TECOGEN INC.
Form 10-K
March 30, 2016

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549
FORM 10-K

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

For the fiscal year ended December 31, 2015
or

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

Commission file number 333-178697
TECOGEN INC.
(Exact name of Registrant as specified in its charter)

Delaware	04-3536131
(State or Other Jurisdiction of Incorporation or Organization)	(IRS Employer Identification No.)
45 First Avenue	
Waltham, Massachusetts	02451
(Address of Principal Executive Offices)	(Zip Code)

Registrant's Telephone Number, Including Area Code: (781) 622-1120
Securities registered pursuant to Section 12(b) of the Exchange Act:

Title of each class	Name of each exchange on which registered
Common Stock, $0.001 par value	NASDAQ Capital Market

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.Yes ¨ No ý
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Securities Act. Yes ¨ No ý
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 ý No ¨
Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ý 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 the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or an amendment to this Form 10-K. ¨
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer", "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one): Large accelerated filer o Accelerated filer o Non –accelerated filer o Smaller reporting company x
Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).Yes ¨ No ý
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. $24,972,026.

As of March 29, 2016, the registrant's shares of common stock outstanding were: 18,478,990.

DOCUMENTS INCORPORATED BY REFERENCE

The registrant intends to file a definitive proxy statement pursuant to Regulation 14A within 120 days following the fiscal year ended December 31, 2015. Portions of such proxy statement are incorporated by reference into Part III of this Form 10-K.

CAUTIONARY NOTE CONCERNING FORWARD-LOOKING STATEMENTS

THIS ANNUAL REPORT ON FORM 10-K CONTAINS FORWARD-LOOKING STATEMENTS WITHIN THE MEANING OF THE PRIVATE SECURITIES LITIGATION REFORM ACT OF 1995 AND OTHER FEDERAL SECURITIES LAWS. THESE FORWARD-LOOKING STATEMENTS ARE BASED ON OUR PRESENT INTENT, BELIEFS OR EXPECTATIONS, AND ARE NOT GUARANTEED TO OCCUR AND MAY NOT OCCUR. ACTUAL RESULTS MAY DIFFER MATERIALLY FROM THOSE CONTAINED IN OR IMPLIED BY OUR FORWARD-LOOKING STATEMENTS AS A RESULT OF VARIOUS FACTORS.

WE GENERALLY IDENTIFY FORWARD-LOOKING STATEMENTS BY TERMINOLOGY SUCH AS “MAY,” “WILL,” “SHOULD,” “EXPECTS,” “PLANS,” “ANTICIPATES,” “COULD,” “INTENDS,” “TARGET,” “PROJECTS,” “CONTEMPLATES,” “BELIEVES,” “ESTIMATES,” “PREDICTS,” “POTENTIAL” OR “CONTINUE” OR THE NEGATIV OF THESE TERMS OR OTHER SIMILAR WORDS. THESE STATEMENTS ARE ONLY PREDICTIONS. THE OUTCOME OF THE EVENTS DESCRIBED IN THESE FORWARD-LOOKING STATEMENTS IS SUBJECT TO KNOWN AND UNKNOWN RISKS, UNCERTAINTIES AND OTHER FACTORS THAT MAY CAUSE OUR, OUR CUSTOMERS’ OR OUR INDUSTRY’S ACTUAL RESULTS, LEVELS OF ACTIVITY, PERFORMANCE OR ACHIEVEMENTS EXPRESSED OR IMPLIED BY THESE FORWARD-LOOKING STATEMENTS TO DIFFER.

THIS REPORT ALSO CONTAINS MARKET DATA RELATED TO OUR BUSINESS AND INDUSTRY. THESE MARKET DATA INCLUDE PROJECTIONS THAT ARE BASED ON A NUMBER OF ASSUMPTIONS. IF THESE ASSUMPTIONS TURN OUT TO BE INCORRECT, ACTUAL RESULTS MAY DIFFER FROM THE PROJECTIONS BASED ON THESE ASSUMPTIONS. AS A RESULT, OUR MARKETS MAY NOT GROW AT THE RATES PROJECTED BY THESE DATA, OR AT ALL. THE FAILURE OF THESE MARKETS TO GROW AT THESE PROJECTED RATES MAY HAVE A MATERIAL ADVERSE EFFECT ON OUR BUSINESS, RESULTS OF OPERATIONS, FINANCIAL CONDITION AND THE MARKET PRICE OF OUR COMMON STOCK.

SEE “ITEM 1A. RISK FACTORS,” “ITEM 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS” AND “ITEM 1. BUSINESS,” AS WELL AS OTHER SECTIONS IN THIS REPORT, THAT DISCUSS SOME OF THE FACTORS THAT COULD CONTRIBUTE TO THESE DIFFERENCES. THE FORWARD-LOOKING STATEMENTS MADE IN THIS ANNUAL REPORT ON FORM 10-K RELATE ONLY TO EVENTS AS OF THE DATE OF WHICH THE STATEMENTS ARE MADE. EXCEPT AS REQUIRED BY LAW, WE UNDERTAKE NO OBLIGATION TO UPDATE OR RELEASE ANY FORWARD-LOOKING STATEMENTS AS A RESULT OF NEW INFORMATION, FUTURE EVENTS OR OTHERWISE.

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FOR THE FISCAL YEAR ENDED DECEMBER 31, 2015
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Item 1. Business

Overview

Tecogen® Inc. ("Tecogen" or the "Company") designs, manufactures, markets, and maintains high efficiency, ultra-clean cogeneration products including natural gas engine-driven combined heat and power, air conditioning systems, and water heaters for residential, commercial, recreational and industrial use. The company is known for cost efficient, environmentally friendly and reliable products for distributed power generation that, through patented technology, nearly eliminate criteria pollutants and significantly reduce a customer's carbon footprint.

Tecogen's natural gas powered cogeneration systems (also known as combined heat and power or "CHP") are efficient because they drive electric generators or compressors, which reduce the amount of electricity purchased from the utility while recovering the engine's waste heat for water heating, space heating, and/or air conditioning at the customer's building.

Tecogen manufactures three types of CHP products:

•Cogeneration units that supply electricity and hot water including the InVerde® 100, InVerde e+®, CM-75 and CM-60;
•Chillers that provide air-conditioning and hot water marketed under the TECOCHILL® brand name; and
•Ilios® branded high-efficiency water heaters.

All of these are standardized, modular, CHP products that reduce energy costs, carbon emissions, and dependence on the electric grid. Tecogen's products allow customers to produce power on-site in parallel with the electric grid, or stand alone when no utility grid is available via inverter-based black-start capability. Because our CHP systems also produce clean, usable heat energy, they provide economic advantages to customers who can benefit from the use of hot water, chilled water, air conditioning and heating.

Traditional customers for our cogeneration and chiller systems include hospitals and nursing homes, schools and universities, health clubs and spas, hotels and motels, office and retail buildings, food and beverage processors, multi-unit residential buildings, laundries, ice rinks, swimming pools, factories, municipal buildings, and military installations; however, the economic feasibility of using our systems is not limited to these customer types. Market drivers include the price of natural gas, local electricity rates, environmental regulations, and governmental energy policies, as well as customers' desire to become more environmentally responsible.

Through our factory service centers in California, Connecticut, Massachusetts, Michigan, New Jersey, and New York our specialized technical staff maintain our products via long-term service contracts. The Company has shipped over 2,300 units, some of which have been operating for almost 25 years.

Our CHP technology uses low-cost, mass-produced engines, which we modify to run on natural gas. In the case of our mainstay cogeneration and chiller products, the engines have proven to be cost-effective and reliable. In 2009, in response to the changing regulatory requirements for stationary engines, our research team developed an economically feasible process for removing air pollutants from the engine exhaust. This technology's U.S. and foreign patents were granted beginning in October 2013 with other domestic and foreign patents granted or applications pending. Branded Ultera™, the ultra clean emissions technology, repositions our engine driven products in the marketplace, making them comparable environmentally with other technologies such as fuel cells, but at a much lower cost and greater efficiency. Because of this breakthrough design for emission control, our natural gas-fueled CHP modules fitted with the patented Ultera control technology are certified by the California Air Resources Board ("CARB") as meeting its stringent 2007 emissions requirements, the same emissions standard used to certify fuel cells and the same emissions levels as a state-of-the-art central power plant. We now offer our Ultera emissions control technology as an option on all our products or as a stand-alone application for the retrofitting of other rich-burn spark-ignited reciprocating internal combustion engines.

Tecogen products are designed as compact modular units that are intended to be installed in multiples when utilized in larger CHP plants. The majority of our CHP modules are installed in multi-unit sites with applications ranging up to 12 units. This approach has significant advantages over utilizing single larger units, allowing building placement in constrained urban settings and redundancy to mitigate service outages. Redundancy is particularly relevant in regions where the electric utility has formulated tariff structures that include high "peak demand" charges. Such tariffs are

common in many areas of the country, and are applied by such utilities as Southern California Edison, Pacific Gas and Electric, Consolidated Edison of New York, and National Grid of Massachusetts. Because these tariffs are assessed based on customers' peak monthly demand charge over a very short interval, typically only 15 minutes, a brief service outage for a system comprised of a single unit can create a high demand charge and therefore be highly detrimental to the monthly savings of the system. For multiple unit sites, a full system outage that will create a high demand charge is less likely, so consequently, these customers have a greater probability of capturing peak demand savings.

Our CHP products are sold directly to customers by our in-house marketing team and by established sales agents and representatives, including American DG Energy Inc. and Eurosite Power Ltd. which are affiliated companies.

In 2009, we created a subsidiary, Ilios Dynamics, to develop and distribute a line of high-efficiency heating products, starting with a water heater. We believe that these products are much more efficient than the conventional boilers traditionally used in commercial buildings and industrial processes (see “Our Products” below). As of the date of this filing, we own a 65.0% interest in Ilios Dynamics.

In December 2015, the Company launched a joint venture in conjunction with a group of European strategic investors to develop the Ultera emissions control technology for the automotive market. Known as Ultra Emissions Technologies Limited, or ULTRATEK for short, Tecogen contributed an exclusive license for use of Ultera in the automotive space to the joint venture while the strategic partners have committed to financing the initial research, development and testing of a viable product. A more in depth discussion of the ULTRATEK opportunity is included in the “Our Products” Ultera discussion section below.

Company History

Tecogen was formed in the early 1960s as the Research and Development New Business Center of Thermo Electron Corporation, which is now Thermo Fisher Scientific Inc. For the next 20 years, this group performed fundamental and applied research in many energy-related fields to develop new technologies. In 1982, the Research and Development group released its first major product, a 60-kilowatt (kW) cogenerator. In the late 1980s and early 1990s, air-conditioning and refrigeration products using the same gas engine-driven technology were introduced. In 1987, Tecogen was spun out as a separate entity by Thermo Electron and, in 1992, became a division of the newly formed Thermo Power Corporation.

In 2000, Thermo Power Corporation was dissolved, and Tecogen was sold to a group of private investors including Thermo Electron’s original founders, Dr. George N. Hatsopoulos and John N. Hatsopoulos. Tecogen Inc. was incorporated in the State of Delaware on September 15, 2000. Our business and registered office is located at 45 First Avenue, Waltham, Massachusetts, 02451. Our telephone number is 781-466-6400.

Our Products

We manufacture natural gas engine-driven cogeneration systems, heat pumps, and chillers, all of which are CHP products that deliver more than one form of energy. Our cogeneration products are all standard, modular units that come pre-packaged from the company’s factory for ease of installation at a customer’s site. The package incorporates the engine, generator, heat-recovery equipment, system controls, electrical switchgear, emission controls, and a data controller for remote monitoring and data transmission; minimizing the cost and complexity of installing the equipment at a site. This packaged, modular system simplifies CHP technology for small to mid-sized customers who typically are less experienced with the implementation and benefits of a CHP system.

All of our cogeneration systems and most of our chillers use the same engine, the TecoDrive 7400 model. This is an engine modified by us to use natural gas fuel. The small 25-ton chiller uses a similar engine, the 3000 model. We worked closely with the engine manufacturers and the gas industry (including the Gas Research Institute) in the 1980s and 1990s to modify the engine and validate its durability. For the Ilios water heater, we introduced a technologically advanced Ford engine that is enhanced for industrial applications.

Our commercial product line includes:

•the InVerde®, InVerde e+®, and TECOGEN® cogeneration units;
•TECOCHILL® chillers;
•Ilios® high-efficiency water heaters; and
•Ultera™ emissions control technology.

InVerde Cogeneration Units

Our premier cogeneration product is the InVerde, a 100-kW CHP system that not only provides electricity and hot water, but also satisfies the growing customer demand for operation during a utility outage, commonly referred to as “black-start” capability. Our exclusively licensed microgrid technology (see “Intellectual Property” below) enables our InVerde CHP products to provide backup power in the event of power outages that may be experienced by local, regional, or national grids.

The InVerde incorporates an inverter, which converts direct current, or DC, electricity to alternating current, or AC. With an inverter, the engine and generator can run at variable speeds, which maximizes efficiency at varying loads.

The inverter then converts the generator's variable output to the constant-frequency power required by customers in 50 or 60 Hertz.

This inverter technology was developed originally for solar and wind power generation. The company believes that the InVerde is the first commercial engine-based CHP system to use an inverter. Electric utilities accept inverter technology as "safe" by virtue of its certification to the Underwriters Laboratory interconnection standard 1741. InVerde earned this certification. This qualifies our product for a much simpler permitting process nationwide and is mandatory in some areas such as New York City and California, a feature we consider to be a competitive advantage. The inverter also improves the CHP system's efficiency at partial load, when less heat and power are needed by the customer.

The InVerde`s black-start feature addresses a crucial demand from commercial and institutional customers who are increasingly concerned about utility grid blackouts and brownouts, natural disasters, security threats, and antiquated utility infrastructure. Multiple InVerde units can operate collectively as a stand-alone microgrid, which is a group of interconnected loads served by one or more power sources. The InVerde is equipped with software that allows a cluster of units to seamlessly share the microgrid load without complex controls; a proprietary cost advantage for multiple modules on a single location.

The InVerde CHP system was developed in 2007, it began shipping in 2008. Our largest InVerde installation utilizes 12 units, which supply 1.2 MW of on-site power and about 8.5 million Btu/hr of heat (700,000 Btu/hr per unit).

In January 2016, the company launched its newest edition to the InVerde line, the InVerde e+. The e+ builds on the success of the first generation InVerde and reinforces our goal to be at the forefront of the industry, providing our customers with the most advanced clean energy technologies available in the marketplace. Among the most differentiating features when compared to competitive CHP technology, the InVerde e+ offers: best in class electrical efficiency; a DC input option for solar or battery array integration; rapid 10 second black-start; and requires just 4 inches of water column gas pressure which eliminated the need for additional costly pressure boosting equipment, unlike its competitors.

TECOGEN Cogeneration Units

The TECOGEN cogeneration system is the original model introduced in the 1980s; available in sizes of 60 kW and 75 kW and capable of producing up to 500,000 Btu/hr of hot water. This technology is based on a conventional single-speed generator. It is meant only for grid-connected operation and is not universally accepted by utilities for interconnection, in contrast to the InVerde. Although this cogeneration product has the longest legacy and largest installed population, much of its production volume has been supplanted by the InVerde and its broader array of product features.

TECOCHILL Chillers

Our TECOCHILL natural gas engine-driven chillers are available in capacities ranging from 25 to 400 tons, with the smaller units air-cooled and the larger ones water-cooled. Using technology first developed in 1987, the engine drives a compressor that makes chilled water, while the engine’s free waste heat can be recovered to satisfy the building’s needs for heat or hot water. This process is sometimes referred to as “mechanical” cogeneration, as it generates no electrical power, and the equipment does not have to be connected to the utility grid.

A gas-fueled chiller provides enough air conditioning to avoid most of the utility’s seasonal peak charges for electric usage and capacity. In summer when electric rates are at their highest, natural gas is “off-peak” and quite affordable, allowing TECOCHILL customers to avoid typically higher summer-time “peak-usage” electric rates. Gas-fueled chillers also free up the building’s existing electrical capacity to use for other loads and can operate on minimal electric load in case of electric grid blackout; a key feature for customers concerned about load demand on backup power generators.

Ilios High-Efficiency Water Heaters

Tecogen has developed several heat pumps under the Ilios brand name including a High Efficiency ("HE") Air-Source Water Heater, HE Water-Sourced Water Heater, and HE Air-Sourced “Split System” Water Heater. Our water heater products operate like an electric heat pump but use a natural gas engine instead of an electric motor to power the system. The Ilios high-efficiency water heater uses a heat pump, which captures warmth from outdoor air even if it is moderately cool outside. Heat pumps work somewhat like a refrigerator, but in reverse. Refrigerators extract heat from inside the refrigerator and move it outside the refrigerator while heat pumps extract heat from outside and move it indoors.

The gas engine’s waste heat is recovered and used in the process, unlike its electric counterpart, which runs on power that has already lost its waste heat. This means that the heat being captured from outdoors is supplemented by the engine’s waste heat, which increases the efficiency of the process. The net effect is that an Ilios heat pump’s efficiency far surpasses that of conventional boilers for water heating; gas engine heat pumps can deliver efficiencies in excess of 200%.

Similarly, if used for space heating, the engine-powered heat pump is more efficient than an electric heat pump, again because heat is recovered and used for other building processes. The product’s higher efficiency translates directly to

lower fuel consumption and, for heavy use customers, significantly lower operating costs when compared with conventional equipment.

In 2013, a water-sourced model of the heat pump was added to our product line. This heat pump captures heat from a water source such as a geothermal well or from a pre-existing chilled water loop in the facility; the latter configuration provides simultaneous heating and cooling benefits, doubling the effect.

Following on the success of the water-sourced model, in early 2015 a 'split system' Ilios model was introduced. The new Split System offers increased flexibility because its air-source evaporator package can be installed remotely. The engine driven heat pump, which is contained in a small acoustic enclosure can be located with a building's mechanical space while the quiet air-source evaporator package can be installed on a roof, or in any outdoor space. The outdoor evaporator component is connected to the indoor heat pump via refrigerant lines, therefore eliminating all freeze protection issues in colder climates. All of the water

being heated remains inside the conditioned space eliminating the need for a costly isolation heat exchanger and additional pumps, which simplifies installation and increases efficiency by being able to operate at a lower delivery temperature.

The heat pump water heater serves as a boiler, producing hot water for drinking and washing, for space heating, swimming pools, or other building loads. Energy cost savings to the customer depend on the climate. Heat pumps in general, whether gas or electric, perform best in moderate weather conditions although the performance of the Ilios water-source heat pump is not impacted by weather or climate conditions. In a typical building, the Ilios heat pump would be added on to an existing heating or water heating system, and would operate as many hours as possible. The conventional boiler would be left in place, but would serve mainly as a backup when the heat pump's engine is down for maintenance or when the heat pump cannot meet the building's peak heating load. In areas where low electric rates make CHP less economical, the Ilios heat pump could be a financially attractive alternative because its economics depend only on natural gas rates. In some areas with high electric rates, the Ilios option could have advantages over CHP; for example where it is hard to connect to the utility grid or where the building's need for electricity is too low for CHP to be economically sound.

Ultera Low-Emissions Technology

All of our CHP products are available with the patented Ultera low-emissions technology as an equipment option. This breakthrough technology was developed in 2009 and 2010 as part of a research effort funded by the California Energy Commission and Southern California Gas Company. The objective was to bring our natural-gas engines into compliance with California's stringent air quality standards.

(1) Based upon an annual output of 100 kW and 670,000 Btu/hr of hot water.

(2) Conventional Energy Source is U.S. powerplant and gas boiler. Average U.S. powerplant NOx emission rate of 0.9461 lb/MWh from (USEPA eGrid 2012),
CO data not available. Gas boiler efficiency of 78% (www.eia.gov) with emissions of 20 ppm NOx @ 3% O_2 (California Regulation SCAQMD Rule 1146.2
and <50 ppmv CO @ 3% O_2 (California Regulation SCAQMD BACT).

(3) Tecogen emissions based upon actual third party source test data.

(4) Microturbine and Fuel Cell emissions from EPA CHP Partnership - Catalog of CHP Technologies- March 2015.

(5) Stationary Engine BACT as defined by SCAQMD.

Through development of a two stage catalyst emission treatment system, the Company was able to meet or exceed the strict air quality regulations with a solution that is cost-effective, robust, and reliable. The patent-protected Ultera low-emissions technology keeps our CHP systems compliant with air quality regulations. The first commercial CHP units equipped with Ultera low-emissions technology shipped to a California utility in 2011. We conducted three validation programs for this technology:

1. Third-party laboratory verification. The AVL California Technology Center, a long-standing research and technology partner with the international automotive industry, confirmed our results in their state-of-the-art dynamometer test cell, which was outfitted with sophisticated emissions measurement equipment.
2. Verifying longevity and reliability in the field. We did so by equipping one of our TECOGEN 75-kW units, already operating at a customer location in Southern California, with the Ultera low-emissions technology and a device to continuously monitor emissions. The Ultera low-emissions system operated successfully for more than 25,000 hours, approximately 3.5 years, and consistently complied with California's stringent emission standards over the entire field testing period.
3. Additional independent tests. During the field test, two companies licensed in California to test emissions each verified our results at different times. The results from one of these tests, obtained in August 2011, enabled us to qualify for New Jersey's fast-track permitting. Virtually every state nationwide requires some kind of permit related to local air quality, but New Jersey allows an exemption for systems such as ours that demonstrate superior emissions performance. This certification was granted in November 2011, and since then we have sold Ultera low-emissions systems to customers in the territory.

In 2012, a 75 kW CHP unit equipped with the Ultera system became our first unit to obtain a conditional air permit (i.e. pending a third party source test to verify compliance) in Southern California since the strict regulations went into effect in 2009. A state-certified source test, administered in January 2013, verified that our emissions levels were well below the new permitting requirements, and the final permit version was approved in August 2013.

Standby Generators

After successfully developing the Ultera technology for our own equipment, the Tecogen R&D team began exploring other possible emissions control applications in an effort to expand the market for the ultra-clean emissions system. Retrofit kits were developed in 2014 for other stationary engines and in 2015 the Ultera Retrofit Kit was applied successfully to natural gas stand-by generators from other manufacturers, including Generac. According to a Brookings Institute report on distributed generation, over 12 million generators have been installed across the United States with a total capacity of more than 200 gigawatts. Market research experts Frost & Sullivan forecast steady future growth for the category, modeling an average yearly revenue increase of 5% through 2017.

Historically standby generators have not been subjected to the strict air quality emissions standards of traditional power generation. However, generators which run for more than 200 hours per year or run for non-emergency purposes (other than routine scheduled maintenance) are subject to compliance with the same stringent regulations applied to a typical electric utility. As demand response programs become more economically attractive and air quality regulations continue to become more stringent, there could be strong demand for retrofitting of standby generators with our Ultera emissions control technology, thus providing a cost-effective solution to keeping the installed base of standby generators operational and in compliance.

Biogas

The Ultera emissions control technology developed by our engineering team applies specifically to rich-burn, spark-ignited, internal combustion engines. While it was originally intended for natural gas powered engines, there is reason to believe the technology may be adapted for other fuel types as long as the engine meets the rich-burn criteria. In 2015 the Ultera system was applied to a biogas powered engine operating at the Eastern Municipal Water District's (EMWD) Moreno Valley Region Water Reclamation Facility in Perris, California. The demonstration project was a result of an ongoing collaboration between Tecogen, the EMWD and various other partners. This project successfully applied an Ultera retrofit kit to a 50 liter Caterpillar engine fueled by biogas extracted from an anaerobic digester. Biogas is a significant byproduct of wastewater treatment plants. Considered to be a renewable source of fuel, it is becoming an increasingly important resource for power generation. According to the American Biogas Council,

nationwide there are over 1,100 engines fueled by wastewater-derived biogas, over 600 fueled by landfill-generated biogas, and over 100 running on biogas from agricultural waste. This represents a significant potential market for Ultera retrofit kit application as these biogas engines become subject to the same air quality standards as traditional power generation sources.

Gasoline Vehicles

In October 2015, following revelations of wide-scale problems with vehicle emissions compliance and testing, Tecogen formed an Emissions Advisory Committee to examine the potential application of Ultera to the automotive gasoline market. According to the U.S. EPA, 50 percent of nitrogen oxides (NOx) and 60 percent of all carbon monoxide (CO) emissions in the United States comes from vehicle exhaust. These are precisely the two pollutants Tecogen's Ultera emission control system is designed to target. After a thorough investigative process on the part of the Advisory Committee and various industry expert consultants, the group recommended Tecogen pursue a funded initiative to develop the technology for gasoline vehicles.

In December 2015, the Company announced the formation of a 50/50 joint venture company with a group of strategic investors. Ultra Emissions Technologies Limited (known as “ULTRATEK”) was created to advance Tecogen’s near-zero emissions technology for adaptation to transportation applications powered by spark-ignited rich-burn engines in the automobile and truck categories. Tecogen has granted ULTRATEK an exclusive license for the development of its patented, emissions-related, intellectual property for the vehicle market, while the strategic investors have collectively contributed $3 million to finance the initial operations of the joint venture.

Initially ULTRATEK’s focus is on preliminary research, testing, and verification that the Ultera technology can in fact be applied to gasoline engines while maintaining similar near-zero emission results as have been demonstrated in other use cases. If successfully developed, the market for automotive emissions control could be a source of future growth for the Company; although that potential could take several years to be realized and there is no guarantee we will be successful.

Other Ultera Applications

According to the University of Washington's Institute for Health Metrics and Evaluation, air pollution is now the world's fourth leading cause of premature death while a 2013 Massachusetts Institute of Technology study found that the U.S. experiences 200,000 early deaths each year due to emissions from heavy industry, transportation, and commercial and residential heating. As climate change and air quality continue to develop as areas of focus by government regulators, emissions restrictions are expected to become increasingly stringent around the world. These tightening regulations could open up new markets and applications for the Ultera near-zero emissions control technology. Some of these opportunities may include:

- Commercial and industrial natural gas fueled engines from other manufacturers
- Natural gas and biogas powered vehicle fleets - such as municipal bus fleets
- Small industrial mobile engines - such as propane powered fork trucks

Product Service

We provide long-term maintenance contracts, parts sales, and turnkey installation through a network of nine well-established field service centers in California, the Midwest, and the Northeast. These centers are staffed by full-time Tecogen technicians, working from local leased facilities. The facilities provide offices and warehouse space for inventory. We encourage our customers to provide internet or phone connections to our units so that we may maintain communications with the installed equipment. For connected installations, the machines are contacted daily, download their status, and provide regular operational reports (daily, monthly, and quarterly) to our service managers. This communication link is used to support the diagnosis effort of our service staff and to send messages to preprogrammed phones that a unit has experienced an unscheduled shutdown. In many cases, communications received by service technicians from connected devices allow for proactive maintenance; minimizing equipment downtime and improving operating efficiency for the customer.

Our service managers, supervisors, and technicians work focuses on our products. Because we manufacture our own equipment, our service technicians bring hands-on experience and competence to their jobs. They are trained at our corporate headquarters and primary manufacturing facility in Waltham, Massachusetts.

Most of our service revenue is in the form of annual service contracts, which are typically of an all-inclusive “bumper-to-bumper” type, with billing amounts proportional to achieved operating hours for the period. Customers are thus invoiced in level, predictable amounts without unforeseen add-ons for such items as unscheduled repairs or engine replacements. We strive to maintain these contracts for many years, assuring the integrity and performance of

our machines is maintained.

Our product lines have a long history of reliable operation. Since 1995, we have had a remote monitoring system in place that connects to hundreds of units daily and reports their “availability,” which is the amount of time a unit is running or is ready to run in hours. More than 80% of them operate above 90% availability, with the average being 93.8%. Our factory service agreements have directly impacted these positive results and represent an important, long-term, annuity-like stream of revenue for the Company.

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In early 2016, we announced the selection of GE's (NYSE: GE) Equipment Insight solution for new equipment sold beginning in 2016 and for select upgrades to the existing installed equipment fleet. With GE's technology Tecogen is able to collect, analyze and manage valuable asset data continuously and in real-time, providing the Service team with improved insight into the functionality of our installed CHP units. GE Equipment Insight allows Tecogen to provide a more seamless and proactive maintenance approach while also ensuring peak performance of installed equipment and improving the equipment payback period for its customers. The industrial internet solution enables the Service department to perform remote monitoring and diagnostics and to view system results in real time via a computer, smart phone or tablet. The solution enables users to better utilize monitoring data, ensuring customers are capturing maximum possible savings and efficiencies from their installation. Through constant monitoring and analysis of equipment data, Tecogen expects to enhance the performance of installed equipment by ensuring machinery consistently operates at peak performance and is available to deliver maximum potential value for customers.

Contributions to Revenue

The following table summarizes net revenue by product line and services for the years ended December 31, 2015 and 2014:

	2015	2014
Products:		
Cogeneration	$7,882,838	$5,364,810
Chiller & Heat Pump	2,172,399	3,260,224
Total product revenue	10,055,237	8,625,034
Service & Parts	7,832,181	7,438,125
Installation Services	3,555,239	3,279,505
Total service revenue	11,387,420	10,717,630
Total revenue	$21,442,657	$19,342,664

All of the Company's long lived assets reside in the United States. Currently, some revenue is generated outside the United States. These sales include United Kingdom, Mexico, Ireland, and others.

Sales & Distribution

Our products are sold directly to end-users by our sales team and by established sales agents and representatives. Various agreements are in place with distributors and outside sales representatives, who are compensated by commissions, including American DG Energy and EuroSite Power which are affiliated companies, for certain territories and product lines. In New England, our affiliate, American DG Energy, has exclusive sales representation rights to our cogeneration products only (not including chillers). Sales through our in-house team or sales that are not covered by a representative's territory carry no commission or only a fractional one. For the fiscal years ended 2015 and 2014, no distribution partner or customer relationship accounted for more than 10% of total combined company revenue.

Our product sales cycle exhibits typical seasonality for the HVAC industry with sales of chillers generally stronger in the warmer months while heat pump sales are stronger in the cooler months.

Total product and installation backlog as of December 31, 2015 was $11.6 million compared to year end 2014 backlog of $9.9 million. Please see Management's Discussion and Analysis section and related Risk Factors for additional information about the Company's backlog.

Markets and Customers

Worldwide, stationary power generation applications vary from huge central stationary generating facilities (traditional electric utility providers) to back-up generators as small as 2 kW. Historically, power generation in most developed countries such as the United States has been part of a regulated central utility system utilizing high-temperature steam turbines powered by fossil-fuels. This turbine technology, though steadily refined over the years, reached a maximum efficiency (where efficiency means electrical energy output per unit of fuel energy input) of approximately 40%. According to the U.S. EPA, the average efficiency of fossil fuel power plants in the United States is 33% and has remained virtually unchanged for four decades.

A number of developments related primarily to the deregulation of the utility industry as well as significant technological advances have now broadened the range of power supply choices available to all types of customers. CHP, which harnesses waste energy from power generation processes and puts it to work for other uses on-site, can boost the energy conversion efficiency to nearly 90%, a better than two-fold improvement over the average efficiency fossil fuel plant. This distributed generation, or power generated on-site at the point of consumption rather than power generated centrally, eliminates the cost, complexity, and inefficiency associated with electric transmission and distribution. The implications of the CHP distributed generation approach are significant. If CHP were applied on a large scale, global fuel usage might be dramatically curtailed and the utility grid made far more resilient.

Our CHP products address the inherent efficiency limitation of central power plants by siting generation close to the loads being served. This allows customers with energy-intensive buildings or processes to reduce energy costs and operate with a lower carbon footprint. Furthermore, with technology we have introduced within the last two years, like the Ultera low-emissions technology, our products can now contribute to better air quality at the local level while complying with the strictest air quality regulations in the United States.

Cogeneration and chiller products can often reduce the customer's operating costs (for the portion of the facility loads to which they are applied) by approximately 30% to 60% based on Company estimates, which provides an excellent rate of return on the equipment's capital cost in many areas of the country with high electricity rates. Our chillers are especially suited to regions where utilities impose extra charges during times of peak usage, commonly called "demand" charges. In these cases, the gas-fueled chiller reduces the use of electricity during the summer, the most costly time of year.

On-site CHP not only eliminates the loss of electric power during transmission, but also offsets the capital expense of upgrading or expanding the utility infrastructure. The national electric grids of many developed countries are already challenged to keep up with existing power demand. In addition, the transmission and distribution network is operating at capacity in a majority of urban areas. Decentralizing power generation by installing equipment at customer sites not only relieves the capacity burden on existing power plants, but also unburdens transmission and distribution lines. This ultimately improves the grid's reliability and reduces the need for costly upgrades.

Increasingly favorable economic conditions could improve our business prospects domestically and abroad. Specifically, we believe that natural gas prices might increase from their current depressed values, but only modestly, while electric rates would continue to rise over the long-term as utilities pay for grid expansion, better emission controls, efficiency improvements, and the integration of renewable power sources.

The largest numbers of potential new customers in the U.S. require less than 1 MW of electric power and less than 1,200 tons of cooling capacity. We are targeting customers in states with high electricity rates in the commercial sector, such as California, Connecticut, Massachusetts, New Hampshire, New Jersey, and New York. These regions also have high peak demand rates, which favor utilization of our modular units in groups so as to assure redundancy and peak demand savings. Some of these regions also have generous rebates that improve the economic viability of our systems.

We aggressively market to both potential domestic and international customers where utility pricing aligns with our advantages. These areas include regions that have strict emissions regulations, such as California, or those that reward CHP systems that are especially non-polluting, such as New Jersey. There are currently 23 states that recognize CHP as part of their Renewable Portfolio Standards or Energy Efficiency Resource Standards and several of them, including New York, California, Massachusetts, New Jersey, and North Carolina, have initiated specific incentive programs for CHP.

The traditional markets for CHP systems are buildings with long hours of operation and with corresponding demand for electricity and heat. Traditional customers for our cogeneration systems include hospitals and nursing homes, colleges and universities, health clubs and spas, hotels and motels, office and retail buildings, food and beverage processors, multi-unit residential buildings, laundries, ice rinks, swimming pools, factories, municipal buildings, and military installations.

Traditional customers for our chillers and heat pumps overlap with those for our cogeneration systems. Engine-driven chillers are often utilized as replacements for aging electric chillers because they both occupy similar amounts of floor space and require similar maintenance schedules.

Competition

Although we believe Tecogen offers customers a suite of premier best-in-class clean energy and thermal solutions, the market for our products is highly competitive. Our cogeneration products compete with the utility grid, existing technologies such as other reciprocating engine and microturbine CHP systems, and other emerging distributed generation technologies including solar power, wind-powered systems, and fuel cells.

Although solar and wind powered systems produce no emissions, the main drawbacks to these renewable powered systems are their dependence on weather conditions, their reliance on backup utility grid, and high capital costs that

can often make these systems uneconomical without government subsidies. Similarly, while the market for fuel cells is still developing, a number of companies are focused on markets similar to ours. Fuel cells, like solar and wind powered systems, have received higher levels of incentives for the same type of applications as CHP systems in many territories. Management believes that, absent these higher government incentives, our CHP solutions provide a better value and more robust solution to end users in most applications.

Additionally, our patents relating to the Ultera ultra-low emissions technology give Tecogen products a strong competitive advantage in markets where severe emissions limits are imposed or where very clean power is favored, such as New Jersey, California, and Massachusetts.

Our products fall into the broad market category of distributed generation systems that produce electric power on-site to mitigate the drawbacks of traditional central power and the low efficiency of conventional heating processes.

Overall, we compete with end users' other options for electrical power, heating and cooling on the basis of our clean technology's ability to:

- Provide power when a utility grid is not available or goes out of service;
- Reduce the customer's total cost of purchasing electricity and other fuel;
- Reduce emissions of criteria pollutants (NOx and CO) to near-zero levels and cut the emission of greenhouse gas such as carbon dioxide;
- Provide reliable on-site power generation, heating and cooling services; and
- Control maintenance costs and ensure optimal peak equipment performance.

InVerde CHP

We believe that no other company has developed a product that competes with our inverter-based InVerde, which offers UL-certified grid connection, blackstart capability, and patented variable-speed operation. An inverter-based product with at least some of these features has been introduced by others, but we believe that they face serious challenges in duplicating all the unique features of the InVerde. Product development time and costs could be significant, and we expect that our patents and license for Microgrid software will keep others from offering certain important functions.

Similarly, in the growing Microgrid segment, neither fuel cells nor microturbines can respond to changing energy loads when the system is disconnected from the utility grid. Engines such as those used in Tecogen's equipment inherently have a fast dynamic response to step load changes, which is why they are the primary choice for emergency generators. Fuel cells and microturbines would require an additional energy storage device to be utilized in off-grid operation, giving our engine-driven solutions an advantage for Microgrid applications. We believe that Capstone Turbine Corporation is the only microturbine manufacturer with a commercial presence in CHP.

TECOCHILL Chillers

According to the Energy Solutions Center, a non-profit consortium, three companies make gas-engine-driven chillers that compete with our TECOCHILL products: Trane, a division of Ingersoll-Rand plc, York, a division of Johnson Controls, Inc. and Alturdyne. Natural gas can also fuel absorption chillers, which use fluids to transfer heat without an engine drive. However, engine chillers will continue to have an efficiency advantage over absorption machines, TECOCHILL products reach efficiencies well above levels achieved by similarly sized absorption systems. Today's low natural gas prices in the United States improve the economics of gas-fueled chillers while their minimal electric demand on back up power systems make them ideal for facilities requiring critical precision climate control.

Ilios Heat Pump

There are a few companies manufacturing gas-engine heat pumps, including Yanmar and Tedom. The Ilios water heater and other heat pump products compete in both the high-efficiency water heating market and the CHP market.

Research & Development

Tecogen has a long, rich, research and development tradition and sustained programs have allowed us to cultivate deep engineering expertise. We have strong core technical knowledge that is critical to product support and continuous product improvement efforts. Our TecoDrive engine, cogeneration and chiller products, InVerde, Ilios heat pumps, and most recently the Ultera emissions control system were all created and optimized in-house with both public and private funding support.

We continue to forge alliances with utilities, government agencies, universities, research facilities, and manufacturers. The Company has already succeeded in developing new technologies and products in collaboration with several entities, including:

- Sacramento Municipal Utility District has provided test sites for the Company since 2010.
- Southern California Gas Company and San Diego Gas & Electric Company, each a Sempra Energy subsidiary have granted us research and development contracts since 2004.
- Department of Energy's Lawrence Berkeley National Laboratory, research and development contracts executed since 2005, including ongoing Microgrid development work related to the InVerde.
- Eastern Municipal Water District has co-sponsored demonstration projects to retrofit both a natural-gas powered municipal water pump engine, and a biofuel powered pumping station engine with the Ultera low emissions

technology since 2012.

- Consortium for Electric Reliability Technology Solutions executed research and development contracts, and provided a test site to the Company since 2005.
- California Energy Commission executed research and development contracts from 2004 until March 2013.
- The AVL California Technology Center has performed a support role in research and development contracts as well as internal research and development on our emission control system from August 2009 to November 2011.

Our efforts to forge partnerships continue to focus on utilities, particularly to promote the InVerde, our most utility-friendly product. The nature of these alliances varies by utility, but could include simplified interconnection, joint marketing, ownership options, peak demand mitigation agreements, and customer services. We have commissioned a Microgrid with the Sacramento Municipal Utility District at its headquarters in Sacramento, California, where the central plant incorporated three InVerde systems equipped with our Ultera low-emissions technology. Some expenses for this project were reimbursed to the utility through a grant from the California Energy Commission.

Certain components of our InVerde product were developed through a grant from the California Energy Commission. This grant includes a requirement that we pay royalties on all sales of all products related to the grant. As of December 31, 2015, such royalties accrued in accordance with this grant agreement were less than $12,000 on an annual basis.

We also continue to leverage our resources with government and industry funding, which has yielded a number of successful developments. These include the Ultera low-emissions technology, sponsored by the California Energy Commission and Southern California Gas Company, and new 35-kW engine technology we developed with the California Energy Commission's support. Pursuant to the terms of the grants from the California Energy Commission, the California Energy Commission has a royalty-free, perpetual, non-exclusive license to these technologies, for government purposes.

For the years ended December 31, 2015 and 2014, we spent approximately $591,585 and $1,041,483, respectively, in research and development activities.

Intellectual Property

We currently hold five United States patents for our technologies:

- 9,121,326: "Assembly and method for reducing nitrogen oxides, carbon monoxide and hydrocarbons in exhausts of internal combustion engines." This patent, granted in September 2015, is related to the Ultera emission control system applicable to all our products.
- 8,829,698: "Power generation systems." This patent, granted in September 2014, is for a power generation system that includes an internal combustion engine configured to provide rotational mechanical energy.
- 8,578,704: "Assembly and method for reducing nitrogen oxides, carbon monoxide, and hydrocarbons in exhausts of internal combustion engines." This patent, granted in November 2013, is for the Ultera emission system applicable to all our products.
- 7,239,034: "Engine driven power inverter system with cogeneration." This patent, granted in July 2007, pertains to the utilization of an engine-driven CHP module combined with an inverter and applies to our InVerde product specifically.
- 7,243,017: "Method for controlling internal combustion engine emissions." This patent, granted in July 2007, applies to the specific algorithms used in our engine controller for metering the fuel usage to obtain the correct combustion mixture and is technology used by most of our engines.

We have filed for several additional patents - most notable among them:

- "Systems and methods for reducing emissions in exhaust of vehicles and producing electricity." This patent, filed in November 2015 and published in March 2016, is related to the development of the Ultera emission control system for vehicle applications.

In addition, the Company licensed specific rights to Microgrid algorithms developed by University of Wisconsin researchers for which we pay royalties to the assignee, The Wisconsin Alumni Research Foundation (WARF). The specific patent named in our agreement is "Control of small distributed energy resources" (7,116,010), granted in 2006. Our exclusive rights are valid for engine-driven systems utilizing natural gas or diesel fuel in the application of power generation where the per-unit output is less than 500 kW.

The software allows our products to be integrated as a Microgrid, where multiple InVerde units can be seamlessly isolated from the main utility grid in the event of an outage and re-connected to it afterward. The licensed software allows us to implement such a Microgrid with minimal control devices and associated complexity and cost. Tecogen pays WARF a royalty for each cogeneration module sold using the licensed technology. Such royalty payments have

been in the range of $5,000 to $20,000 on an annual basis through the year ended December 31, 2015. In addition, WARF reserved the right to grant non-profit research institutions and governmental agencies non-exclusive licenses to practice and use, for non-commercial research purposes technology developed by Tecogen that is based on the licensed software.

We consider our patents and license to be important in the operation of our business. The expiration, termination, or invalidity of one or more of these patents may have a material adverse effect on our business. Our earliest patent, the licensed from WARF, was issued in 2006 and expires in 2022. Most of our current patents expire between 2022 and 2027.

We believe that one other company has developed a product that competes with our inverter-based InVerde. We anticipate that an inverter-based product with at least some of these features will be introduced by others, but we believe that competitors will face serious challenges in duplicating the InVerde. Product development time and costs would likely be significant, and we expect that our patent for the inverter-based CHP system (7,239,034) would offer significant protection, especially in key features. Likewise, we consider the Microgrid license with WARF to be a key feature of our InVerde product, and one that would be difficult to duplicate outside the patent.

In 2013, we purchased rights to designs and technologies including patents granted or pending for our permanent magnet generators. This key component of our InVerde module uses this acquired technology.

The recent issuance by the U.S. PTO of the patent for the Ultera low-emissions technology keeps that technology exclusive to us. It applies to all of our gas engine-driven products and may have licensing applications to other rich-burn spark-ignited internal combustion engines. We have also filed for or been granted patents for this technology in Europe, Australia, Brazil, Canada, China, Costa Rica, Dominican Republic, India, Japan, Mexico, New Zealand, Republic of Korea, Singapore, and South Africa. There is no assurance, however, that the Ultera low-emissions patent applications will be approved in any other country.

Trademarks

The Company has registered the brand names of our equipment and logos used on our equipment. These registered trademarks include Tecogen, Tecochill, Ultera, InVerde, Ilios, and the associated logos. We will continue to trademark our product names and symbols.

Sourcing & Manufacturing

We are focused on continuously strengthening our manufacturing processes and increasing operational efficiencies within the Company. Many of the components used in the manufacture of our highly-efficient clean energy equipment are readily fabricated from commonly available raw materials or are standardly available parts sourced from multiple suppliers. We believe that in most cases, adequate supply exists to meet our near to medium term manufacturing needs. Tecogen has an on-going focus on developing and implementing new systems to simplify our manufacturing processes, product sourcing methods, and our supply chain.

The company has a combined total of approximately 26,000 square foot manufacturing and warehouse footprint running on a single 5-day per week shift at the Waltham, Massachusetts facility. We believe we have sufficient spare capacity to meet near to medium term demand without accruing additional fixed cost.

Government & Regulation

Several kinds of government regulations affect our current and future business, including but not exclusive to:

- Product safety certifications and interconnection requirements;
- Air pollution regulations, which govern the emissions allowed in engine exhaust;
- State and federal incentives for CHP technology;
- Various local building and permitting codes and third party certifications; and
- Electric utility pricing and related regulations.

Our markets can be positively or negatively impacted by the effects of governmental and regulatory matters. We are impacted not only by energy policy, laws, regulations and incentives of governments in the markets in which we sell, but also by rules, regulations and costs imposed by utilities. Utility companies or governmental entities may place barriers on the installation or interconnection of our product with the electric grid. Further, utility companies may charge additional fees to customers who install on-site power generation; thereby reducing the electricity they take from the utility, or for having the capacity to use power from the grid for back-up or standby purposes. These types of restrictions, fees or charges could hamper the ability to install or effectively use our product, or increase the cost to our potential customers for using our systems. This could make our systems less desirable, adversely impacting our revenue and profitability. In addition, utility rate reductions can make our products less competitive, causing a material adverse effect on our operations. These costs, incentives and rules are not always the same as those faced by technologies with which we compete.

Similarly, rules, regulations, laws and incentives could also provide an advantage to our distributed generation solutions as compared with competing technologies if we are able to achieve required compliance in a lower cost, more efficient manner. Additionally, reduced emissions and higher fuel efficiency could help our customers combat the effects of global warming. Accordingly, we may benefit from increased government regulations that impose tighter emission and fuel efficiency standards. We encourage investors and potential investors to carefully consider associated Risk Factors detailed below which highlight various aspects of the regulatory environment and other related risks.

TECOGEN INC.
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Employees

As of December 31, 2015, we employed 72 full-time employees and 4 part-time employees, including 6 sales and marketing personnel and 31 service personnel. We believe that our relationship with our employees is satisfactory. Three of our New Jersey service employees are represented by a collective bargaining agreement which was executed on February 25, 2014 with a retroactive effective date of January 1, 2014.

Item 1A. Risk Factors

Our business faces many risks. The risks described below may not be the only risks we face. Additional risks that we do not yet know of, or that we currently think are immaterial, may also impair our business operations or financial results. If any of the events or circumstances described in the following risks occurs, our business, financial condition or results of operations could suffer and the trading price of our common stock could decline. Investors and prospective investors should consider the following risks and the information contained under the heading "Cautionary Note Concerning Forward-Looking Statements" before deciding whether to invest in our securities.

Risks Relating to Our Business

Our operating history is characterized by net losses. We anticipate incurring further losses, and we may never become profitable.

For each of our last five fiscal years and prior thereto, we have incurred annual operating losses. We expect this trend to continue until such time that we can sell a sufficient number of systems and achieve a cost structure to become profitable. We may not have adequate cash resources to reach the point of profitability. Even if we do achieve profitability, we may be unable to increase our sales and sustain or increase our profitability in the future.

We experience significant fluctuations in revenues from quarter to quarter on our product sales.

We have low volume, high dollar sales for projects that are generally non-recurring, and therefore our sales have fluctuated significantly from period to period. For example, when compared to the previous quarter, our revenues in 2015 increased in the first and fourth quarters, and decreased in the second and third quarter. In 2014, our revenues increased during the second and the fourth quarters and decreased in the first and third quarters. Fluctuations cannot be predicted because they are affected by the purchasing decisions and timing requirements of our customers, which are unpredictable.

We may be unable to fund our future operating requirements, which could force us to curtail our operations.

If our funds are insufficient to fund our future operating requirements, we would need to raise additional funds through further public or private equity or debt financings depending upon prevailing market conditions. These financings may not be available to us, or if available, may be on terms that are not favorable to us and could result in significant dilution to our stockholders and reduction of the trading price of our stock. The state of worldwide capital markets could also impede our ability to raise additional capital on favorable terms or at all. If adequate capital were not available to us, we likely would be required to significantly curtail our operations or possibly even cease our operations.

If we experience a period of significant growth or expansion, it could place a substantial strain on our resources.

If our cogeneration and chiller products penetrate the market rapidly, we would be required to deliver even larger volumes of technically complex products or components to our customers on a timely basis and at a reasonable costs to us. We have never ramped up our manufacturing capabilities to meet significant large-scale production requirements. If we were to commit to deliver large volumes of products, we may not be able to satisfy these commitments on a timely and cost-effective basis.

We are dependent on a limited number of third-party suppliers for the supply of key components for our products.

We use third-party suppliers for components in many of our products. Our engine supplier, generator supplier for cogeneration products (other than the InVerde), and in our chillers a compressor and vessel set, are all purchased from large multinational equipment manufacturers. The loss of one of our suppliers could materially, and adversely affect our business if we are unable to replace them. While alternate suppliers for the manufacture of our engine, generator and compressor have been identified, should the need arise, there can be no assurance that alternate suppliers will be available and able to manufacture our engine, generator or compressor on acceptable terms.

From time to time, shipments can be delayed because of industry-wide or other shortages of necessary materials and components from third-party suppliers, as well as shipping delays at points of importation. A supplier's failure to supply components in a timely manner, or to supply components that meet our quality, quantity, or cost requirements, or our inability to obtain substitute sources of these components on a timely basis or on terms acceptable to us, could impair our ability to deliver our products in accordance with contractual obligations.

We expect significant competition for our products and services.

Many of our competitors and potential competitors are well established and have substantially greater financial, research and development, technical, manufacturing and marketing resources than we do. If these larger competitors decide to focus on the development of distributed power or cogeneration, they have the manufacturing, marketing and sales capabilities to complete research, development and commercialization of these products more quickly and effectively than we can. There can also be no assurance that current and future competitors will not develop new or enhanced technologies or more cost-effective systems, and therefore, there can be no assurance that we will be successful in this competitive environment.

If we are unable to maintain our technological expertise in design and manufacturing processes, we will not be able to successfully compete.

We believe that our future success will depend upon our ability to continue to develop and provide innovative products and product enhancements that meet the increasingly sophisticated needs of our customers.

However, this requires that we successfully anticipate and respond to technological changes in design and manufacturing processes in a cost-effective and timely manner. The development of new, technologically advanced products and enhancements is a complex and uncertain process requiring high levels of innovation, as well as the accurate anticipation of technological and market trends. There can be no assurance that we will successfully identify new product opportunities, develop and bring new or enhanced products to market in a timely manner, successfully lower costs, and achieve market acceptance of our products, or that products and technologies developed by others will not render our products or technologies obsolete or noncompetitive.

The introduction of products embodying new technologies, and the shifting of customer demands or changing industry standards, could render our existing products obsolete and unmarketable. We may experience delays in releasing new products and product enhancements in the future. Material delays in introducing new products or product enhancements may cause customers to forego purchases of our products and purchase those of our competitors.

Our intellectual property may not be adequately protected.

We seek to protect our intellectual property rights through patents, trademarks, copyrights, trade secret laws, confidentiality agreements, and licensing arrangements, but we cannot ensure that we will be able to adequately protect our technology from misappropriation or infringement. We cannot ensure that our existing intellectual property rights will not be invalidated, circumvented, challenged, or rendered unenforceable.

We have applied for and obtained patents on certain key components used in our products. Specifically, the Company holds patents, all of which are utilized in our products. In addition, we have rights to a 2006 University of Wisconsin patent enabling us to use that patent’s microgrid control algorithms for our specific use: engine-based power generation fueled by natural gas and diesel for engines less than 500 kW in electric power output. Also, the Company acquired rights to several patents and technologies included in the permanent magnet generators. The Company continues to apply for patents in the United States and other countries related to our technologies.

Our competitors may successfully challenge the validity of our patents, design non-infringing products, or deliberately infringe our patents. There can be no assurance that other companies are not investigating or developing other similar technologies. In addition, our intellectual property rights may not provide a competitive advantage to us or ensure that our products and technology will be adequately covered by our patents and other intellectual property. Any of these factors or the expiration, termination, or invalidity of one or more of our patents may have a material adverse effect on our business.

Our control software is protected by copyright laws or under an exclusive license agreement. Further, we rely on treatment of our technology as trade secrets through confidentiality agreements, which our employees and vendors are required to sign. We also rely on non-disclosure agreements with others that have or may have access to confidential information to protect our trade secrets and proprietary knowledge. These agreements may be breached, and we may not have adequate remedies for any breach. Our trade secrets may also be or become known without breach of these agreements or may be independently developed by competitors. Failure to maintain the proprietary nature of our technology and information could harm our results of operations and financial condition.

Others may assert that our technology infringes their intellectual property rights.

We may be subject to infringement claims in the future. The defense of any claims of infringement made against us by third parties could involve significant legal costs and require our management to divert time from our business operations. If we are unsuccessful in defending any claims of infringement, we may be forced to obtain licenses or to pay additional royalties to continue to use our technology. We may not be able to obtain any necessary licenses on commercially reasonable terms or at all. If we fail to obtain necessary licenses or other rights, or if these licenses are costly, our operating results would suffer either from reductions in revenues through our inability to serve customers or from increases in costs to license third-party technologies.

Our success is dependent upon attracting and retaining highly qualified personnel and the loss of key personnel could significantly hurt our business.

To achieve success, we must attract and retain highly qualified technical, operational and executive employees. The loss of the services of key employees or an inability to attract, train and retain qualified and skilled employees, specifically engineering, operations, and business development personnel, could result in the loss of business or could otherwise negatively impact our ability to operate and grow our business successfully.

Our business is subject to product liability and warranty claims.

Our business exposes us to potential product liability claims, which are inherent in the manufacturing, marketing and sale of our products, and we may face substantial liability for damages resulting from the faulty design or manufacture of products or improper use of products by end users. We currently maintain a moderate level of product liability insurance, but there can be no assurance that this insurance will provide sufficient coverage in the event of a claim. Also, we cannot predict whether we will be able to maintain such coverage on acceptable terms, if at all, or that a product liability claim would not harm our business or financial condition. In addition, negative publicity in connection with the faulty design or manufacture of our products would adversely affect our ability to market and sell our products.

We sell our products with warranties. There can be no assurance that the provision in our financial statements for estimated product warranty expense will be sufficient. We cannot ensure that our efforts to reduce our risk through warranty disclaimers will effectively limit our liability. Any significant occurrence of warranty expense in excess of estimates could have a material adverse effect on our operating results, financial condition and cash flow. Further, we have at times undertaken programs to enhance the performance of units previously sold. These enhancements have at times been provided at no cost or below our cost. If we choose to offer such programs again in the future, such actions could result in significant costs.

Certain businesses and consumers might not consider cogeneration solutions as a means for obtaining their electricity and power needs.

Generating electricity and heat at the customers' building (on-site CHP) is an established technology, but it is more complex than buying electricity from the utility and using a furnace for heat. Customers have been slow to accept on-site CHP in part because of this complexity. In addition, the development of a larger market for our products will be impacted by many factors that are out of our control, including cost competitiveness, regulatory requirements, and the emergence of newer and potentially better technologies and products. If a larger market for cogeneration technology in general and our products in particular fails to grow substantially, we may be unable to continue our business.

Utilities or governmental entities could hinder our entry into and growth in the marketplace, and we may not be able to effectively sell our products.

Utilities or governmental entities on occasion have placed barriers to the installation of our products or their interconnection with the electric grid, and they may continue to do so. Utilities may charge additional fees to customers who install on-site CHP and rely on the grid for back-up power. These types of restrictions, fees, or charges could make it harder for customers to install our products or use them effectively, as well as increasing the cost to our potential customers. This could make our systems less desirable, thereby adversely affecting our revenue and other operating results.

We may not achieve production cost reductions necessary to competitively price our products, which would adversely affect our sales.

We believe that we will need to reduce the unit production cost of our products over time to maintain our ability to offer competitively priced products. Our ability to achieve cost reductions will depend on our ability to develop low-cost design enhancements, to obtain necessary tooling and favorable supplier contracts, and to increase sales volumes so we can achieve economies of scale. We cannot assure you that we will be able to achieve any such production cost reductions. Our failure to do so could have a material adverse effect on our business and results of operations.

We have granted sales representation rights to an affiliated company, which restricts our distribution.

Our affiliates American DG Energy and EuroSite Power Inc. have certain exclusive sales representation rights to our cogeneration products only (not including chillers) and exclusive rights to our Ultra low-emissions technology if it is applied to engines from other CHP manufacturers in projects developed by American DG Energy (see Note 13 in the Financial Statements). As a result of these agreements, we have limited control over our distribution of certain products in New England, and this could have a material adverse effect on our business and results of operations.

Commodity market factors impact our costs and availability of materials.

Our products contain a number of commodity materials, from metals, which include steel, special high temperature alloys, copper, nickel and molybdenum, to computer components. The availability of these commodities could impact our ability to acquire the materials necessary to meet our requirements. The cost of metals has historically fluctuated. The pricing could impact the costs to manufacture our products. If we are not able to acquire commodity materials at prices and on terms satisfactory to us or at all, our operating results may be materially adversely affected.

Our products involve a lengthy sales cycle and we may not anticipate sales levels appropriately, which could impair our results of operations.

The sale of our products typically involves a significant commitment of capital by customers, with the attendant delays frequently associated with large capital expenditures. For these and other reasons, the sales cycle associated with our products is typically lengthy and subject to a number of significant risks over which we have little or no control. We expect to plan our production and inventory levels based on internal forecasts of customer demand, which is highly unpredictable and can fluctuate substantially. If sales in any period fall significantly below anticipated levels, our financial condition, results of operations and cash flow would suffer. If demand in any period increases well above anticipated levels, we may have difficulties in responding, incur greater costs to respond, or be unable to fulfill the demand in sufficient time to retain the order, which would negatively impact our operations. In addition, our operating expenses are based on anticipated sales levels, and a high percentage of our expenses are generally fixed in the short term. As a result of these factors, a small fluctuation in timing of sales can cause operating results to vary materially from period to period.

The economic viability of our projects depends on the price spread between fuel and electricity, and the variability of these prices creates a risk that our projects will not be economically viable and that potential customers will avoid such energy price risks.

The economic viability of our CHP products depends on the spread between natural gas fuel and electricity prices. Volatility in one component of the spread, such as the cost of natural gas and other fuels (e.g., propane or distillate oil), can be managed to some extent by means of futures contracts. However, the regional rates charged for both base load and peak electricity may decline periodically due to excess generating capacity or general economic recessions. Our products could become less competitive if electric rates were to fall substantially in the future, noting that historically the rates have not had any sustained decline in price. Also, potential customers may perceive the unpredictable swings in natural gas and electricity prices as an increased risk of investing in on-site CHP, and may decide not to purchase CHP products.

We are exposed to credit risks with respect to some of our customers.

To the extent our customers do not advance us sufficient funds to finance our costs during the execution phase of our contracts, we are exposed to the risk that they will be unable to accept delivery or that they will be unable to make payment at the time of delivery.

We may make acquisitions that could harm our financial performance.

To expedite development of our corporate infrastructure, particularly with regard to equipment installation and service functions, we anticipate the future acquisition of complementary businesses. Risks associated with such acquisitions include the disruption of our existing operations, loss of key personnel in the acquired companies, dilution through the issuance of additional securities, assumptions of existing liabilities, and commitment to further operating expenses. If any or all of these problems actually occur, acquisitions could negatively impact our financial performance and future stock value.

Risks Related to Ownership of our Common Stock

Investment in our Common Stock is subject to price fluctuations and market volatility.

Historically, valuations of many small companies have been highly volatile. The securities of many small companies have experienced significant price and trading volume fluctuations, unrelated to the operating performance or the prospects of such companies. The market price of shares of our Common Stock could be subject to wide fluctuations in response to many risk factors listed in this section, and others beyond our control, including:

- results and timing of our product development;

- results of the development of our competitors' products;
- regulatory actions with respect to our products or our competitors' products;
- actual or anticipated fluctuations in our financial condition and operating results;
- actual or anticipated changes in our growth rate relative to our competitors;
- actual or anticipated fluctuations in our competitors' operating results or changes in their growth rate;
- competition from existing products or new products that may emerge;

- announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures, collaborations, or capital commitments;
- issuance of new or updated research or reports by securities analysts;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- share price and volume fluctuations attributable to inconsistent trading volume levels of our shares;
- additions or departures of key management or personnel;
- disputes or other developments related to proprietary rights, including patents, litigation matters, and our ability to obtain, maintain, defend or enforce proprietary rights relating to our products and technologies;
- announcement or expectation of additional financing efforts;
- sales of our Common Stock by us, our insiders, or our other stockholders; and
- general economic and market conditions.

Furthermore, the stock markets have experienced extreme price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. These broad market and industry fluctuations, as well as general economic, political, and market conditions such as recessions, interest rate changes, or international currency fluctuations, may negatively impact the market price of shares of our Common Stock. In addition, such fluctuations could subject us to securities class action litigation, which could result in substantial costs and divert our management's attention from other business concerns, which could potentially harm our business.

We may be subject to securities litigation, which is expensive and could divert management attention.

Our share price may be volatile, and in the past companies that have experienced volatility in the market price of their stock have been subject to an increased incidence of securities class action litigation. We may be the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and divert our management's attention from other business concerns, which could seriously harm our business.

If securities or industry analysts do not publish research or publish inaccurate or unfavorable research about our business, our share price and trading volume could decline.

The trading market for our Common Stock will depend on the research and reports that securities or industry analysts publish about us or our business. We do not have any control over these analysts. There can be no assurance that analysts will cover us, or provide favorable coverage. If one or more analysts downgrade our stock or change their opinion of our stock, our share price would likely decline. In addition, if one or more analysts cease coverage of our company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our share price or trading volume to decline.

We are controlled by a small group of majority stockholders, and our minority stockholders will be unable to effect changes in our governance structure or implement actions that require stockholder approval, such as a sale of the Company.

George N. Hatsopoulos and John N. Hatsopoulos, who are brothers, beneficially own approximately 39.4% of our outstanding shares of Common Stock. These stockholders have the ability to control various corporate decisions, including our direction and policies, the election of directors, the content of our charter and bylaws and the outcome of any other matter requiring stockholder approval, including a merger, consolidation and sale of substantially all of our assets or other change of control transaction. The concurrence of our minority stockholders will not be required for any of these decisions. This concentration of voting power could delay or prevent an acquisition of us on terms that other stockholders may desire. The interests of this group of stockholders may not always coincide with your interests or the interests of other stockholders and they may act in a manner that advances their best interests and not necessarily those of other stockholders, including seeking a premium value for their Common Stock, which might affect the prevailing market price for our Common Stock.

There has been a material weakness in our disclosure controls and procedures and our internal control over financial reporting, which could harm our operating results or cause us to fail to meet our reporting obligations.

As of our fiscal year end, December 31, 2015, our principal executive officers and principal accounting officer performed an evaluation of disclosure controls and procedures and concluded that our controls were not effective to

provide reasonable assurance that information required to be disclosed by our Company in reports that we file under the Exchange Act, is recorded, processed, summarized and reported as when required. Management conducted an evaluation of our internal control over financial reporting and based on this evaluation, management concluded that the company's internal control over financial reporting was not effective as of December 31, 2015. The Company currently does not have personnel with a sufficient level of accounting knowledge, experience and training in the selection, application and implementation of generally acceptable accounting principles as it relates to complex transactions and financial reporting requirements. The Company also has a small number of employees dealing with general controls over information technology security and user access. This constitutes a material weakness in financial reporting. Any failure to implement effective internal controls could harm our operating results or cause us to fail to meet our reporting obligations. Inadequate internal controls could also cause investors to lose confidence in our reported financial

information, which could have a negative effect on the trading price of our common stock, and may require us to incur additional costs to improve our internal control system.

The JOBS Act allows us to postpone the date by which we must comply with certain laws and regulations and reduces the amount of information provided by us in reports filed with the SEC. We cannot be certain if the reduced disclosure requirements applicable to emerging growth companies will make our Common Stock less attractive to investors.

We are and we will remain an "emerging growth company", as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, until the earliest to occur of (i) the last day of the fiscal year during which our total annual gross revenues equal or exceed $1 billion (subject to adjustment for inflation), (ii) the last day of the fiscal year following the fifth anniversary of our initial public offering, (iii) the date on which we have, during the previous three-year period, issued more than $1 billion in non-convertible debt, or (iv) the date on which we are deemed a large accelerated filer under the Exchange Act.

For so long as we remain an emerging growth company we are not required to:

- have an auditor report on our internal controls over financial reporting pursuant to Section 404(b) of the Sarbanes-Oxley Act;
- comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements (i.e., an auditor discussion and analysis);
- submit certain executive compensation matters to shareholder non-binding advisory votes;
- submit for shareholder approval golden parachute payments not previously approved; and
- disclose certain executive compensation related items such as the correlation between executive compensation and financial performance and comparisons of the Chief Executive Officer's compensation to median employee compensation, when such disclosure requirements are adopted.

In addition, Section 107 of the JOBS Act also provides that an emerging growth company can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act of 1933, as amended, or the Securities Act, for complying with new or revised accounting standards. An emerging growth company can therefore delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. However, we have chosen to "opt out" of such extended transition period, and as a result, we will comply with new or revised accounting standards on the relevant dates on which adoption of such standards is required for non-emerging growth companies. Section 107 of the JOBS Act provides that our decision to opt out of the extended transition period for complying with new or revised accounting standards is irrevocable.

We cannot predict if investors will find our Common Stock less attractive because we may rely on some of these exemptions. If some investors find our Common Stock less attractive as a result, there may be a less active trading market for our Common Stock and our stock price may be more volatile. If we avail ourselves of certain exemptions from various reporting requirements, our reduced disclosure may make it more difficult for investors and securities analysts to evaluate us and may result in less investor confidence.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

Our headquarters is located in Waltham, Massachusetts, and consists of approximately 43,000 square feet of leased space, of which Tecogen occupies approximately 40,000 square feet of manufacturing, storage and office space. We sub-lease the remaining space to American DG Energy, and other tenants. Our lease, with an original expiration date of March 31, 2014, was renewed for an additional ten years and will expire March 31, 2024. We believe that our facilities are appropriate and adequate for our current needs.

Our nine leased service centers can be broken into two different sizes. The larger of the two has office space to accommodate administrative, sales and engineering personnel, and warehouse space to stock parts in support of our service contracts.

As of December 31, 2015, the service centers that fit this larger category are based in Piscataway, New Jersey, Valley Stream and Buchanan, New York to service the Metro New York City and the Mid-Atlantic region. The San

Francisco bay area and Northern California is served by such a center in Hayward, California. A portion of the Corporate headquarters in Waltham, Massachusetts is used in this manner to service Boston and northern New England.

The smaller type service center is a parts depot or warehouse for the stocking of parts in support of our service contracts. These centers are located in Los Angeles, California, Sterling Heights, Michigan, Newark, New York, and East Windsor, Connecticut.

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Item 3. Legal Proceedings.
In the ordinary course of its business, the Company is involved in various legal proceedings involving a variety of matters. The Company does not believe there are any pending legal proceedings that will have a material impact on the Company's financial position or results of operations.
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.
Market
The Company's common stock has been listed on the NASDAQ Capital Market since May 2014 and trades under the ticker symbol TGEN. The following table sets forth, for the periods indicated, the high and low sale prices per share of common stock as quoted by the NASDAQ.

Year Ended December 31, 2015	High	Low
1st Quarter	$5.65	$4.55
2nd Quarter	5.19	3.90
3rd Quarter	4.40	2.80
4th Quarter	4.10	2.46
Year Ended December 31, 2014	High	Low
2nd Quarter	$31.31	$5.06
3rd Quarter	8.18	4.97
4th Quarter	7.80	4.59

Holders
As of March 29, 2016, there were more than 300 beneficial owners of our Common Stock including 88 holders of record.
Dividends
To date, we have not declared or paid any dividends on our outstanding shares. We currently do not anticipate paying any cash dividends in the foreseeable future on our Common Stock. Although we intend to retain our earnings to finance our operations and future growth, our Board of Directors will have discretion to declare and pay dividends in the future. Payment of dividends in the future will depend upon our earnings, capital requirements and other factors, which our Board of Directors may deem relevant. Also, the Company's convertible note provides that the Company shall not declare, pay or authorize any dividend, without prior consent of the note holder.
Equity Compensation Plan Information
The following table provides information, as of December 31, 2015, with respect to our equity compensation plans:

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 (a)) (c)
Equity compensation plans approved by security holders [1]	1,268,200	$3.06	1,614,533
Equity compensation plans not approved by security holders	—	—	—
Total	1,268,200	$3.06	1,614,533

(1) 2006 Equity Incentive Plan approved by written consent of stockholders (see exhibit 10.24).

Purchases of Equity Securities

Not applicable.

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Item 6. Selected Financial Data.
Not applicable.
Item 7. Management's Discussion and Analysis of Financial Condition
You should read the following discussion and analysis of our financial condition and results of operations together with our financial statements and related notes appearing elsewhere in this Annual Report on Form 10-K. Some of the information contained in this discussion and analysis or set forth elsewhere in this Annual Report on Form 10-K, including information with respect to our plans and strategy for our business, includes forward-looking statements that involve risks and uncertainties. You should review “Item 1A. Risk Factors” of this Annual Report on Form 10-K for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.
Overview
Tecogen designs, manufactures and sells industrial and commercial cogeneration systems that produce combinations of electricity, hot water, and air conditioning using automotive engines that have been specially adapted to run on natural gas. Cogeneration systems are efficient because in addition to supplying mechanical energy to power electric generators or compressors – displacing utility supplied electricity – they provide an opportunity for the facility to incorporate the engine’s waste heat into onsite processes such as space and potable water heating. We produce standardized, modular, small-scale products, with a limited number of product configurations that are adaptable to multiple applications. We refer to these combined heat and power products as CHP (electricity plus heat) and MCHP (mechanical power plus heat).
Our products are sold directly to end-users by our in-house marketing team and by established sales agents and representatives. We have agreements in place with distributors and sales representatives, including American DG Energy and EuroSite Power which are affiliated companies. Our existing customers include hospitals and nursing homes, colleges and universities, health clubs and spas, hotels and motels, office and retail buildings, food and beverage processors, multi-unit residential buildings, laundries, ice rinks, swimming pools, factories, municipal buildings, and military installations. We have an installed base of more than 2,100 units. Many of these have been operating for almost 25 years.
In 2009, we created a majority-owned subsidiary Ilios to develop and distribute a line of ultra-high-efficiency heating products, including a high efficiency water heater. These products provide twice the efficiency of conventional commercial and industrial boilers (based upon management estimates) utilizing advanced thermodynamic principles. As of the date of this report, we own a 65.0% interest in Ilios.
Although we may, from time to time, have one or a few customers who may represent more than 10% of our product revenue for a given year, we are not dependent on the recurrence of revenue from those customers. Our product revenue is such that customers may make a large purchase once and may not ever make a purchase again. Our equipment is built to last 20 or more years, therefore, our product revenue model is not dependent on recurring sales transactions from the same customer. Our service revenue, however, lends itself to recurring revenue from particular customers; although we currently do not have any service revenue customers who make up more than 10% of our total revenues on an annual basis.
For the last two fiscal years, more than one third of our revenue was generated from long-term maintenance contracts, or service contracts, which provide us with a somewhat predictable revenue stream, especially during the summer months. We have a slight surge of activity from May through September as our “chiller season” is in full swing. Our service revenue has grown from year to year since 2005, with our New York City/New Jersey, New England and to some extent California territories experiencing the majority of the growth. This growth is consistent with the sale of new units into those territories. Our service margins are generally predictable as we service hundreds of long-term contracts with relatively low dollar, high volume sales.
Our product revenue is derived from the sale of the various cogeneration modules, such as the InVerde 100, the CM-75 and the CM-60, Ilios heat pumps, and the three chiller models, such as the smaller ST, the larger DT and the RT (roof-top) units. The sales cycle for each module varies widely, and can range from as short as a month to as long as a year or more. Furthermore, since our products and their installation are costly they are considered a major capital

improvement and customers may be slow in making their buying decisions. Our products sales are high dollar value, low volume transactions. Therefore our product revenue can be difficult to predict and the expected margin varies. Our cogeneration and chiller modules are built to order and revenue is recognized upon shipment. The lead time to build and deliver a unit depends on its customized configuration and is approximately 12 to 16 weeks from time of purchase order. As revenue is recognized upon shipment, our work-in-process is an important factor in understanding our financial condition in any given quarter.

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Critical Accounting Policies

The preparation of financial statements and related disclosures in conformity with accounting principles generally accepted in the United States of America requires management to make judgments, assumptions and estimates that affect the amounts reported. Note 2 of the Notes to Consolidated Financial Statements describes the significant accounting policies used in the preparation of the consolidated financial statements. Some of these significant accounting policies are considered to be critical accounting policies, as defined below.

A critical accounting policy is defined as one that is both material to the presentation of the Company's financial statements and requires management to make difficult, subjective or complex judgments that could have a material effect on the Company's financial condition and results of operations. Specifically, critical accounting estimates have the following attributes: 1) the Company is required to make assumptions about matters that are highly uncertain at the time of the estimate; and 2) different estimates the Company could reasonably have used, or changes in the estimate that are reasonably likely to occur, would have a material effect on the Company's financial condition or results of operations. Estimates and assumptions about future events and their effects cannot be determined with certainty. The Company bases its estimates on historical experience and on various other assumptions believed to be applicable and reasonable under the circumstances. These estimates may change as new events occur, as additional information is obtained and as the Company's operating environment changes. These changes have historically been minor and have been included in the consolidated financial statements as soon as they became known. In addition, management is periodically faced with uncertainties, the outcomes of which are not within its control and will not be known for prolonged periods of time. These uncertainties are discussed in Item 1A, "Risk Factors" above. Based on a critical assessment of its accounting policies and the underlying judgments and uncertainties affecting the application of those policies, management believes that the Company's consolidated financial statements are fairly stated in accordance with generally accepted accounting principles, and present a meaningful presentation of the Company's financial condition and results of operations.

Management believes that the following are critical accounting policies:

Accounts Receivable

Accounts receivable are stated at the amount management expects to collect from outstanding balances. An allowance for doubtful accounts is provided for those accounts receivable considered to be uncollectible based upon historical experience and management's evaluation of outstanding accounts receivable at the end of the year. Bad debts are written off against the allowance when identified.

Inventory

Raw materials, work in process, and finished goods inventories are stated at the lower of cost, as determined by the average cost method, or market. The Company periodically reviews inventory quantities on hand for excess and/or obsolete inventory based primarily on historical usage, as well as based on estimated forecast of product demand. Any reserves that result from this review are charged to cost of sales.

Revenue Recognition

Revenue is recognized when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the price is fixed or determinable and collectability is reasonably assured. Generally, sales of cogeneration and chiller units and parts are recognized when shipped and services are recognized over the term of the service period. Payments received in advance of services being performed are recorded as deferred revenue.

The Company recognizes revenue in certain circumstances before delivery has occurred (commonly referred to as bill and hold transactions). In such circumstances, among other things, risk of ownership has passed to the buyer, the buyer has made a written fixed commitment to purchase the finished goods, the buyer has requested the finished goods be held for future delivery as scheduled and designated by them, and no additional performance obligations exist by the Company. For these transactions, the finished goods are segregated from inventory and normal billing and credit terms granted.

For those arrangements that include multiple deliverables, the Company first determines whether each service or deliverable meets the separation criteria of FASB ASC 605-25, Revenue Recognition—Multiple-Element Arrangements. In general, a deliverable (or a group of deliverables) meets the separation criteria if the deliverable has stand-alone

value to the customer and, if the arrangement includes a general right of return, delivery or performance of the undelivered item(s) is considered probable and substantially in control of the Company. Each deliverable that meets the separation criteria is considered a separate ‘‘unit of accounting”. The Company allocates the total arrangement consideration to each unit of accounting using the relative selling price method. The amount of arrangement consideration that is allocated to a delivered unit of accounting is limited to the amount that is not contingent upon the delivery of another unit of accounting.

When vendor-specific objective evidence or third-party evidence is not available, adopting the relative fair value method of allocation permits the Company to recognize revenue on specific elements as completed based on the estimated selling price. The Company generally uses internal pricing lists that determine sales prices to external customers in determining its best estimate of the selling price of the various deliverables in multiple-element arrangements. Changes in judgments made in estimating the selling price of the various deliverables could significantly affect the timing or amount of revenue recognition. The Company enters into sales arrangements with customers to sell its cogeneration and chiller units and related service contracts and occasionally installation services. Based on the fact that the Company sells each deliverable to other customers on a stand-alone basis, the company has determined that each deliverable has a stand-alone value. Additionally, there are no rights of return relative to the delivered items; therefore, each deliverable is considered a separate unit of accounting.

After the arrangement consideration has been allocated to each unit of accounting, the Company applies the appropriate revenue recognition method for each unit of accounting based on the nature of the arrangement and the services included in each unit of accounting. Cogeneration and chiller units are recognized when shipped and services are recognized over the term of the applicable agreement, or as provided when on a time and materials basis.

In some cases, our customers may choose to have the Company engineer and install the system for them rather than simply purchase the cogeneration and/or chiller units. In this case, the Company accounts for revenue, or turnkey revenue, and costs using the percentage-of-completion method of accounting. Under the percentage-of-completion method of accounting, revenues are recognized by applying percentages of completion to the total estimated revenues for the respective contracts. Costs are recognized as incurred. The percentages of completion are determined by relating the actual cost of work performed to date to the current estimated total cost at completion of the respective contracts. When the estimate on a contract indicates a loss, the Company’s policy is to record the entire expected loss, as required by generally accepted accounting principles. The excess of contract costs and profit recognized to date on the percentage-of-completion accounting method in excess of billings is recorded as unbilled revenue. Billings in excess of related costs and estimated earnings are recorded as deferred revenue.

Recent Accounting Pronouncements

In May 2014, the FASB amended its standards related to revenue recognition. This amendment replaces all existing revenue recognition guidance and provides a single, comprehensive revenue recognition model for all contracts with customers. The standard contains principles that we will apply to determine the measurement of revenue and timing of when it is recognized. The underlying principle is that we will recognize revenue in a manner that depicts the transfer of goods or services to customers at an amount that we expect to be entitled to in exchange for those goods or services. The guidance provides a five-step analysis of transactions to determine when and how revenue is recognized. Other major provisions include capitalization of certain contract costs, consideration of the time value of money in the transaction price and allowing estimates of variable consideration to be recognized before contingencies are resolved in certain circumstances. The amendment also requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to fulfill a contract. The standard allows either full or modified retrospective adoption effective for our annual and interim periods beginning January 1, 2018. Management is in the process of evaluating the impact the amendment will have on our Consolidated Financial Statements. While a final decision has not been made, we are currently planning to adopt the standard using the modified retrospective approach.

Emerging Growth Company

Section 107 of the JOBS Act provides that an emerging growth company can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act for complying with new or revised accounting standards. However, we chose to “opt out” of any extended transition period, and as a result we will comply with new or revised accounting standards on the relevant dates on which adoption of such standards is required for non-emerging growth companies. Section 107 of the JOBS Act provides that our decision to opt out of the extended transition period for complying with new or revised accounting standards is irrevocable.

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Results of Operations

The following table sets forth for the periods indicated, the percentages of the net sales represented by certain items reflected in the Company's statements of operations.

	Years ended December 31,			
	2015		2014	
Revenues	100.0	%	100.0	%
Cost of Sales	64.4		66.9	
Gross Profit	35.6		33.1	
General and administrative	37.3		37.6	
Selling	7.9		9.3	
Research and development	2.8		5.4	
Loss from operations	(12.4	)	(19.2	)
Total other expense, net	(0.7	)	(0.9	)
Consolidated net loss	(13.1	)	(20.1	)
Less: Loss attributable to the noncontrolling interest	0.3		0.6	
Net loss attributable to Tecogen Inc.	(12.8	)	(19.5	)

Year Ended December 31, 2015 Compared to Year Ended December 31, 2014

Revenues

Revenues in 2015 were $21,442,657 compared to $19,342,664 in 2014, an increase of $2,099,993 or 10.9%. This increase is the result of the increased sales in both equipment and services. Product revenues in 2015 were $10,055,237 compared to $8,625,034 in 2014, an increase of $1,430,203 or 16.6%. This increase from the year ended December 31, 2014 to 2015 resulted from an increase in cogeneration sales of $2,518,028 and a decrease in chiller sales of $1,087,825. The increased sales efforts in 2015 yielded dramatic increase in cogen sales. Our product mix, as well as product revenue, can vary significantly from period to period as our products are high dollar, low volume sales in which revenue is only recognized upon shipment.

Revenues derived from our service centers including installation activities, in 2015 were $11,387,420 compared to $10,717,630 for the same period in 2014, an increase of $669,790 or 6.2%. Our service operation grows with the sales of cogeneration and chiller systems, since the majority of our product sales are accompanied by a service contract or time and materials agreements. As a result our “fleet” of units being serviced by our service department grows with product sales. In addition, our service department revenue has increased due to turnkey projects of $3,555,239 in 2015 compared to $3,279,505 in 2014.

Cost of Sales

Cost of sales in 2015 was $13,809,431 compared to $12,943,600 in 2014, an increase of $865,831 or 6.7%. Our gross profit margin was 35.6% in 2015 compared to 33.1% in 2014, an increase of 7.6%. The increase in gross profit margin is attributable to better margins on turnkey projects year over year and improving production efficiencies in material, labor and factory utilization. The factory continues to improve product service cycles, ease of maintenance, and component sourcing in to order to continuously improve efficiencies in our processes.

Operating Expenses

Operating expenses increased in 2015 to $10,276,576 compared to $10,102,381 in 2014, an increase of $174,195 or 1.7%. This increase was mostly due to increased general and administrative expense of $732,882, and a decreased research and development expense of $449,898. The increase in general and administrative expenses was due to increased rent expense after the loss of subleases, and the first full year of public company related expenses. Selling expenses decreased in 2015 to $1,687,479 compared to $1,796,268 in 2014, a decrease of $108,789 or 6.1%. This decrease was due to a decrease in sales commissions as more revenues were the result of staff compared to contracted sales representatives. Research and development expenses decreased in 2015 to $591,585 compared to $1,041,483 in 2014, a decrease of $449,898 or 43.2%. The decrease in research and development expenses was due to the completion of projects related to Ilios and InVerde e+ products. The decrease is not the result of a change in focus with research and development, but reflects the completion of these long term programs. Management continues its

efforts to improve the product's performance and cost.

Loss from Operations

Loss from operations for the year ended December 31, 2015 was $2,643,350 compared to $3,703,317 in 2014, a decrease of $1,059,967 or 28.6%. The decrease in the loss was due to the increase in operating expenses being less than the increase in gross profit as discussed above.

Other Income (Expense), net

Other expense, net for the year ended December 31, 2015 was $157,610 compared to $167,635 for the same period in 2014. Other income (expense) includes interest income and other income of $14,334, net of interest expense on notes payable of $171,944 in 2015. For the same period in 2014, interest and other income was $9,710 and interest expense was $177,345. The interest income and expense is not expected to change in the near future.

Noncontrolling Interest

The noncontrolling interest share in the losses of Ilios was $73,547 for the year ended December 31, 2015 compared to $125,140 for the same period in 2014, a decrease of $51,593 or 41.2%. The decrease in the losses were a direct result of increased sales and improving performance of the subsidiary. Management expects continued improvement with higher sales volume and margin improvement in the near future. Noncontrolling interest ownership percentage as of December 31, 2015 and 2014 was 35%.

Net Loss Attributable to Tecogen, Inc.

Net loss for the year ended December 31, 2015 was $2,727,413 compared to $3,745,812 for the same period in 2014. The decrease in the loss of $1,018,399 was due to the increase in gross profit offset partially by the increase in operating expenses as discussed above.

Liquidity and Capital Resources

Consolidated working capital at December 31, 2015 was $14,027,370, compared to $7,217,583 at December 31, 2014, an increase of $6,809,787 or 94.3%. Included in working capital were cash and cash equivalents of $5,486,526 and $294,802 in restricted short-term investments at December 31, 2015, compared to $1,186,033 in cash and cash equivalents and $585,702 of restricted short-term investments at December 31, 2014. These increases in consolidated working capital and cash is due to increased cash from the sale of stock, increased accounts receivable and increased inventory in anticipation of increased sales.

Cash used in operating activities for the years ended December 31, 2015 and 2014 was $4,733,759 and $5,126,816, respectively. Our accounts receivable balance increased to $5,286,863 at December 31, 2015 compared to $4,750,437 at December 31, 2014, an increase of $536,426 due to timing of billing, shipments, and collections. Unbilled revenues also increased by $375,479 in connection with turnkey projects. Our inventory increased to $5,683,043 as of December 31, 2015 compared to $4,090,221 as of December 31, 2014, an increase of $1,585,822. This increase was in anticipation of increased sales, and inventory associated with change in product lines with a new inverter with the InVerde e+. Prepaid expenses as of December 31, 2015 increased to $353,105 as compared to $348,868, an increase of $4,237.

Accounts payable increased to $3,311,809 as of December 31, 2015 from $2,416,313 at December 31, 2014, an increase of $895,496. The increase in accounts payable is related to increased activities in manufacturing. Accrued expenses decreased to $1,066,860 as of December 31, 2015 compared to $1,008,153 as of December 31, 2014, a decrease of $58,707. Deferred revenues decreased to $1,270,103 as of December 31, 2015 from $1,873,729 at December 31, 2014, a decrease of $603,626. This significant decrease in deferred revenues relates to a decrease in customer deposits, and an increase in projects billed but not completed.

Our related party balance was a net receivable of $1,177,261 as of December 31, 2015 and $600,251 as of December 31, 2014. This change is due to receivables with related parties being larger than payables at year end and are not necessarily indicative of any significant change in operations.

During 2015 our cash flows used in investing activities were $185,740 and included , purchases of property and equipment of $69,582 and expenditures related to intangible assets such as patents and product certifications of $133,032 offset by the proceeds from disposal of assets of $16,874.

Our cash flows provided by financing activities were $9,219,992 for 2015, resulting from the proceeds of $8,859,767 from the sale of the Company's common stock and warrants provided by a private placement, and the exercising of

stock options of $360,225.

At December 31, 2015, our commitments included various leases for office and warehouse facilities of $4,674,897 to be paid over several years through 2024. The source of funds to fulfill these commitments will be provided from operations.

Based on our current operating plan, we believe existing resources, including cash and cash flows from operations and funds raised in subsequent private placements, will be sufficient to meet our working capital requirements for the next twelve months. As we continue to grow our business, we expect that our cash requirements will increase. As a result, we may need to raise additional capital through a debt financing or an equity offering to meet our operating and capital needs for future growth.

Seasonality

We expect that the majority of our heating systems sales will be in the winter and the majority of our chilling systems sales will be in the summer. Our cogeneration and chiller system sales are not generally affected by the seasons, although customer goals will be to have chillers installed and running in the spring. Our service team does experience higher demand in the warmer months when cooling is required. These units are generally shut down in the winter and started up again in the spring. This “busy season” for the service team generally runs from May through the end of September.

Off Balance Sheet Arrangements

On April 10, 2015, the performance obligation tied to a performance bond previously collateralized by an account owned by John N. Hatsopoulos was relieved and the credit facility was canceled. As of December 31, 2015, $294,802 in a letter of credit was outstanding under a revolving bank credit facility needed to collateralize a performance bond on a certain installation project. The bank required collateral to issue the letter of credit which the company provided in the form of restricted cash. This revolving bank credit facility was terminated on January 28, 2016 as the performance bond obligations were cleared.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

Not applicable.

Item 8. Financial Statements and Supplementary Data.

The information required by this item is incorporated from Item 15 and pages F-1 through F-26 of this Annual Report on Form 10-K.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None

Item 9A. Controls and Procedures.

Management’s Evaluation of Disclosure Controls and Procedures:

Our disclosure controls and procedures are designed to provide reasonable assurance that the control system’s objectives will be met. Our management, including our Co-Chief Executive Officers and Chief Financial Officer, after evaluating the effectiveness of our disclosure controls and procedures as of December 31, 2015, or the "Evaluation Date", have concluded that as of the Evaluation Date, our disclosure controls and procedures were not effective due to material weaknesses in financial reporting relating to lack of personnel with a sufficient level of accounting knowledge and a small number of employees dealing with general controls over information technology. At the present time, our management has decided that, considering the employees involved and the control procedures in place, there are risks associated with the above, but the potential benefits of adding additional employees to mitigate these weaknesses do not justify the expenses associated with such increases. Management will continue to evaluate the above weaknesses, and as the Company grows and resources become available, the Company plans to take the necessary steps in the future to remediate the weaknesses.

For these purposes, the term disclosure controls and procedures of an issuer means controls and other procedures of an issuer that are designed to ensure that information required to be disclosed by the issuer in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC’s rules and forms. 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 Exchange 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.

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Management's Annual Report on Internal Control over Financial Reporting:
The management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting in accordance with the Exchange Act. Management, including our Co-Chief Executive Officers and Chief Financial Officer, conducted an evaluation of our internal control over financial reporting based on the framework and criteria established in Internal Control—Integrated Framework (2013), issued by the Committee of Sponsoring Organizations of the Treadway Commission. This evaluation included review of the documentation of controls, evaluation of the design effectiveness of controls, testing of the operating effectiveness of controls and a conclusion of this evaluation. Based on this evaluation, management concluded that the Company's internal control over financial reporting was not effective as of December 31, 2015.
At December 31, 2015, the Company employed 72 active full-time employees and 4 part-time employees. The Company currently does not have personnel with a sufficient level of accounting knowledge, experience and training in the selection, application and implementation of generally accepted accounting principles as it relates to complex transactions and the financial reporting requirements for such transactions. The Company also has a small number of employees dealing with general controls over information technology security and user access. This constitutes a material weakness in financial reporting. At this time, management has decided that considering the employees involved and the control procedures in place, there are risks associated with the above, but the potential benefits of adding additional employees to mitigate these weaknesses, does not justify the expenses associated with such increases. Management will continue to evaluate the above weaknesses.
Our management, including our Co-Chief Executive Officers and Chief Financial Officer, does not expect that our Disclosure Controls or our internal control over financial reporting will prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. The design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Further, because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, within the Company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty and that breakdowns can occur because of a simple error or mistake. Controls can also be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the controls. The design of any system of controls is based in part on certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Projections of any evaluation of controls effectiveness to future periods are subject to risks. Over time, controls may become inadequate because of changes in conditions or deterioration in the degree of compliance with policies or procedures.
Item 9B. Other Information.
None.
PART III
Item 10. Directors, Executive Officers and Corporate Governance.
The information called for by this item is incorporated by reference to our 2016 Proxy Statement.
Item 11. Executive Compensation.
The information called for by this item is incorporated by reference to our 2016 Proxy Statement.
Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.
The information called for by this item is incorporated by reference to our 2016 Proxy Statement.
Item 13. Certain Relationships and Related Transactions, and Director Independence.
The information called for by this item is incorporated by reference to our 2016 Proxy Statement.
Item 14. Principal Accountant Fees and Services.
The information called for by this item is incorporated by reference to our 2016 Proxy Statement.

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PART IV
Item 15. Exhibits and Financial Statement Schedules.
The following consolidated financial statements and the related notes thereto of Tecogen Inc. and the Accounting Firm thereon are filed as part of this Annual Report on Form 10-K.
(a) REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM
INDEX TO FINANCIAL STATEMENTS AND FINANCIAL STATEMENTS SCHEDULES:
Consolidated Balance Sheets as of December 31, 2015 and December 31, 2014
Consolidated Statements of Operations for the years ended December 31, 2015 and December 31, 2014
Consolidated Statements of Stockholders' Equity for the years ended December 31, 2015 and December 31, 2014
Consolidated Statements of Cash Flows for the years ended December 31, 2015 and December 31, 2014
Notes to Consolidated Financial Statements
All other schedules for which provision is made in the applicable accounting regulations of the SEC are not required under the related instructions, or are inapplicable, and therefore have been omitted.
(b) Exhibits
The exhibits to the Registration Statement are listed in the Exhibit Index attached hereto and incorporated by reference herein.

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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.

TECOGEN INC.
(Registrant)

By: /s/ John N. Hatsopoulos
Co-Chief Executive Officer
(Principal Executive Officer)

By: /s/ Benjamin Locke
Co-Chief Executive Officer
(Principal Executive Officer)

By: /s/ David A. Garrison
Chief Financial Officer, Treasurer and Secretary
(Principal Financial and Accounting Officer)

Dated: March 30, 2016

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 capacity and on the dates indicated.

Signature	Title	Date
/s/ Angelina M. Galiteva Angelina M. Galiteva	Chairman of the Board	March 30, 2016
/s/ John N. Hatsopoulos John N. Hatsopoulos	Director and Co-Chief Executive Officer (Principal Executive Officer)	March 30, 2016
/s/ Benjamin Locke Benjamin Locke	Co-Chief Executive Officer (Principal Executive Officer)	March 30, 2016
/s/ David A. Garrison David A. Garrison	Chief Financial Officer, Treasurer and Secretary (Principal Financial and Accounting Officer)	March 30, 2016
/s/ Charles T. Maxwell Charles T. Maxwell	Director	March 30, 2016
/s/ Ahmed F. Ghoniem Ahmed F. Ghoniem	Director	March 30, 2016
/s/ Joseph E. Aoun Joseph E. Aoun	Director	March 30, 2016
/s/ Earl R. Lewis Earl R. Lewis	Director	March 30, 2016

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EXHIBIT INDEX

Exhibit Number	Description
3.1[b]	Amended and Restated Certificate of Incorporation.
3.2[b]	Amended and Restated Bylaws.
4.1[b]	Specimen Common Stock Certificate of Tecogen Inc.
4.2[a]	Form of Restricted Stock Purchase Agreement.
4.3+[b]	Form of Stock Option Agreement.
4.5	Form of Warrant Agreement.
10.1+[c]	Tecogen Inc. 2006 Stock Incentive Plan, as amended and restated on June 30, 2014 with stockholder approval on July 15, 2014.
10.2[a]	Form of Tecogen Inc. Subscription Agreement for private placement of Common Stock.
10.7[b]	Lease Agreement between Atlantic-Waltham Investment II, LLC, and Tecogen Inc., dated May 14, 2008.
10.8[b]	Second Amendment to Lease Agreement between Atlantic-Waltham Investment II, LLC, and Tecogen Inc., dated January 16, 2013.
10.11[a]	Form of Sales Representative Agreement.
10.12#[b]	Asset Purchase Agreement with Danotek, LLC.
10.13#[b]	Exclusive License Agreement between Tecogen Inc. and the Wisconsin Alumni Research Foundation, dated February 5, 2007.
10.14[a]	Grant Award Number PIR-08-022, dated July 2, 2009.
10.15#[b]	Sales Representative Agreement between American DG Energy Inc. and Ilios Dynamics, dated October 20, 2009.
10.16[b]	First Amendment to the Sales Representative Agreement, dated November 12, 2013, between Ilios Inc. and American DG Energy Inc.
10.20[b]	Form of Common Stock Purchase Agreement.
10.21[b]	Senior Convertible Promissory Note, dated December 23, 2013, by Tecogen Inc. in favor of Michaelson Capital Special Finance Fund LP.
10.22[b]	Collective Bargaining Agreement, dated February 25, 2014, between Tecogen Inc. and International Union of Operating Engineers, Local 68, 68A, 68B.
10.23[b]	Revolving Line of Credit Agreement between Tecogen Inc. and John N. Hatsopoulos, dated March 26, 2014.
10.24[c]	Facilities and Support Services Agreement between American DG Energy Inc. and Tecogen Inc., dated August 8, 2014.
10.26[g]	Revolving Line of Credit Agreement between Tecogen Inc. and John N. Hatsopoulos, dated July 1, 2015.
10.28[d]	Form of Common Stock Purchase Agreement dated August 3, 2015.
10.29[d]	Registration Rights Agreement dated August 3, 2015.
10.30[e]	First amendment to the Facilities and Support Services Agreement between American DG Energy Inc. and Tecogen Inc., dated Aug 7, 2015.
10.31[f]	Joint Venture Agreement, dated December 28, 2015.
10.32[f]	License between Tecogen and Ultra Emissions Technologies Ltd., dated December 28, 2015.
10.33[f]	Form of subscription agreement between Tecogen and the several investors purchasing shares of Tecogen common stock and warrants, dated December 28, 2015.
10.34[f]	Form of warrants issued pursuant to the subscription agreements described in Exhibit 10.33 hereto.
14.1[a]	Code of Business Conduct and Ethics
21.1[b]	List of subsidiaries
23.1*	Consent of Wolf & Company, P.C.
31.1*	Rule 13a-14(a) Certification of Co-Chief Executive Officer
31.2*	Rule 13a-14(a) Certification of Co-Chief Executive Officer

31.3* Rule 13a-14(a) Certification of Chief Financial Officer

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Exhibit Number	Description
32.1*	Section 1350 Certifications of Co-Chief Executive Officers and Chief Financial Officer
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.

\# Confidential Treatment has been granted for portions of this document. The confidential portions were omitted and filed separately, on a confidential basis, with the Securities and Exchange Commission.

\+ Management contract or compensatory plan or agreement.

[a] Incorporated by reference to the registrant’s Registration Statement on Form S-1, as amended, originally filed with the SEC on December 22, 2011 (Registration No. 333-178697).

[b] Incorporated by reference to the registrant's Registration Statement on Form S-1, as amended, filed with the SEC on June 27, 2014 (Registration No. 333-193791).

[c] Incorporated by reference to the registrant’s Quarterly Report on Form 10-Q, for the quarter ended June 30, 2014 as filed with the SEC on August 14, 2014.

[d] Incorporated by reference to the registrant's Report on Form 8-K, as filed with the SEC on August 6, 2015.

[e] Incorporated by reference to the registrant's Report on Form 8-K, as filed with the SEC on August 13, 2015.

[f] Incorporated by reference to the registrant's Report on Form 8-K, as filed with the SEC on December 31, 2015.

[g] Incorporated by reference to the registrant's Report on Form 8-K, as filed with the SEC on June 18, 2015.

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of
Tecogen Inc.

We have audited the accompanying consolidated balance sheets of Tecogen Inc. (the “Company”) as of December 31, 2015 and 2014 and the related consolidated statements of operations, changes in stockholders’ equity and cash flows for the years then ended. These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Tecogen Inc. as of December 31, 2015 and 2014, and the results of its operations and its cash flows for the years then ended, in conformity with U.S. generally accepted accounting principles.

/s/ WOLF & COMPANY, P.C.
Boston, Massachusetts
March 30, 2016

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CONSOLIDATED BALANCE SHEETS
As of December 31, 2015 and 2014

	2015	2014
ASSETS		
Current assets:		
Cash and cash equivalents	$5,486,526	$1,186,033
Short-term investments, restricted	294,802	585,702
Accounts receivable, net	5,286,863	4,750,437
Unbilled revenue	1,072,391	696,912
Inventory, net	5,683,043	4,090,221
Due from related party	1,177,261	600,251
Deferred financing costs	48,989	50,201
Prepaid and other current assets	353,105	348,868
Total current assets	19,402,980	12,308,625
Property, plant and equipment, net	543,754	658,421
Deferred financing costs, net of current portion	—	48,990
Intangible assets, net	1,044,611	1,011,300
Goodwill	40,870	40,870
Other assets	58,425	53,325
TOTAL ASSETS	$21,090,640	$14,121,531
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$3,311,809	$2,416,313
Accrued expenses	1,066,860	1,008,153
Deferred revenue	996,941	1,666,576
Total current liabilities	5,375,610	5,091,042
Long-term liabilities:		
Deferred revenue, net of current portion	273,162	207,153
Senior convertible promissory note, related party	3,000,000	3,000,000
Total liabilities	8,648,772	8,298,195
Commitments and contingencies (Note 8)		
Stockholders' equity:		
Tecogen Inc. stockholders' equity:		
Common stock, $0.001 par value; 100,000,000 shares authorized; 18,478,990 and 15,905,881 issued and outstanding at December 31, 2015 and 2014, respectively	18,479	15,906
Additional paid-in capital	34,501,640	25,088,213
Accumulated deficit	(21,682,437)	(18,955,023)
Total Tecogen Inc. stockholders' equity	12,837,682	6,149,096
Noncontrolling interest	(395,814)	(325,760)
Total stockholders' equity	12,441,868	5,823,336
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$21,090,640	$14,121,531

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

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CONSOLIDATED STATEMENTS OF OPERATIONS
For the Years Ended December 31, 2015 and 2014

	2015	2014
Revenues		
Products	$10,055,237	$8,625,034
Services	11,387,420	10,717,630
Total revenues	21,442,657	19,342,664
Cost of sales		
Products	7,137,149	6,347,583
Services	6,672,282	6,596,017
Total cost of sales	13,809,431	12,943,600
Gross profit	7,633,226	6,399,064
Operating expenses		
General and administrative	7,997,512	7,264,630
Selling	1,687,479	1,796,268
Research and development	591,585	1,041,483
Total operating expenses	10,276,576	10,102,381
Loss from operations	(2,643,350)	(3,703,317)
Other income (expense)		
Interest and other income	14,334	9,710
Interest expense	(171,944)	(177,345)
Total other expense, net	(157,610)	(167,635)
Loss before income taxes	(2,800,960)	(3,870,952)
Consolidated net loss	(2,800,960)	(3,870,952)
Less: Loss attributable to the noncontrolling interest	73,547	125,140
Net loss attributable to Tecogen Inc.	$(2,727,413)	$(3,745,812)
Net loss per share - basic and diluted	$(0.16)	$(0.24)
Weighted average shares outstanding - basic and diluted	16,860,453	15,607,897

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

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CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
For the Years Ended December 31, 2015 and 2014

	Tecogen Inc.					
	Common Stock Shares	Common Stock $.001 Par Value	Additional Paid-In Capital	Accumulated Deficit	Noncontrolling Interest	Total
Balance at December 31, 2013	15,155,200	$15,155	$22,463,996	$(15,209,212)	$(204,046)	$7,065,893
Sale of common stock	649,106	649	2,339,545	—	—	2,340,194
Exercise of stock options	101,575	102	161,163	—	—	161,265
Stock based compensation expense	—	—	123,510	—	3,426	126,936
Net loss	—	—	—	(3,745,812)	(125,140)	(3,870,952)
Balance at December 31, 2014	15,905,881	$15,906	$25,088,214	$(18,955,024)	$(325,760)	$5,823,336
Sale of common stock and warrants	2,350,734	2,351	8,857,416	—	—	8,859,767
Exercise of stock options	222,375	222	360,003	—	—	360,225
Stock based compensation expense	—	—	196,007	—	3,493	199,500
Net loss	—	—	—	(2,727,413)	(73,547)	(2,800,960)
Balance at December 31, 2015	18,478,990	$18,479	$34,501,640	$(21,682,437)	$(395,814)	$12,441,868

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

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CONSOLIDATED STATEMENTS OF CASH FLOWS
For the Years Ended December 31, 2015 and 2014

	2015	2014
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$(2,800,960)	$(3,870,952)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	271,727	278,865
Loss (gain) on disposal of asset	(4,631)	1,209
Provision for losses on accounts receivable	—	53,800
(Recovery) for inventory reserve	(7,000)	—
Stock-based compensation	199,500	126,936
Non-cash interest expense	50,202	50,910
Changes in operating assets (increase) decrease in:		
Short-term investments, restricted	290,900	(1,303)
Accounts receivable	(536,426)	(1,063,352)
Inventory	(1,585,822)	(746,428)
Unbilled revenue	(375,479)	(50,514)
Due from related party	(577,010)	(600,251)
Prepaid expenses and other current assets	(4,237)	(8,855)
Other assets	(5,100)	19,100
Changes in operating liabilities increase (decrease) in:		
Accounts payable	895,496	78,267
Accrued expenses	58,707	(131,401)
Deferred revenue	(603,626)	1,055,270
Interest payable, related party	—	(198,450)
Due to related party	—	(119,667)
Net cash used in operating activities	(4,733,759)	(5,126,816)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchases of property and equipment	(69,582)	(223,574)
Disposal of property and equipment	16,874	7,092
Purchases of intangible assets	(133,032)	(141,959)
Purchases of short-term investments	—	(584,400)
Net cash used in investing activities	(185,740)	(942,841)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Payments made on demand notes payable, related party	—	(2,950,000)
Proceeds from sale of common stock, net of costs	8,859,767	2,340,194
Proceeds from exercise of stock options	360,225	161,265
Payments for debt issuance costs	—	(9,668)
Net cash (used in) provided by financing activities	9,219,992	(458,209)
Net increase (decrease) in cash and cash equivalents	4,300,493	(6,527,866)
Cash and cash equivalents, beginning of the year	1,186,033	7,713,899
Cash and cash equivalents, end of the year	$5,486,526	$1,186,033
Supplemental disclosure of cash flow information:		
Cash paid for interest	$121,742	$324,885

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

TECOGEN INC.
Notes to Audited Consolidated Financial Statements for December 31, 2015 and 2014

Note 1 – Nature of business and operations

Tecogen Inc. (the "Company"), a Delaware Corporation, was organized on November 15, 2000, and acquired the assets and liabilities of the Tecogen Products division of Thermo Power Corporation. The Company produces commercial and industrial, natural-gas-fueled engine-driven, combined heat and power (CHP) products that reduce energy costs, decrease greenhouse gas emissions and alleviate congestion on the national power grid. Tecogen's products supply electric power or mechanical power for cooling, while heat from the engine is recovered and purposefully used at a facility. The majority of the Company's customers are located in regions with the highest utility rates, typically California, the Midwest and the Northeast.

On May 4, 2009, the Company invested in a new corporation called Ilios Inc., or Ilios. The investment gave the Company a controlling financial interest in Ilios, whose business focus is advanced heating systems for commercial and industrial applications. As of December 31, 2015 the Company owns a 65.0% interest in Ilios and has consolidated Ilios into its financial statements. With the inclusion of unvested restricted stock awards, the Company owns 64.3% of Ilios.

The accompanying consolidated financial statements include the accounts of the Company and its majority owned subsidiary, Ilios.

The Company's operations are comprised of one business segment. Our business is to manufacture and support highly efficient CHP products based on engines fueled by natural gas.

Note 2 – Summary of significant accounting policies

Principles of Consolidation and Basis of Presentation

The financial statements have been prepared in accordance with accounting standards set by the Financial Accounting Standards Board, or FASB. The FASB sets generally accepted accounting principles, or GAAP, to ensure financial condition, results of operations, and cash flows are consistently reported. References to GAAP issued by the FASB in these footnotes are to the FASB Accounting Standards Codification, or ASC. The Company adopted the presentation requirements for noncontrolling interests required by ASC 810 Consolidation. Under ASC 810, earnings or losses attributed to the noncontrolling interests are reported as part of the consolidated earnings and not a separate component of income or expense. Noncontrolling interests in the net assets and operations of Ilios are reflected in the caption "Noncontrolling interest" in the accompanying consolidated financial statements. All intercompany transactions have been eliminated.

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 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.

Concentration of Credit Risk

The Company's financial instruments that are exposed to concentrations of credit risk consist primarily of cash and cash equivalents, short-term investments and accounts receivable. The Company maintains its cash balances in bank accounts, which at times may exceed the Federal Deposit Insurance Corporation's general deposit insurance limits. The amount on deposit at December 31, 2015 and 2014 which exceeded the $250,000 federally insured limit was approximately $5,329,528 and $1,272,500, respectively. The Company has not experienced any losses in such accounts and thus believes that it is not exposed to any significant credit risk on cash and cash equivalents.

There was no customer who represented more than 10% of revenues for the years ended December 31, 2015 and 2014. The Company has approximately four hundred customers who represented 100% of the revenues for the year ended December 31, 2015. Included in trade accounts receivable are amounts from one customer who represents 16% of the accounts receivable balance as of December 31, 2015 and another customer who represented 13% of the accounts receivable balance as of December 31, 2014.

Cash and Cash Equivalents

The Company considers all highly liquid instruments with an original maturity date, at date of purchase, of three months or less to be cash and cash equivalents.

Short-Term Investments

Short-term investments consist of certificate of deposit with maturities of greater than three months but less than one year. Certificates of deposits approximate fair value, based on estimates using current market rates offered for deposits with similar remaining maturities. These certificates of deposits was currently restricted as collateral for performance bonds associated with ongoing turnkey projects. On January 28, 2016, the collateral restriction was lifted and the remaining certificates was liquidated into cash.

TECOGEN INC.
Notes to Audited Consolidated Financial Statements for December 31, 2015 and 2014

Accounts Receivable
Accounts receivable are stated at the amount management expects to collect from outstanding balances. An allowance for doubtful accounts is provided for those accounts receivable considered to be uncollectible based upon historical experience and management’s evaluation of outstanding accounts receivable at the end of the year. Bad debts are written off against the allowance when identified. At December 31, 2015 and 2014, the allowance for doubtful accounts was $50,000.

Inventory
Raw materials, work in process, and finished goods inventories are stated at the lower of cost, as determined by the average cost method, or market. The Company periodically reviews inventory quantities on hand for excess and/or obsolete inventory based primarily on historical usage, as well as based on estimated forecast of product demand. Any reserves that result from this review are charged to cost of sales.

Property, Plant and Equipment
Property, plant and equipment are recorded at cost. Depreciation is provided using the straight-line method over the estimated useful lives of the asset, which range from three to fifteen years. Leasehold improvements are amortized using the straight-line method over the lesser of the estimated useful lives of the assets or the term of the related leases. Expenditures for maintenance and repairs are expensed currently, while renewals and betterments that materially extend the life of an asset are capitalized.

Intangible Assets
Intangible assets subject to amortization include costs incurred by the Company to acquire product certifications, certain patent costs and developed technologies. These costs are amortized on a straight-line basis over the estimated economic life of the intangible asset. Indefinite life intangible assets such as trademarks are recorded at cost and not amortized. The Company reviews intangible assets for impairment when the circumstances warrant.

Goodwill
The Company's goodwill was recorded as a result of the Company's asset acquisition. The Company tests its recorded goodwill for impairment as of the last day of the year, or more often if indicators of potential impairment exist, by determining if the carrying value of the Company's single reporting unit exceeds its estimated fair value. Factors that could trigger an interim impairment test include, but are not limited to, underperformance relative to historical or projected future operating results, significant changes in the manner of use of the acquired assets or the Company's overall business, significant negative industry or economic trends and a sustained period where market capitalization, plus an appropriate control premium, is less than stockholders' equity.

The Company's impairment testing involves a step zero process. Step zero allows for management to first assess qualitative factors to determine whether it is more likely than not that the fair value of the intangible asset is less than its carrying value. Therefore, as of December 31, 2015, the Company determined that the fair value of the reporting unit exceeded its carrying value and therefore no impairment was recognized.

Impairment of Long-lived Assets
Long-lived assets, including intangible assets and property, plant and equipment, are evaluated for impairment whenever events or changes in circumstances have indicated that an asset may not be recoverable and are grouped with other assets to the lowest level for which identifiable cash flows are largely independent of the cash flows of other groups of assets and liabilities. If the sum of the projected undiscounted cash flows (excluding interest charges) is less than the carrying value of the assets, the assets will be written down to the estimated fair value and such loss is recognized in income from continuing operations in the period in which the determination is made. Management determined that no impairment of long-lived assets existed as of December 31, 2015.

Off Balance Sheet Arrangements
On July 22, 2013, John Hatsopoulos, one of the Company’s Co-Chief Executive Officers, personally pledged to support a bank credit facility of $1,055,000 to support bank guarantees issued on certain construction contracts. On April 10, 2015, the performance obligation tied to this bond was relieved and the credit facility was canceled.

TECOGEN INC.
Notes to Audited Consolidated Financial Statements for December 31, 2015 and 2014

Loss per Common Share

The Company computes basic loss per share by dividing net loss for the period by the weighted-average number of shares of common stock outstanding during the period. The Company computes its diluted earnings per common share using the treasury stock method. For purposes of calculating diluted earnings per share, the Company considers its shares issuable in connection with the convertible debentures, stock options and warrants to be dilutive common stock equivalents when the exercise/conversion price is less than the average market price of our common stock for the period. All shares issuable for the years ended December 31, 2015 and 2014 were anti-dilutive because of the reported net loss.

Segment Information

The Company reports segment data based on the management approach. The management approach designates the internal reporting that is used by management for making operating and investment decisions and evaluating performance as the source of the Company's reportable segments. The Company uses one measurement of profitability and does not disaggregate its business for internal reporting. The Company has determined that it operates in one business segment which manufactures and supports highly efficient CHP products based on engines fueled by natural gas. All of the Company’s long lived assets reside in, and the significant majority of the Company’s revenue is generated in the United States of America.

The following table summarizes net revenue by product line and services for the years ended December 31, 2015 and 2014:

	2015	2014
Products:		
Cogeneration	$7,882,838	$5,364,810
Chiller & Heat Pump	2,172,399	3,260,224
Total Product Revenue	10,055,237	8,625,034
Services:		
Service contracts and related part sales	7,832,181	7,438,125
Installations	3,555,239	3,279,505
Total Service Revenue	11,387,420	10,717,630
Total Revenue	$21,442,657	$19,342,664

Income Taxes

The Company uses the asset and liability method of accounting for income taxes. The current or deferred tax consequences of transactions are measured by applying the provisions of enacted tax laws to determine the amount of taxes payable currently or in future years. Deferred tax assets and liabilities are determined based on the difference between the financial statement and tax bases of assets and liabilities and expected future tax consequences of events that have been included in the financial statements or tax returns using enacted tax rates in effect for the years in which the differences are expected to reverse. Under this method, a valuation allowance is used to offset deferred taxes if, based upon the available evidence, it is more likely than not that some or all of the deferred tax assets may not be realized. Management evaluates the recoverability of deferred taxes and the adequacy of the valuation allowance annually.

The Company has adopted the provisions of the accounting standards relative to accounting for uncertainties in tax positions. These provisions provide guidance on the recognition, de-recognition and measurement of potential tax benefits associated with tax positions. The Company elected to recognize interest and penalties related to income tax matters as a component of income tax expense in the statements of operations. The Company has analyzed its current tax return compliance positions and has determined that no uncertain tax positions have been taken that would require recognition.

With few exceptions, the Company is no longer subject to possible income tax examinations by federal, state or local taxing authorities for tax years before 2012, with the exception of loss carryforwards in the event they are utilized in future years. The Company's tax returns are open to adjustment from 2002 forward, as a result of the fact that the Company has loss carryforwards from those years, which may be adjusted in the year those losses are utilized.

TECOGEN INC.
Notes to Audited Consolidated Financial Statements for December 31, 2015 and 2014

Fair Value of Financial Instruments

The Company's financial instruments are cash and cash equivalents, certificates of deposit, accounts receivable, accounts payable, demand notes, line of credit and convertible debentures due to related parties. The recorded values of cash and cash equivalents, accounts receivable and accounts payable approximate their fair values based on their short-term nature. At December 31, 2015, the recorded value on the consolidated balance sheet of the debentures approximates fair value as the terms approximate those available for similar instruments. Certificates of deposits are classified as short-term investments and approximate fair value, based on estimates using current market rates offered for deposits with similar remaining maturities.

Revenue Recognition

Revenue is recognized when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the price is fixed or determinable and collectability is reasonably assured. Generally, sales of cogeneration and chiller units and parts are recognized when shipped and services are recognized over the term of the service period. Payments received in advance of services being performed are recorded as deferred revenue.

The Company recognizes revenue in certain circumstances before delivery has occurred (commonly referred to as bill and hold transactions). In such circumstances, among other things, risk of ownership has passed to the buyer, the buyer has made a written fixed commitment to purchase the finished goods, the buyer has requested the finished goods be held for future delivery as scheduled and designated by them, and no additional performance obligations exist by the Company. For these transactions, the finished goods are segregated from inventory and normal billing and credit terms granted. For the year ended December 31, 2015, bill and hold transactions were approximately $928,900 in revenue compared to $1,020,000 in 2014.

For those arrangements that include multiple deliverables, the Company first determines whether each service or deliverable meets the separation criteria of FASB ASC 605-25, Revenue Recognition—Multiple-Element Arrangements. In general, a deliverable (or a group of deliverables) meets the separation criteria if the deliverable has stand-alone value to the customer and, if the arrangement includes a general right of return, delivery or performance of the undelivered item(s) is considered probable and substantially in control of the Company. Each deliverable that meets the separation criteria is considered a separate ‘‘unit of accounting”. The Company allocates the total arrangement consideration to each unit of accounting using the relative selling price method. The amount of arrangement consideration that is allocated to a delivered unit of accounting is limited to the amount that is not contingent upon the delivery of another unit of accounting.

When vendor-specific objective evidence or third-party evidence is not available, adopting the relative fair value method of allocation permits the Company to recognize revenue on specific elements as completed based on the estimated selling price. The Company generally uses internal pricing lists that determine sales prices to external customers in determining its best estimate of the selling price of the various deliverables in multiple-element arrangements. Changes in judgments made in estimating the selling price of the various deliverables could significantly affect the timing or amount of revenue recognition. The Company enters into sales arrangements with customers to sell its cogeneration and chiller units and related service contracts and occasionally installation services. Based on the fact that the Company sells each deliverable to other customers on a stand-alone basis, the company has determined that each deliverable has a stand-alone value. Additionally, there are no rights of return relative to the delivered items; therefore, each deliverable is considered a separate unit of accounting.

After the arrangement consideration has been allocated to each unit of accounting, the Company applies the appropriate revenue recognition method for each unit of accounting based on the nature of the arrangement and the services included in each unit of accounting. Cogeneration and chiller units are recognized when shipped and services are recognized over the term of the applicable agreement, or as provided when on a time and materials basis.

In some cases, our customers may choose to have the Company engineer and install the system for them rather than simply purchase the cogeneration and/or chiller units. In this case, the Company accounts for revenue, or turnkey revenue, and costs using the percentage-of-completion method of accounting. Under the percentage-of-completion method of accounting, revenues are recognized by applying percentages of completion to the total estimated revenues for the respective contracts. Costs are recognized as incurred. The percentages of completion are determined by

relating the actual cost of work performed to date to the current estimated total cost at completion of the respective contracts. When the estimate on a contract indicates a loss, the Company's policy is to record the entire expected loss, as required by generally accepted accounting principles. The excess of contract costs and profit recognized to date on the percentage-of-completion accounting method in excess of billings is recorded as unbilled revenue. Billings in excess of related costs and estimated earnings are recorded as deferred revenue.

Presentation of Sales Taxes

The Company reports revenues net of any revenue-based taxes assessed by governmental authorities that are imposed on and concurrent with specific revenue-producing transactions.

Shipping and Handling Costs

The Company classifies freight billed to customers as sales revenue and the related freight costs as cost of sales.

TECOGEN INC.
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Advertising Costs
The Company expenses the costs of advertising as incurred. For the years ended December 31, 2015 and 2014, advertising expense was approximately $184,000 and $281,000, respectively.
Research and Development Costs
Research and development expenditures are expensed as incurred. Proceeds from certain grants and contracts with governmental agencies and their contractors to conduct research and development for new CHP technologies or to improve or enhance existing technology is recorded as an offset to the related research and development expenses. These grants and contracts are paid on a cost reimbursement basis provided in the agreed upon budget. Amounts received totaled $0 and $74,800 in fiscal years 2015 and 2014, respectively, which offset the Company's total research and development expenditures of approximately $591,585 and $1,116,283 for each of the years ended December 31, 2015 and 2014, respectively.
Stock-Based Compensation
Stock-based compensation cost is measured at the grant date, based on the estimated fair value of the award, and is recognized as an expense in the statements of operations over the requisite service period.
The determination of the fair value of share-based payment awards is affected by the Company's stock price. For the awards prior to the Company being publicly traded, the Company considered the sales price of the Common Stock in private placements to unrelated third parties as a measure of the fair value of its Common Stock.
The Company utilizes an estimated forfeiture rate when calculating the expense for the period. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. Stock-based compensation expense recognized is based on awards that are ultimately expected to vest. The Company evaluates the assumptions used to value awards regularly and if factors change and different assumptions are employed, stock-based compensation expense may differ significantly from what has been recorded in the past. If there are any modifications or cancellations of the underlying unvested securities, the Company may be required to accelerate, increase or cancel any remaining unearned stock-based compensation expense.
Pursuant to ASC 505-50, Equity Based Payments to Non-Employees, the fair value of restricted Common Stock and stock options issued to nonemployees is revalued at each reporting period until the ultimate measurement date, as defined by ASC 505-50. The Company records the value of the instruments at the time services are provided and the instruments vest. Accordingly, the ultimate expense is not fixed until such instruments are fully vested.
Recent Accounting Pronouncements
In May 2014, the FASB amended its standards related to revenue recognition. This amendment replaces all existing revenue recognition guidance and provides a single, comprehensive revenue recognition model for all contracts with customers. The standard contains principles that we will apply to determine the measurement of revenue and timing of when it is recognized. The underlying principle is that we will recognize revenue in a manner that depicts the transfer of goods or services to customers at an amount that we expect to be entitled to in exchange for those goods or services. The guidance provides a five-step analysis of transactions to determine when and how revenue is recognized. Other major provisions include capitalization of certain contract costs, consideration of the time value of money in the transaction price and allowing estimates of variable consideration to be recognized before contingencies are resolved in certain circumstances. The amendment also requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to fulfill a contract. The standard allows either full or modified retrospective adoption effective for annual and interim periods beginning January 1, 2018. Management is in the process of evaluating the impact the amendment will have on our Consolidated Financial Statements. While a final decision has not been made, we are currently planning to adopt the standard using the modified retrospective approach.
In April 2015, the FASB amended its standards related to the balance sheet classification of debt issuance costs. This amendment requires entities to present debt issuance costs related to a debt liability as a direct deduction from the carrying amount of the debt and requires retrospective application. The new rules will become effective for annual and interim periods beginning after December 15, 2016. This will not have a significant impact our Consolidated Financial

Statements.

In July 2015, the FASB issued ASU No. 2015-11, which simplifies the subsequent measurement of inventory by requiring inventory to be measured at the lower of cost and net realizable value. Net realizable value is the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. This ASU is effective for public business entities for fiscal years beginning after December 15, 2016, and interim periods within those fiscal years. The Company is currently assessing the impact of adopting this ASU on its Consolidated Financial Statements.

TECOGEN INC.
Notes to Audited Consolidated Financial Statements for December 31, 2015 and 2014

In November 2015, the FASB amended its standards related to balance sheet classification of deferred taxes. This amendment requires that all deferred tax assets and liabilities be classified as non-current in a classified statement of financial position. The new rules will become effective for annual and interim periods beginning after December 15, 2016. Our deferred tax assets and liabilities include a full evaluation allowance. The Company adoption is not expected to impact our financial statements.

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842), which requires companies to recognize all leases as assets and liabilities on the consolidated balance sheet. This ASU retains a distinction between finance leases and operating leases, and the classification criteria for distinguishing between finance leases and operating leases are substantially similar to the classification criteria for distinguishing between capital leases and operating leases in the current accounting literature. The result of retaining a distinction between finance leases and operating leases is that under the lessee accounting model in Topic 842, the effect of leases in a consolidated statement of comprehensive income and a consolidated statement of cash flows is largely unchanged from previous GAAP. The amendments in this ASU are effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Earlier application is permitted. The Company is currently evaluating the impact that the adoption of this ASU will have on its Consolidated Financial Statements.

Note 3 – Loss per common share:

Basic and diluted loss per share for the years ended December 31, 2015 and 2014, respectively, was as follows:

	2015	2014
Loss available to stockholders	$(2,727,413)	$(3,745,812)
Weighted average shares outstanding - Basic and diluted	16,860,453	15,607,897
Basic and diluted loss per share	$(0.16)	$(0.24)
Anti-dilutive shares underlying stock options outstanding	1,268,200	1,356,325
Anti-dilutive convertible debentures	890,207	555,556

Note 4 – Inventory

Inventories at December 31, 2015 and 2014 consisted of the following.

	2015	2014
Gross raw materials	$5,618,853	$4,348,786
Less - reserves	(293,000)	(300,000)
Net raw materials	5,325,853	4,048,786
Work-in-process	124,845	22,250
Finished goods	232,345	19,185
	$5,683,043	$4,090,221

Note 5 – Intangible assets other than goodwill

The Company capitalized $39,272 and $68,638 of product certification costs during the years ended December 31, 2015 and 2014, respectively. Also included in intangible assets are the costs incurred by the Company to acquire certain patents. These patents, once in service, will be amortized on a straight-line basis over the estimated economic life of the associated product, which range from approximately 7-10 years. The Company capitalized $88,985 and $73,321 of patent-related costs during the years ended December 31, 2015 and 2014, respectively. The Company capitalized $4,775 in trademarks during 2015.

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Intangible assets at December 31, 2015 and 2014 consist of the following:

	Product Certifications	Patents	Developed Technology	Trademarks	Total
Balance at December 31, 2015					
Intangible assets	$514,616	$603,915	$240,000	$4,775	$1,363,306
Less - accumulated amortization	(182,931)	(91,764)	(44,000)	—	(318,695)
	$331,685	$512,151	$196,000	$4,775	$1,044,611
Balance at December 31, 2014					
Intangible assets	$475,344	$514,930	240,000	—	$1,230,274
Less - accumulated amortization	(128,732)	(62,242)	(28,000)	—	(218,974)
	$346,612	$452,688	$212,000	$—	$1,011,300

Amortization expense was $99,721 and $83,986 during the years ended December 31, 2015 and 2014, respectively.
Estimated amortization expense at December 31, 2015 for each of the five succeeding years and thereafter are as follows:

2016	$153,278
2017	153,278
2018	147,081
2019	130,430
2020	124,518
Thereafter	336,026
	$1,044,611

Note 6 – Property, plant and equipment
Property, plant and equipment at December 31, 2015 and 2014 consisted of the following:

	Estimated Useful Life (in Years)	2015	2014
Machinery and equipment	5 - 7 years	$953,081	$936,705
Furniture and fixtures	5 years	113,842	99,346
Computer software	3 - 5 years	67,215	67,215
Leasehold improvements	*	437,341	427,791
		1,571,479	1,531,057
Less - accumulated depreciation and amortization		(1,027,725)	(872,636)
Net property, plant and equipment		$543,754	$658,421

* Lesser of estimated useful life of asset or lease term
Depreciation and amortization expense on property and equipment for the years ended December 31, 2015 and 2014 was $172,006 and $194,879, respectively.
Note 7 – Demand notes payable, convertible debentures and line of credit
Demand notes payable to related parties consist of various demand notes outstanding to stockholders totaling $0 at December 31, 2015 and 2014. The primary lender was John N. Hatsopoulos, the company's Co-Chief Executive Officer. On January 6, 2014, the Company repaid the then outstanding principal balance of $1,750,000 together with accrued interest of $175,311.
On March 25, 2013, the Company entered into a Revolving Line of Credit Agreement, or the Credit Agreement, with John N. Hatsopoulos, our Co-Chief Executive Officer. On January 6, 2014, the Company repaid the then outstanding principal balance of $1,200,000 together with accrued interest of $25,347, closing the line of Credit.

TECOGEN INC.
Notes to Audited Consolidated Financial Statements for December 31, 2015 and 2014

On December 23, 2013, the Company entered into a Senior Convertible Promissory Note (the "Note") with Michaelson Capital Special Finance Fund LP, ("Michaelson"), for the principal amount of $3,000,000 with interest at 4% per annum for a term of three years. In the event of default such interest rate shall accrue at 8% after the occurrence of the event of default and during continuance plus 2% after the occurrence and during the continuance of any other event of default. The Note is a senior unsecured obligation which pays interest only on a monthly basis in arrears at a rate of 4% per annum, unless earlier converted in accordance with the terms of the agreement prior to such date. The principal amount, if not converted, is due on the third anniversary of the Note, December 31, 2016. The Note is senior in right of payment to any unsecured indebtedness that is expressly subordinated in right of payment to the Note.

The principal balance of the Note, together with any unpaid interest, is convertible into shares of the Company's common stock at 296.73 shares of our common stock per $1,000 principal amount of Note (equivalent to a conversion price of $3.37 per share) at the option of Michaelson. If at any time the common stock of the Company is (1) the arithmetic average of the volume weighted average price of the Common Stock for the twenty consecutive trading days preceding the Company's notice of mandatory conversion exceeds $150,000, the Company shall have the right to require conversion of all of the then outstanding principal balance together with unpaid interest of this Note into the Company's common stock based on the conversion price of $3.37 per share. The conversion price is subject to adjustment.

The Company may prepay all of the outstanding principal and interest due and payable under this Note in full, at any time prior to the maturity date for an amount equal to 120% of the then outstanding principal and interest due and payable as of the date of such prepayment.

Upon change of control, as defined by the Note, at Michaelson's option, the obligations may be assumed, on the terms and conditions in this Note, through an assignment and assumption agreement, or the Company may prepay all of the then outstanding principal and unpaid interest under this Note in full at the optional 120% prepayment amount. This provision does not create an embedded derivative in accordance with ASC 815, Derivatives and Hedging. As such it is not required to be bifurcated and accounted for separately from the Note.

Debt issuance costs of $140,433 with a balance of $48,989 at December 31, 2015 are being amortized to interest expense over the term of the Note using the effective interest method. At December 31, 2015, there were 890,207 shares of common stock issuable upon conversion of the Notes.

While, prior to this transaction, Michaelson was an unrelated party, due to their beneficial ownership percentage of 6.8% after this transaction, Michaelson is now considered a related party.

On June 15, 2015, the Company entered into a Non-Revolving Line of Credit Agreement, or the Agreement, with John N. Hatsopoulos, the Company's Co-Chief Executive Officer and a Company Director. Under the terms of the Agreement, Mr. Hatsopoulos has agreed to lend the Company up to an aggregate of $2,000,000, with a withdrawal limit of $250,000 per financial calendar quarter, at the written request of the Company. Any amounts borrowed by the Company pursuant to the Agreement will bear interest at 6% per year. Interest is due and payable quarterly in arrears. The term of the Agreement is from July 1, 2015 to July 1, 2017. Repayment of the principal amount borrowed pursuant to the Agreement will be due on July 1, 2017, or the Maturity Date. Prepayment of any amounts due under the Agreement may be made at any time without penalty. The Agreement terminates on the Maturity Date. The Company has not yet borrowed any amounts pursuant to the Agreement.

Note 8 – Commitments and contingencies

Operating Lease Obligations

The Company leases office space and warehouse facilities under various lease agreements which expire through March 2024. The Company subleases portions of its corporate offices and manufacturing facility to sub-tenants under annual sublease agreements, on a calendar year basis. Total rent expense for the years ended December 31, 2015 and 2014 amounted to $637,588 and $615,602, offset by $113,472 and $201,440 in rent paid by sub-lessees, to both related and unrelated parties, for a net amount of $524,116 and $414,162.

As of December 31, 2015, the future minimum lease payments receivable on subleases were $65,748.

The Company leased two passenger vehicle under a lease agreement expiring in 2018. Vehicle rent expense amounted to $7,547 and $1,839 during the year ended December 31, 2015 and 2014, respectively.

TECOGEN INC.
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Future minimum lease payments under all non-cancelable operating leases as of December 31, 2015 consist of the following:

Years Ending December 31,	Amount
2016	$621,516
2017	742,944
2018	568,221
2019	506,432
2020	513,742
2021 and thereafter	1,722,042
Total	$4,674,897

Letters of Credit

As of December 31, 2015, $294,802 in a letter of credit was outstanding under a revolving bank credit facility needed to collateralize a performance bond on a certain installation project. The bank required collateral to issue the letter of credit which the company provided in the form of restricted cash. This revolving bank credit facility was terminated on January 28, 2016 as the performance bond obligations were cleared. On April 10, 2015, the performance obligation tied to a performance bond previously collateralized by an account owned by John N. Hatsopoulos was relieved and the credit facility was canceled.

Legal Proceedings

From time to time, the Company may be involved in various claims and other legal proceedings which arise in the normal course of business. Such matters are subject to many uncertainties and outcomes that are not predictable. Based on the information available to the Company and after discussions with legal counsel, the Company does not believe any such proceedings will have a material adverse effect on the business, results of operations, financial position or liquidity.

Note 9 – Product warranty

The Company reserves an estimate of its exposure to warranty claims based on both current and historical product sales data and warranty costs incurred. The majority of the Company's products carry a one-year warranty. The Company assesses the adequacy of its recorded warranty liability annually and adjusts the amount as necessary. The warranty liability is included in accrued expenses on the accompanying consolidated balance sheets.

Changes in the Company's warranty reserve were as follows:

Warranty reserve, December 31, 2013	$95,000
Warranty provision for units sold	207,583
Costs of warranty incurred	(155,583)
Warranty reserve, December 31, 2014	147,000
Warranty provision for units sold	87,690
Costs of warranty incurred	(124,690)
Warranty reserve, December 31, 2015	$110,000

Note 10 – Stockholders' equity

Common Stock

In 2015 and 2014, the Company raised additional funds through the private placements and public offerings of common stock. In connection with the 2014 public offering, the Company sold an aggregate of 647,706 shares of common stock at a purchase price of $4.75 per share. In connection with this public offering the Company incurred commissions, legal fees and various other costs of $742,710 which were offset against the proceeds in additional paid in capital, resulting in net cash proceeds of $2,333,894. In connection with the 2015 and 2014 private placements, the Company sold an aggregate of 2,350,734 and 1,400 shares of common stock in a purchase price range from $3.37 and $4.75 per share, resulting in net cash proceeds of $8,859,767 and $6,300.

The holders of Common Stock have the right to vote their interest on a per share basis. At December 31, 2015 and 2014, there were 18,478,990 and 15,905,881 shares of Common Stock outstanding, respectively.

TECOGEN INC.
Notes to Audited Consolidated Financial Statements for December 31, 2015 and 2014

Preferred Stock
On February 13, 2013, the Company authorized preferred stock of 10 million shares. At December 31, 2015, no shares were issued or outstanding.

Stock-Based Compensation
In 2006, the Company adopted the 2006 Stock Option and Incentive Plan (the “Plan”), under which the board of directors may grant incentive or non-qualified stock options and stock grants to key employees, directors, advisors and consultants of the Company. The Plan was amended at various dates by the board to increase the reserved shares of common stock issuable under the Plan to 3,838,750 as of December 31, 2014 (the “Amended Plan”).
Stock options vest based upon the terms within the individual option grants, with an acceleration of the unvested portion of such options upon a change in control event, as defined in the Amended Plan. The options are not transferable except by will or domestic relations order. The option price per share under the Amended Plan cannot be less than the fair market value of the underlying shares on the date of the grant. The number of shares remaining available for future issuance under the Amended Plan as of December 31, 2015 and 2014 was 1,614,533 and 1,748,783, respectively.
In 2015, the Company granted nonqualified options to purchase an aggregate of 165,000 shares of common stock in a range of $3.39 and $4.05 per share, respectively to certain employees and a consultant. These options have a vesting schedule of four years and expire in ten years. The fair value of the options issued in 2015 was $250,462. The weighted-average grant date fair value of stock options granted during 2015 was $1.52 per option. In October 2015, the Board of Directors modified the performance options granted in 2014 to the Company's standard vesting schedule.
In 2014, the Company granted nonqualified options to purchase an aggregate of 318,325 shares of common stock for between $4.50 and $5.39 per share, respectively to certain employees, a director, and a consultant. These options have a vesting schedule of four years and expire in ten years. One of the grants for 100,000 shares had vesting terms of one year and only vest if the Company achieves positive earnings before interest, taxes, depreciation, and amortization adjusted for stock compensation. The fair value of the options issued in 2014 was $577,029. The weighted-average grant date fair value of stock options granted during 2015 was $1.89 per option.
Stock option activity for the year ended December 31, 2015 was as follows:

Common Stock Options	Number of Options	Exercise Price Per Share	Weighted Average Exercise Price	Weighted Average Remaining Life	Aggregate Intrinsic Value
Outstanding, December 31, 2014	1,356,325	$1.20-$5.39	$2.77	5.12 years	$3,618,935
Granted	165,000	$3.39-$4.05	3.43		
Exercised	(222,375)	$1.20-$2.60	1.62		
Canceled and forfeited	(18,250)	$2.60-$4.50	3.52		
Expired	(12,500)	$1.20	1.20		
Outstanding, December 31, 2015	1,268,200	$1.20-$5.39	$3.06	6.01 years	$985,578
Exercisable, December 31, 2015	841,650		$2.48		$978,640
Vested and expected to vest, December 31, 2015	1,268,200		$3.06		$985,578

The Company does not expect any forfeitures and the table above represents all stock options expected to vest. The Company uses the Black-Scholes option pricing model to determine the fair value of stock options granted. Use of a valuation model requires management to make certain assumptions with respect to selected model inputs. Expected volatility was calculated based on the average volatility of four comparable publicly traded companies. The average expected life was estimated using the simplified method to determine the expected life based on the vesting period and contractual terms, since it does not have the necessary historical exercise data to determine an expected life for stock options. The Company uses a single weighted-average expected life to value option awards and recognizes compensation on a straight-line basis over the requisite service period for each separately vesting portion of the awards. The risk-free interest rate is based on U.S. Treasury zero-coupon issues with a remaining term which

approximates the expected life assumed at the date of grant.

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The weighted average assumptions used in the Black-Scholes option pricing model for options granted in 2015 and 2014 are as follows:

Stock option awards:	2015	2014
Expected life	6.25 years	6.25 years
Risk-free interest rate	1.63%-1.67%	1.51%
Expected volatility	32.4%-32.6%	22.7%-32.3%

The Company has granted restricted stock awards to its employees and directors. The performance based awards have vesting schedules 25% per year beginning two years after an IPO.

Restricted stock activity for the years ended December 31, 2015 was as follows:

	Number of Restricted Stock	Weighted Average Grant Date Fair Value
Unvested, December 31, 2014	163,350	$1.31
Granted	—	—
Vested	—	—
Forfeited	—	—
Unvested, December 31, 2015	163,350	$1.31

During the year ended December 31, 2015, the Company granted 250,000 warrants.

During the years ended December 31, 2015 and 2014, the Company recognized stock-based compensation of $189,511 and $117,138, respectively, related to the issuance of stock options and restricted stock. No tax benefit was recognized related to the stock-based compensation recorded during the years. At December 31, 2015 and 2014, the total compensation cost related to unvested restricted stock awards and stock option awards not yet recognized is $592,494 and $156,179, respectively. This amount will be recognized over a weighted average period of 2.96 years.

Stock Based Compensation - Ilios

In 2009, Ilios adopted the 2009 Stock Incentive Plan (the “2009 Plan”) under which the board of directors may grant incentive or non-qualified stock options and stock grants to key employees, directors, advisors and consultants of the company. The maximum number of shares allowable for issuance under the Plan is 2,000,000 shares of common stock.

Stock options vest based upon the terms within the individual option grants, with an acceleration of the unvested portion of such options upon a change in control event, as defined in the Plan. The options are not transferable except by will or domestic relations order. The option price per share under the Plan cannot be less than the fair market value of the underlying shares on the date of the grant.

During the years ended December 31, 2015 and 2014 Ilios recognized stock-based compensation of $9,989 and $9,798, related to stock options, respectively. No tax benefit was recognized related to the stock-based compensation recorded during the year. At December 31, 2015 and 2014 there were 160,000 unvested shares of restricted stock outstanding. At December 31, 2015 and 2014 the total compensation cost related to unvested restricted stock awards and stock option awards not yet recognized is $4,489 and $9,004, respectively. This amount will be recognized over the weighted average period of 0.36 years.

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Stock option activity relating to Ilios for the year ended December 31, 2015 was as follows:

Common Stock Options	Number of Options	Exercise Price Per Share	Weighted Average Exercise Price	Weighted Average Remaining Life	Aggregate Intrinsic Value
Outstanding, December 31, 2014	675,000	$0.10-$0.50	$0.32	6.56 years	$120,000
Granted	—	—	—		
Exercised	—	—	—		
Canceled and forfeited	(25,000)	0.50	0.50		
Expired	—	—	—		
Outstanding, December 31, 2015	650,000	$0.10-$0.50	$0.32	5.04 years	$120,000
Exercisable, December 31, 2015	262,500		$0.50		$—
Vested and expected to vest, December 31, 2015	650,000		$0.32		$120,000

Ilios does not expect any forfeitures and the table above represents all stock options expected to vest. Ilios uses the Black-Scholes option pricing model to determine the fair value of stock options granted. Expected volatility was calculated based on the average volatility of comparable publicly traded companies, the expected life of the options was calculated using the simplified method, and the risk-free interest rate is based on U.S. Treasury zero-coupon issues with a remaining term which approximates the expected life assumed at the date of grant. The Company uses a single weighted-average expected life to value option awards and recognizes compensation on a straight-line basis over the requisite service period for each separately vesting portion of the awards.

The weighted average assumptions used in the Black-Scholes option pricing model for options granted in 2014 are as follows:

Stock option awards:	
Expected life	6.25 years
Risk-free interest rate	1.65%
Expected volatility	35.2%

Ilios has granted restricted stock awards to its employees and directors. The awards have only service conditions and carry vesting schedules ranging from 100% 90 days after an IPO up to 100% one year after an IPO.

Restricted stock activity for the Ilios awards, for the years ended December 31, 2015 was as follows:

	Number of Restricted Stock	Weighted Average Grant Date Fair Value
Unvested, December 31, 2014	310,000	$0.10
Granted	—	—
Vested	—	—
Forfeited	(150,000)	0.10
Unvested, December 31, 2015	160,000	$0.10

Note 11 – Noncontrolling interests

As of December 31, 2015, Tecogen owns 9,500,000 shares of 14,610,000 outstanding shares in Ilios or 65.0%. If the 160,000 restricted Ilios shares vest, the net result will decrease Tecogen’s ownership interest to 64.3%.

Note 12 – Retirement plans

The Company has a defined contribution retirement plan (the “Plan”), which qualifies under Section 401(k) of the Internal Revenue Code (IRC). Under the Plan, employees meeting certain requirements may elect to contribute a percentage of their salary up to the maximum allowed by the IRC. The Company matches a variable amount based on participant contributions up to a maximum of 4.5% of each participant’s salary. The Company contributed approximately $179,300 and $144,568 to the Plan in 2015 and 2014, respectively.

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Note 13 – Related party transactions

The Company has two affiliated companies, namely American DG Energy, and EuroSite Power. These companies are affiliates because several of the major stockholders of those companies have a significant ownership position in the Company. The Company does not own any shares of American DG Energy, and EuroSite Power.

American DG Energy has sales representation rights to the Company's products and services in New England. Revenue from sales of cogeneration and chiller systems, parts and service to American DG Energy and EuroSite Power during the years ended December 31, 2015 and 2014 amounted to $1,903,427 and $1,410,639, respectively.

On October 20, 2009, American DG Energy, in the ordinary course of its business, signed a Sales Representative Agreement with Ilios to promote, sell and service the Ilios high-efficiency heating products, such as the high efficiency water heater, in the marketing territory of the New England States, including Connecticut, Rhode Island, Massachusetts, New Hampshire, Vermont, and Maine. The marketing territory also includes all of the nations in the European Union. The initial term of this Agreement is for five years, after which it may be renewed for successive one-year terms upon mutual written agreement.

The Company had lines of credit with John N. Hatsopoulos, the Co-Chief Executive Officer. Details of these transactions can be found in Note 7.

On December 23, 2013, the Company entered into a Senior Convertible Promissory Note (the "Note") with Michaelson Capital Special Finance Fund LP, ("Michaelson"). Details of these transaction can be found in Note 7.

John N. Hatsopoulos' salary is $1.00 per year. On average, Mr. Hatsopoulos spends approximately 50% of his business time on the affairs of the Company; however such amount varies widely depending on the needs of the business and is expected to increase as the business of the Company develops.

Since 2006, the Company has a facilities and support services agreement with American DG Energy. Under this agreement, the Company provides American DG Energy with certain office and business support services and also provides pricing based on a volume discount depending on the level of American DG Energy purchases of cogeneration and chiller products. For certain sites, American DG Energy hires the Company to service its chiller and cogeneration products. The Company also provides office space and certain utilities to American DG Energy based on a monthly rate set at the beginning of each year. Also, under this agreement, American DG Energy has sales representation rights to the Company's products and services in New England.

The Company subleases portions of its corporate offices and manufacturing facility to sub-tenants under annual sublease agreements. For the years ended December 31, 2015 and 2014, the Company received $78,468 and $87,880, respectively, from American DG Energy and EuroSite Power. In addition, for the years ended December 31, 2015 and 2014 the Company received from the same companies, $36,672 and $42,366, respectively, to offset common operating expenses incurred in the administration and maintenance of its corporate office and warehouse facility. In addition, Tecogen pays certain operating expenses, including benefits and insurance, on behalf of American DG Energy. Tecogen was reimbursed for these costs. As of December 31, 2015 and 2014, the net amount due from American DG Energy was $1,177,261 and $600,251, respectively.

Note 14 – Investment Activities

On December 28, 2015, Tecogen entered into a joint venture agreement relating to the formation of a joint venture company (the "JV") organized to develop and commercialize Tecogen's patented technology ("Ultera® technology") designed to reduce harmful emissions generated by engines using fossil fuels. The joint venture company, called Ultra Emissions Technologies Ltd., was organized under the laws of the Island of Jersey, Channel Islands.

Tecogen received a 50% equity interest in the JV in exchange for a fully paid-up worldwide license to use Tecogen's Ultera emissions control technology in the field of mobile vehicles burning fossil fuels. The other half of the joint venture equity interests were purchased for $3,000,000 by a small group of offshore investors. Warrants to purchase additional equity securities in the JV were granted to all parties pro rata. If the venture is not successful, all licensed intellectual property rights will revert to Tecogen. The license agreement, joint venture agreement and form of warrant are filed as exhibits to this Current Report on Form 8-K.

Robert Panora, Tecogen's President, Chief Operating Officer, and one of the inventors of the Ultera technology will serve as JV co-Chief Executive Officer along with Dr. Elias Samaras. Dr. Samaras is the founder, President and

Managing Director of Digital Security Technologies S.A. and the Chief Executive Officer of EuroSite Power Inc., a Tecogen affiliate.

The JV is expected to have losses as it performs the necessary research and development with the Ultera technology. Using equity method accounting, these losses will not be included in Tecogen's financial statements since Tecogen does not guarantee obligations of the JV and is not otherwise obligated to provide further financial support of the JV, although it may choose to in the future.

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Note 15 – Income taxes

A reconciliation of the federal statutory income tax provision to the Company's actual provision for the years ended 2015 and 2014 is as follows:

	2015	2014
Pre-tax book income	$(2,800,960)	$(3,870,952)
Expected tax at 34%	(952,326)	(1,316,123)
Permanent differences:		
Machinery & equipment	5,251	6,492
Other	444	36
State taxes:		
Current	—	—
Deferred	120,931	(177,412)
Other items:		
Federal research and development credits	(16,504)	—
Change in valuation allowance	(120,931)	177,412
Deferred tax past year true-up's	(47,242)	132
Unbenefited operating losses	1,010,377	1,309,463
Income tax provision	$—	$—

The components of net deferred tax assets recognized in the accompanying consolidated balance sheets at 2015 and 2014 are as follows:

	2015	2014
Net operating loss carryforwards	$6,734,000	$6,356,000
R&D and ITC credit carryforwards	133,000	—
Accrued expenses and other	1,297,000	1,051,000
Accounts receivable	19,000	19,000
Inventory	250,000	207,000
Property, plant and equipment	119,000	138,000
Deferred tax assets	8,552,000	7,771,000
Valuation allowance	(8,552,000)	(7,771,000)
Deferred tax assets, net	$—	$—

At 2015, the Company has approximately $17,903,000 of Federal Loss Carryforwards that expire beginning in the year 2021 through 2035. In addition, the Company has varying amounts of state net operating losses, expiring at various dates starting 2017 through 2035. The Federal net operating losses include approximately $3,578,000 attributable to the Company's majority owned subsidiary, which can only be used against income of that entity. Utilization of the loss carryforwards may be subject to a substantial annual limitation due to ownership change limitations that may have occurred previously or could occur in the future, as provided by Section 382 of the Internal Revenue Code of 1986, as well as, similar state provisions. Ownership changes may limit the amount of the carryforwards that can be utilized to offset future taxable income and tax, respectively. In general, an ownership change, as defined by Section 382, results from transactions increasing the ownership of certain shareholders or public groups of stock of a corporation by more than 50 percentage points over a three-year period.

If the Company has experienced a change of control, utilization of its carryforwards would be subject to an annual limitation under Section 382. Any limitation may result in expiration of a portion of the loss carryforwards before utilization. Subsequent ownership changes could further impact the limitation in future years. Further, until a study is completed and any limitation known, no amounts are being presented as an uncertain tax provision.

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A full valuation allowance has been provided against the company's loss carryforwards and, if an adjustment is required, this adjustment would be offset by an adjustment to the valuation allowance. Thus, there would be no impact to the balance sheet or statement of operations if an adjustment were required.

The Company did not record a benefit for income taxes related to its operating losses for the years ended 2015 and 2014.

Note 16 – Subsequent events

On January 28, 2016, the letter of credit from Enterprise Bank and Trust Company required for collateral with an outstanding performance bond was closed as the Company had met the performance obligations of the bond (see Note 8).

On March 8, 2016, the Board of Directors authorized a stock exchange with Ilios shareholders in order to acquire the remaining 35% of outstanding Ilios stock and effect a statutory merger of the Company. The exchange was offered using a 30 day volume weighted average closing price of the Company's stock, or $3.93 at an exchange rate of 7.86 Ilios shares per Tecogen share. As of the filing date, shareholders have begun to respond but no shares have been issued in the exchange.

On March 15, 2016, the Board of Directors accepted an offer in principle by the Michealson Capital Special Finance Fund, LP to extend the maturity date of the convertible note until December 18, 2018 and increase the outstanding balance by $150,000.

The Company has evaluated subsequent events through the date of this report and determined that no additional subsequent events occurred that would require recognition in the consolidated financial statements or disclosure in the notes thereto.