
| Depreciation | 160,000 | 60,000 |
| Prepaid expenses | (20,000) | (20,000) |
| Other | - | - |
| Deferred tax assets, net | 11,910,000 | 10,020,000 |
| Valuation allowance | (11,910,000) | (10,020,000) |
| Net deferred tax asset | $- | $- |

Although the Company is not under examination, the tax years for 2015 and forward are subject to examination by United States tax authorities.

The Company’s practice is to recognize interest and penalties related to income tax matters in income tax expense. As of December 31, 2018, and 2017, there were no accrued interest or penalties related to uncertain tax positions.

On December 22. 2017. The Tax Cuts and Jobs Act (the “Tax Act”) was signed into law. The Tax Act contains significant changes to corporate taxation, including (i) the reduction of the corporate income tax rate to 21%, (ii) the acceleration of expensing for certain business assets, (iii) the one-time transition tax related to the transition of U.S. international tax from a worldwide tax system to a territorial tax system, (iv) the repeal of the domestic production deduction, (v) additional limitations on the deductibility of interest expense and (vi) expanded limitations on executive compensation.

The key impact of the Tax Act on the Company’s financial statements for the year ended December 31, 2017 was the re-measurement of deferred tax balances to the new corporate tax rate. In order to calculate the effects of the new corporate tax rate on the Company’s deferred tax balances, ASC 740 “Income Taxes” (“ASC 740’) required the re-measurement of the Company’s deferred tax balances as of the enactment date of the Tax Act, based on the rates at which the balances are expected to reverse in the future. The re-measurement of the Company’s deferred tax balances resulted in a net reduction in deferred tax assets of $6.2 million offset with a corresponding adjustment to the valuation allowance.

**Note 8 – Stockholders’ Equity**

Common Stock and Preferred Stock

The Company is authorized to issue 62,500,000 shares of common stock and 2,000,000 shares of preferred stock. Preferences, limitations, voting powers and relative rights of any preferred stock to be issued may be determined by the Company's Board of Directors. The Company has not issued any shares of preferred stock.

In February 2018, the Company completed an offering of common stock whereby 5,750,000 shares of common stock at a price of $2.25 per share were issued and sold for net cash proceeds of approximately $11.9 million.

In July 2018, the Company completed a private equity offering of 5,213,543 shares of common stock at a price of $2.25 per share to ClirSPV, LLC (Investor). Gross proceeds from the offering totaled $11.7 million and net cash proceeds approximated $11.6 million. The Stock Purchase Agreement permitted the Investor to purchase from the Company up to an aggregate 478,854 shares of common stock at a price of $4 per share (Additional Purchase Right). Pursuant to the terms of the Additional Purchase Right, the Investor had the right to purchase shares of common stock from the Company, as the warrants previously issued to the investors by the Company in its January 25, 2017 rights offering were exercised and the warrant shares were issued. As of December 31, 2018, no warrants issued in the rights offering had been exercised and the warrants have since expired unexercised on January 25, 2019. The Additional Purchase Right expired on February 1, 2019. The Additional Purchase Right was considered an equity instrument accounted for as a component of the actual price per common share paid by the Investor in the private offering. For basic earnings per share, the common shares associated with the Additional Purchase Right were treated as contingently issuable shares and were not included in basic earnings per share for the year ended December 31, 2018.

The Stock Purchase Agreement also permits the Investor to participate in future capital raising transactions (Participation Right) on the same terms as other investors participating in such transactions. The Participation Right will expire on December 31, 2023.

In no event may the Participation Right be exercised to the extent it would cause the Investor or any of its affiliates to beneficially own 20% or more of the Company's then outstanding common stock or hold shares with 20% or more of the voting power.

The Company filed a registration statement to register the shares issued in this private offering and shares underlying the Additional Purchase Right. The registration statement was declared effective by the SEC on September 21, 2018.

In January 2017, the Company completed a rights offering and public offering of units comprised of common stock and warrants at a purchase price of $4.00 per unit pursuant to which the Company issued 2,395,471 shares of common stock together with warrants for the purchase of 2,395,471 shares of common stock. The warrants allowed each holder to purchase one share of common stock at an exercise price of $4.00 per share, were non-callable, and were publicly traded on the Nasdaq Capital Market under the symbol "CLIRW" until they expired on January 25, 2019. Gross proceeds from the offering totaled $9.6 million and net cash proceeds approximated $8.7 million. Expenses of the offering approximated $915,000, including dealer-manager and placement agent fees of $575,000 paid to MDB Capital Group LLC (MDB) and MDB's legal fees of $60,000. The net cash proceeds were allocated to the relative fair values of the common stock and warrants on the date of issuance resulting in an allocation of $3.03 per share to the common stock and $0.97 per share to the warrants.

Equity Incentive Plan

The ClearSign Combustion Corporation 2011 Equity Incentive Plan (the Plan) provides for the granting of options to purchase shares of common stock, stock awards to purchase shares at no less than 85% of the value of the shares, and stock bonuses to officers, employees, board members, certain consultants, and advisors. The Compensation Committee of the Board of Directors is authorized to administer the Plan and establish the grant terms, including the grant price, vesting period and exercise date. As of December 31, 2018, the number of shares reserved for issuance under the Plan totaled 2,768,618 shares. The Plan provides for quarterly increases in the available number of authorized shares equal to the lesser of 10% of any new shares issued by the Company during the quarter immediately prior to the adjustment date or such lesser amount as the Board of Directors shall determine. Activity under the Plan is as follows:

| | 2018 | 2017 |
|---|---|---|

| | | |
|---|---|---|
| Reserved but unissued shares under the Plan, beginning of year | 191,656 | 266,884 |
| Increases in the number of authorized shares under the Plan | 1,106,088 | 255,261 |
| Grants of stock options | (224,000 ) | (127,000) |
| Stock option forfeitures | 337,583 | 15,955 |
| Exercise of stock options | - | - |
| Stock grants | (114,865 ) | (219,444) |
| Stock grant forfeitures | - | - |
| Reserved but unissued shares under the Plan, end of year | 1,296,462 | 191,656 |

Stock Options

In 2018, the Company granted from the Plan to certain employees stock options for the purchase of 224,000 shares of stock. The stock options have exercise prices based on the grant date fair values ranging from $1.85 to $2.10 per share with a weighted average of $1.94 per share, a contractual life of 10 years, and vesting over three to four years. As permitted by SAB 107, due to the Company's insufficient history of option activity, management utilized the simplified approach to estimate the expected term of the options, which represents the period of time that options granted are expected to be outstanding. Expected volatility was determined through the Company's historical stock price volatility. The Company estimated the forfeiture rate at the time of grant and will revise it, if necessary, in subsequent periods if actual forfeitures differ from those estimates. The Company recognizes compensation costs only for those equity awards expected to vest. The risk-free rate for periods within the contractual life of the option is based on the U.S. Treasury yield in effect at the time of grant. The Company has never declared or paid dividends and has no plans to do so in the foreseeable future. The following weighted-average assumptions were utilized in the calculation of the fair value of the stock options:

| | | |
|---|---|---|
| Expected life | 6.20 years | |
| Weighted average volatility | 70 | % |
| Forfeiture rate | 15 | % |
| Weighted average risk-free interest rate | 2.74 | % |
| Expected dividend rate | 0 | % |

The fair value of stock options granted, estimated on the date of grant using the Black-Scholes option valuation model, was $236,000. The recognized compensation expense associated with these grants in 2018 was $43,000.

On December 31, 2018 the Company entered into a consulting agreement with its former Chief Executive Officer, Stephen Pirnat, which expires on December 31, 2020. Pursuant to the terms of the consulting agreement, Mr. Pirnat's vested options were extended for a period of two years. The compensation expense associated with the extension of the term of the fully vested options was immaterial.

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

| **2018 Options to Purchase** | **Weighted Average** | **Weighted Average** | **2017 Options to Purchase** | **Weighted Average** | **Weighted Average** |
|---|---|---|---|---|---|

| | Common Stock | Exercise Price | Remaining Contractual Life (in years) | Common Stock | Exercise Price | Remaining Contractual Life (in years) |
|---|---|---|---|---|---|---|
| Outstanding at January 1 | 993,860 | $ 4.81 | 6.94 | 882,815 | $ 4.98 | 7.51 |
| Granted | 224,000 | $ 1.94 | 9.23 | 127,000 | $ 3.69 | 9.48 |
| Exercised | - | - | - | - | - | - |
| Forfeited/Expired/Exchanged | (337,583) | $ 4.19 | - | (15,955) | $ 5.15 | - |
| Outstanding at December 31 | 880,277 | $ 4.32 | 9.04 | 993,860 | $ 4.81 | 6.94 |
| Exercisable at December 31 | 587,962 | $ 5.17 | 6.49 | 754,989 | $ 4.98 | 6.32 |

A summary of the status of the Company's non-vested stock options at December 31 and changes during the year is as follows:

| | 2018 | | 2017 | |
|---|---|---|---|---|
| | **Number of Options** | **Weighted Average Grant Date Fair Value** | **Number of Options** | **Weighted Average Grant Date Fair Value** |
| Non-vested stock options at January 1 | 238,871 | $ 4.27 | 335,283 | $ 5.09 |
| Granted | 224,000 | $ 1.94 | 127,000 | $ 3.74 |
| Vested | (122,647) | $ 4.15 | (207,457) | $ 5.16 |
| Exercised | - | - | - | - |
| Forfeited/Expired/Exchanged | (47,909 ) | $ 3.82 | (15,955 ) | $ 5.15 |
| Non-vested stock options at December 31 | 292,315 | $ 2.61 | 238,871 | $ 4.27 |

The estimated aggregate pretax intrinsic value of the Company's outstanding vested stock options at December 31, 2018 is $0. The intrinsic value is the difference between the Company's common stock price and the option exercise prices multiplied by the number of in-the-money options. This amount changes based on the fair value of the Company's common stock.

At December 31, 2018, there was $377,000 of total unrecognized compensation cost related to non-vested stock option-based compensation arrangements granted under the Plan. That cost is expected to be recognized in future years as follows:

| | |
|---|---|
| 2019 | 184,000 |
| 2020 | 119,000 |
| 2021 | 63,000 |
| 2022 | 11,000 |
| | $377,000 |

The recognized compensation cost associated with the Plan is as follows:

| | 2018 | 2017 |
|---|---|---|
| Research and development | $145,000 | $119,000 |
| General and administrative | 79,000 | 250,000 |
| Effect on net loss | $224,000 | $369,000 |
| Effect on net loss per share | $0.01 | $0.02 |

Stock Grants

In May 2018, the Company authorized shares of common stock to be issued under the Plan to its non-executive directors in accordance with board agreements. The shares were earned quarterly for service in 2018. The Company recognized $212,000, represented by 114,865 shares, in general and administrative expense through December 31, 2018.

In February 2017, the Company granted 136,110 shares of common stock under the Plan to its six officers as payment for bonuses that were accrued at December 31, 2016. The per share fair value of the stock at the time of grant was $3.60 for a total value of $490,000 which the Company had recognized as bonuses in 2016. The common stock was subject to repurchase rights by the Company at $0.0001 per share through February 10, 2018.

In 2017, the Company issued 83,334 shares of common stock under the Plan to its three non-executive directors for 2018 compensation in accordance with agreements entered into with each director. The common stock was subject to repurchase rights by the Company at $0.0001 per share through February 10, 2018 upon the termination of the individual's services as a director or other circumstances as set forth in the award agreements. The fair value of the stock at the time of grant was $3.60 per share for a total value of $300,000, which the Company recognized in general and administrative expense in 2017.

Consultant Stock Plan

The 2013 Consultant Stock Plan (the Consultant Plan) provides for the granting of shares of common stock to consultants who provide services related to capital raising, investor relations, and making a market in or promoting the Company's securities. The Company's officers, employees, and board members are not entitled to receive grants from the Consultant Plan. The Compensation Committee of the Board of Directors is authorized to administer the Consultant Plan and establish the grant terms. The number of shares reserved for issuance under the Consultant Plan on December 31, 2018 totaled 199,705 shares. The Consultant Plan provides for quarterly increases in the available number of authorized shares equal to the lesser of 1% of any new shares issued by the Company during the quarter immediately prior to the adjustment date or such lesser amount as the Board of Directors shall determine.

The Company granted 7,500 and 10,000 shares of common stock in 2018 and 2017, respectively, under the Consultant Plan to a consultant for services for the period from January 1, 2017 to September 30, 2018. The fair value of the stock at the time of grant was $3.50 per share for a total value of $26,000 and $35,000 in 2018 and 2017, respectively, which the Company recognizes in general and administrative expense on a pro-rated quarterly basis. The Company also granted 10,000 shares of common stock to a second consultant under the Consultant Plan for services performed and to be performed during the period from August 13, 2018 to August 31, 2019. The fair value of the stock at the time of grant was $1.44 per share for a total value of $14,000, for which the Company recognized $4,000 for 2,500 shares in general and administrative expense on a pro-rated quarterly basis in the fourth quarter of 2018. The Consultant Plan expense for 2018 and 2017 was $30,000 and $42,000, respectively.

Activity under the Consultant Plan is as follows:

| | **2018** | **2017** |
|---|---|---|
| Reserved but unissued shares under the Consultant Plan at January 1 | 99,159 | 83,633 |
| Increases in the number of authorized shares under the Consultant Plan | 110,546 | 25,526 |
| Stock grants | (10,000 ) | (10,000) |
| Reserved but unissued shares under the Consultant Plan at Period End | 199,705 | 99,159 |

Warrants

In conjunction with the January 2017 rights offering, the Company issued warrants for the purchase of 2,395,471 shares of common stock at $4.00 per share. The warrants expired on January 25, 2019.

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

| | 2018 | | 2017 | |
|---|---|---|---|---|
| | Warrants | **Weighted Average Exercise Price** | Warrants | **Weighted Average Exercise Price** |
| Outstanding at January 1 | 2,495,784 | $ 3.98 | 445,313 | $ 4.65 |
| Granted | - | - | 2,395,471 | $ 4.00 |
| Exercised | - | - | - | - |
| Forfeited/Expired | - | - | (345,000 ) | $ 5.00 |
| Outstanding at Period End | 2,495,784 | $ 3.98 | 2,495,784 | $ 3.98 |

The following table summarizes the number of warrants, the weighted average exercise price, and weighted average life (in years) by price for both total outstanding warrants and total exercisable warrants at December 31, 2018:

| | Total Outstanding Warrants | | |
|---|---|---|---|
| **Exercise Price** | Warrants | Wtd. Avg. Exercise Price | Remaining Life (in years) |
| $1.80 | 80,000 | $ 1.80 | 2.13 |
| $4.00 | 2,395,471 | $ 4.00 | 0.07 |
| $10.00 | 20,313 | $ 10.00 | 0.18 |
| | 2,495,784 | $ 3.98 | |

The intrinsic value of the outstanding warrants was $0 at December 31, 2018.

**Note 9 – Retirement Plan**

The Company has a defined contribution retirement plan covering all of its employees whereby the Company matches employee contributions up to 3% of each employee's 2018 and 2017 earnings. The Company's matching contribution expense totaled $85,000 and $86,000 in 2018 and 2017, respectively.

**Note 10 – Related Party Transactions**

In connection with the January 2017 rights offering, the Company paid the dealer-manager and placement agent, MDB Capital Group LLC, fees of $575,000 and legal fees and other costs of $60,000. MDB and its chief executive officer were significant owners of the Company's common stock at the time of this offering.

In November 2018, one of the Company's shareholders, who is also a co-founder and member of MDB Capital Group LLC, filed a draft solicitation statement with the SEC seeking the support of the Company's shareholders in making a demand that the Company call a special meeting of its shareholders. In January 2019, the Company entered into a Cooperation Agreement with this shareholder pursuant to which the shareholder withdrew his request to hold a special meeting. The Cooperation Agreement among other things, includes certain standstill provisions. The term of the Cooperation agreement will continue until the earlier of (i) the day immediately following the date of 2020 annual meeting or (ii) December 31, 2020. Pursuant to the terms of the Cooperation Agreement the Company reimbursed the shareholder $40,000 for expenses, which is included in accounts payable and accrued liabilities at December 31, 2018. Total costs incurred in connection with this matter, including the amount reimbursed to the shareholder, totaled approximately $364,000 and is included in general and administrative expenses for the year ended December 31, 2018.

**Note 11 – Commitments and Contingencies**

Employment Contract

On January 28, 2019, the Company entered into an employment contract with its President Dr. Colin 'Jim' Deller as described in Note 13.

Litigation

From time to time the Company may become involved in various lawsuits and legal proceedings which arise in the ordinary course of business. Litigation is subject to inherent uncertainties and an adverse result in any such matter may harm the Company's business. As of the date of this report, we are not a party to any material pending legal proceedings.

**Note 12 – Quarterly Results (unaudited)**

Quarterly results for the years ended December 31, 2018 and 2017 are as follows:

| | First Quarter | Second Quarter | Third Quarter | Fourth Quarter |
|---|---|---|---|---|
| For the year ended December 31, 2018 | | | | |
| Revenue | $530,000 | $- | $- | $- |
| Gross Profit (Loss) | $135,000 | $(20,000) | $(9,000) | $(3,000) |
| Operating Expense | $2,413,000 | $2,370,000 | $2,306,000 | $2,585,000 |
| Net Loss | $(2,278,000) | $(2,389,000) | $(2,292,000) | $(2,541,000) |
| Net Loss per share - basic and fully diluted | $(0.13) | $(0.11) | $(0.09) | $(0.10) |
| | | | | |
| For the year ended December 31, 2017 | | | | |
| Revenue | $360,000 | $- | $- | $180,000 |
| Gross Profit (Loss) | $109,000 | $- | $(15,000) | $66,000 |
| Operating Expense | $2,502,000 | $2,251,000 | $2,460,000 | $2,659,000 |
| Net Loss | $(2,379,000) | $(2,236,000) | $(2,472,000) | $(2,593,000) |
| Net Loss per share - basic and fully diluted | $(0.16) | $(0.17) | $(0.16) | $(0.17) |

**Note 13 – Subsequent Event**

On January 28, 2019 (the "Effective Date"), the Company and Colin James Deller entered into an employment agreement (the "Agreement") pursuant to which the Company will employ Dr. Deller as its President until April 1, 2019, at which time Dr. Deller will become the Company's Chief Executive Officer. Pursuant to the Agreement, the Company will pay Dr. Deller an annual salary of $350,000. As an inducement to accept employment with the Company, Dr. Deller was also granted an option to purchase 400,000 shares of the Company's common stock at an exercise price of $1.16 per share and an option to purchase 200,000 shares of the Company's common stock at an exercise price of $2.25 per share. Each option has a term of 10 years and will vest as follows: the right to purchase

one-third of the shares of common stock subject to the option vested on the Effective Date; the right to purchase one-third of the shares will vest on the first anniversary of the grant date; and the right to purchase one-third of the shares will vest on the second anniversary of the grant date. The Company has agreed to pay certain expenses, not to exceed the sum of $100,000, related to Dr. Deller's move from Tulsa, Oklahoma to Seattle, Washington, including reasonable expenses related to the sale of his home in Tulsa. As a temporary adjustment for the difference in the cost of living between Tulsa and Seattle (the "Relocation Adjustment"), for a period of four years (the "Payment Period") from the Effective Date, the Company has also agreed to pay up to $6,000 a month to Dr. Deller for expenses related to temporary housing and travel to and from Tulsa to Seattle. If Dr. Deller purchases a home in the Seattle area, the Relocation Adjustment will continue to be paid through the expiration of the Payment Period, although the Relocation Adjustment may be adjusted or terminated upon mutual agreement of Dr. Deller and the Company. The Agreement may be terminated by the Company for cause, as defined in the Agreement, due to Dr. Deller's death or disability, upon 30 days' notice to Dr. Deller or as a result of a change in control, as defined in the Agreement. With the exception of a termination for cause, if Dr. Deller's employment is terminated by the Company, aside from accrued but unpaid salary, bonus (if any) and business expenses, Dr. Deller will receive the balance of the unpaid Relocation Adjustment and six months of his annual salary.

On January 4, 2019, the Company's Chief Operating Officer, Dr. Roberto Ruiz, announced his retirement. Dr. Ruiz also entered into a two year consulting contract with the Company in order to ensure a smooth transition of his projects.

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

None.

**ITEM 9A: CONTROLS AND PROCEDURES**

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

**Report on Controls and Procedures**

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

**Report on Internal Control over Financial Reporting**

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

- pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of our assets;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of management and our directors; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

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

Our interim chief executive officer and our interim chief financial officer assessed the effectiveness of our internal control over financial reporting as of December 31, 2018. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control—Integrated Framework.*

Based on our assessment, our interim chief executive officer and our interim chief financial officer determined that, as of December 31, 2018, our internal control over financial reporting is effective.

**Changes in Internal Control over Financial Reporting**

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

**ITEM 9B: OTHER INFORMATION**

None.

**PART III**

**Item 10: Directors, Executive Officers and corporate governance**

The information concerning the Company's Code of Business Conduct and Ethics is set forth below in this Item 10. All other information required by this item is incorporated by reference to the Company's Proxy Statement for the 2019 Annual Meeting of Shareholders to be filed with the Securities and Exchange Commission ("SEC") within 120 days of the fiscal year ended December 31, 2018.

**Code of Business Conduct and Ethics**

The Board of Directors has adopted a code of business conduct and ethics (the Code) designed, in part, to deter wrongdoing and to promote honest and ethical conduct, including the ethical handling of actual or apparent conflicts of interest between personal and professional relationships, full, fair, accurate, timely and understandable disclosure in reports and documents that the Company files with or submits to the SEC and in the Company's other public communications, compliance with applicable governmental laws, rules and regulations, the prompt internal reporting

of Code violations to an appropriate person or persons, as identified in the Code and accountability for adherence to the Code. The Code applies to all directors, executive officers and employees of the Company. The Code may be found on the Company's website at www.clearsign.com.

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

**Item 11: Executive Compensation**

The information required by this item is incorporated by reference to the Company's Proxy Statement for the 2019 Annual Meeting of Shareholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2018.

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

The information concerning the Company's equity compensation plan is set forth below in this Item 12. All other information required by this item is incorporated by reference to the Company's Proxy Statement for the 2019 Annual Meeting of Shareholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2018.

**Equity Compensation Plan Information**

The table below provides information as of December 31, 2018 regarding the compensation plans (2011 Equity Incentive Plan and 2013 Consultant Stock Plan) under which equity securities of ClearSign are authorized for issuance.

| Plan Category | Number of securities to be issued upon exercise of outstanding options, warrants and rights (a) | Weighted-average exercise price of outstanding options, warrants and rights (b) | Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (c) |
|---|---|---|---|
| Equity compensation plans approved by security holders | 3,376,061 | $ 4.07 | 1,496,167 |
| Equity compensation plans not not approved by security holders | - | - | - |
| | 3,376,061 | $ 4.07 | 1,496,167 |

The above table excludes vested stock grants of 591,879 and 53,250 shares under the 2011 Equity Incentive Plan and the 2013 Consultant Stock Plan, respectively.

In January 2011, our shareholders approved the ClearSign Combustion Corporation 2011 Equity Incentive Plan that provides for the granting of options to purchase shares of common stock, stock awards to purchase shares at no less than 85% of the value of the shares, and stock bonuses to officers, employees, board members, certain consultants, and advisors. The Compensation Committee of the Board of Directors is authorized to administer the Plan and establish the grant terms, including the grant price, vesting period and exercise date. The Plan provides for quarterly increases in the available number of authorized shares equal to the lesser of 10% of any new shares issued by the Company during the quarter immediately prior to the adjustment date or such lesser amount as the Board of Directors shall determine.

In May 2013, the shareholders approved the 2013 Consultant Stock Plan that provides for the granting of shares of common stock to consultants who provide services related to capital raising, investor relations, and making a market in or promoting the Company's securities. The Company's officers, employees, and board members are not entitled to receive grants from the Consultant Plan. The Compensation Committee of the Board of Directors is authorized to administer the Consultant Plan and establish the grant terms. The Consultant Plan provides for quarterly increases in the available number of authorized shares equal to the lesser of 1% of any new shares issued by the Company during the quarter immediately prior to the adjustment date or such lesser amount as the Board of Directors shall determine.

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

The information required by this item is incorporated by reference to the Company's Proxy Statement for the 2019 Annual Meeting of Shareholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2018.

**ITEM 14: PRINCIPAL ACCOUNTANT FEES AND SERVICES**

The information required by this item is incorporated by reference to the Company's Proxy Statement for the 2019 Annual Meeting of Shareholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2018.

**PART IV**

**Item 15. Exhibits, Financial Statement Schedules**

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

The financial statements filed as part of this report are listed and indexed in the Index to Consolidated Financial Statements included at Item 8. Financial statement schedules have been omitted because they are not applicable, or the required information has been included elsewhere in this report.

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

Not applicable.

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

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

| **Exhibit No.** | **Description of Document** |
|---|---|
| 3.1 | Articles of Incorporation of ClearSign Combustion Corporation, amended on February 2, 2011 (1) |
| 3.1.1 | Articles of Amendment to Articles of Incorporation of ClearSign Combustion Corporation filed on December 22, 2011 (1) |
| 3.2 | Bylaws of ClearSign Combustion Corporation (1) |
| 4.1 | Form of Common Stock Certificate (5) |
| 4.2 | Warrant issued to Brean Capital LLC on March 5, 2014 (3) |
| 4.3 | Warrant Agent Agreement and Form of Warrant Certificate (7) |
| 10.1 | Office Lease Agreement (1) |
| 10.2 | Form of Confidentiality and Proprietary Rights Agreement (5) |
| 10.3 | ClearSign Combustion Corporation 2011 Equity Incentive Plan (1) |
| 10.4 | Form of Director and Officer Indemnification Agreement (1)+ |
| 10.5 | Employment Agreement dated February 3, 2015 between the registrant and Stephen E. Pirnat (4)+ |
| 10.6 | ClearSign Combustion Corporation 2013 Consultant Stock Plan (2) |
| 10.7 | First Amendment to Office Lease Agreement dated December 17, 2013 (3) |

| | |
|---|---|
| 10.8 | Dealer Manager and Placement Agent Agreement date December 7, 2016 (6) |
| 10.9 | Second Amendment to Office Lease Agreement dated September 29, 2016* |
| 10.10 | Separation Agreement and General Release dated May 11, 2017 between the registrant and James N. Harmon (8)+ |
| 10.11 | Consulting Agreement dated May 11, 2017 between the registrant and James N. Harmon (8) |
| 10.12 | Confidential Separation Agreement and General Release dated September 7, 2017 between the registrant and Andrew U. Lee (9)+ |
| 10.13 | Consulting Agreement dated September 7, 2017 between the registrant and Andrew U. Lee (9) |
| 10.14 | Confidential Separation Agreement and General Release dated December 31, 2018 between the registrant and Stephen Pirnat (10)+ |
| 10.15 | Consulting Agreement dated December 31, 2018 between the registrant and Stephen Pirnat (10)+ |
| 10.16 | Confidential Separation Agreement and General Release dated January 4, 2019 between the registrant and Roberto Ruiz (11)+ |
| 10.17 | Consulting Agreement dated January 4, 2019 between the registrant and Roberto Ruiz (11)+ |
| 10.18 | Cooperation Agreement dated January 8, 2019 between the registrant and Anthony DiGiandomenico and his affiliates (12) |
| 10.19 | Cooperation Agreement dated January 8, 2019 between the registrant, MDB Capital Group LLC and Christopher Marlett (12) |
| 10.20 | Employment Agreement dated January 28, 2019 between the registrant and Colin James Deller (13)+ |
| 21 | Subsidiaries of the registrant* |

| | |
|---|---|
| 23.1 | Consent of Gumbiner Savett Inc., Independent Registered Public Accounting Firm* |
| 31.1 | Certification of the Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002* |
| 31.2 | Certification of the Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002* |
| 32.1 | Certification of the Principal Executive Officer and Principal Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002** |
| 101.INS | XBRL Instance Document* |
| 101.SCH | XBRL Taxonomy Extension Schema* |
| 101.CAL | XBRL Taxonomy Extension Calculation Linkbase* |
| 101.DEF | XBRL Taxonomy Extension Definition Linkbase* |
| 101.LAB | XBRL Taxonomy Extension Label Linkbase* |
| 101.PRE | XBRL Taxonomy Extension Presentation Linkbase* |

*Filed herewith.

**Furnished herewith.

+Agreement with management or compensatory plan or arrangement

(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 March 11, 2014.

(4) Incorporated by reference from the registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on February 5, 2015.

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

(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/A filed with the Securities and Exchange Commission on January 24, 2018.

(8) Incorporated by reference from the registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on May 11, 2018.

(9) Incorporated by reference from the registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on September 8, 2018.

(10) Incorporated by reference from the registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on January 7, 2019.

(11) Incorporated by reference from the registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on January 10, 2019.

(12) Incorporated by reference from the registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on January 10, 2019.

(13)

Incorporated by reference from the registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on January 30, 2019.

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**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

**CLEARSIGN COMBUSTION CORPORATION**

Date: March 12, 2019 By: /s/ Robert T. Hoffman
Robert T. Hoffman
Interim Chief Executive Officer

Date: March 12, 2019 By: /s/ Brian G. Fike
Brian G. Fike
Interim Chief Financial Officer

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

Date: March 12, 2019 /s/ Robert T. Hoffman
Robert T. Hoffman
Interim Chief Executive Officer and Director
(Principal Executive Officer)

Date: March 12, 2019 /s/ Brian G. Fike
Brian G. Fike
Interim Chief Financial Officer
(Principal Financial and Accounting Officer)

Date: March 12, 2019 /s/ Lon E. Bell
Lon E. Bell, Ph.D., Director

Date: March 12, 2019 /s/ James M. Simmons
James M. Simmons, Director

Date: March 12, 2019 /s/ Susanne L. Meline
Susanne L. Meline, Director

Date: March 12, 2019 /s/ Bruce A. Pate
Bruce A. Pate, Director

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