

### Tecogen Inc. (TGEN)

Company Report – April 30, 2016

Tecogen designs, manufactures and sells industrial and commercial CHP (Combined Heat & Power), or cogeneration, systems that produce combinations of electricity, hot water, and air conditioning. The main drivers for end users to opt for a CHP system include a significant reduction in energy costs, improved environmental footprint, a potential governmental incentive, and the fact that it provides a safe and reliable backup in case of a utility grid blackout.

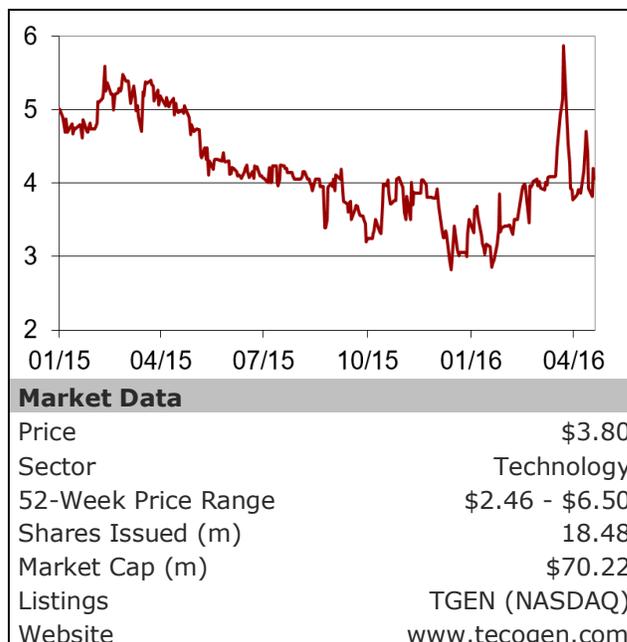
The fundamental economics of CHP, such as high electric rates, low gas rates, and grid resiliency concerns continue to be in the Company’s favor. These trends are already visible in the Company’s financials. In the first full year as a public company, Tecogen grew its revenues from \$19.3 million in fiscal year 2014 to \$21.4 million in 2015, an increase of 11%. At the same time, its sales backlog grew by 17% to \$11.6 million.

Tecogen’s gross margins in 2015 were 35.6%, compared with 33.1% in 2014. And in the fourth quarter of 2015, gross margins reached 37.4%, well above the Company’s goal of 35%. This success is expected to continue in 2016.

Based on the intrinsic value of Tecogen’s shares derived from our model, we reiterate our buy recommendation for Tecogen Inc. with a price target of \$9.02, which is 142% above today’s stock price.



- ▣ These are very exciting times for Ultratek, the joint venture, which was formed with a group of strategic investors, to test, verify and develop the Company’s Ultra near-zero emissions technology for vehicular applications. If successful, Ultratek will revolutionize the car industry and Tecogen won’t be a \$72 million company for much longer.
- ▣ Significant news is also expected in 2016 from the stationary emissions aftertreatment market. A simple natural gas generator that can be permitted without any use restriction has real value in a very large market. Tens of thousands of units could potentially be converted.
- ▣ Tecogen has a solid balance sheet with close to \$5.5 million in cash at the end of 2015.



## THE COMPANY

Tecogen designs, manufactures and sells industrial and commercial cogeneration systems that produce combinations of electricity, hot water, and air conditioning using engines that have been specially adapted to run on natural gas. This technology is called cogeneration, or Combined Heat and Power (CHP).

Cogeneration systems are efficient because they drive electric generators or compressors, which reduce the amount of electricity purchased from the utility. Plus they use the engine's waste heat for water heating, space heating, and/or air conditioning at the customer's building, vastly improving fuel efficiency.

The main drivers for end users to opt for a CHP system are a significant reduction in energy costs, fuel efficiency, emissions reduction, and backup power generation and Microgrid capabilities that allow for participation in demand response and load shaving incentive programs.

Existing customers for these CHP 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. The Company has shipped over 2,300 units so far, some of which have been operating for almost 25 years.

Tecogen manufactures and maintains three types of products:

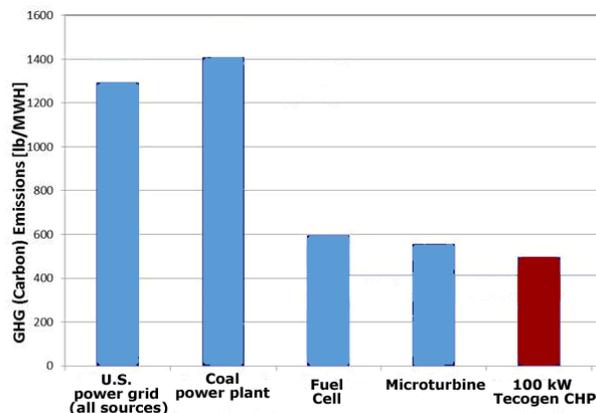
- Cogeneration units that supply electricity and hot water;
- Chillers that provide air-conditioning and hot water; and
- High-efficiency water heaters, developed and distributed through the Company's subsidiary Ilios.

Next to these products, the Company markets the Ultera, a muffler-like kit that dramatically reduces an engine's harmful emissions such as NO<sub>x</sub>, CO<sub>2</sub>, and hydrocarbons. In 2012, a

75 kW CHP unit equipped with the Ultera system became the first unit to obtain a conditional air permit in Southern California, an area with one of the strictest emissions regulations worldwide.

Since then, the Ultera technology has been installed on hundreds of systems and functions impeccably. There is no comparable technology on the market today. It truly sets Tecogen apart from its competition.

In 2015, following Volkswagen's emissions scandal, Tecogen started researching the feasibility of adapting the Ultera technology for gasoline engines. First results look promising. If progress continues to be made in this area, or if a research collaboration with an automotive company can be closed, Tecogen's value will dramatically surge. (Also read Growth Drivers).



**Comparison of carbon emissions for various sources including Tecogen's CHP and chiller products. Source: Company Filing.**

In the first full year as a public company, Tecogen grew its revenues from \$19.3 million in fiscal year 2014 to \$21.4 million in 2015, an increase of 11%. At the same time, its sales backlog grew by 17% to \$11.6 million.

Tecogen's gross margins in 2015 were 35.6%, compared with 33.1% in 2014, a 250 basis points year-over-year improvement. In the fourth quarter of 2015, gross margins even reached 37.4%, well above the Company's goal of 35%. This success is expected to continue in 2016.

Although Tecogen's progress in 2015 from a financial standpoint was strong, the Company

also paved the way for accelerated growth in coming quarters. For example, the recent partnership with a gas company to market and sell Tecogen's machinery in its area of operation. The intention is to close many similar deals with other gas company partners. (Also read Recent Events).

Also, the latest Combined Heat & Power (CHP) unit, the InVerde e+, which distances the Company even further from the competition, should contribute to sales growth. (Also read Technology).

The Company is supported by an established network of engineering, sales, and service personnel across the United States. Service contracts make up a reliable and growing part of the Company's total sales. In 2015, approximately 36.5% of total sales were derived from service contracts.

As of year-end 2015, Tecogen had 72 full-time employees and 3 part-time employees, including 6 sales and marketing personnel and 31 service personnel.

### Case Study – Toren Tower

The Company's business model, and benefits for all parties involved, will become even clearer on the basis of a case study.

Toren, designed by Skidmore, Owings and Merrill, an architectural firm known internationally for their cutting edge skyscrapers, is an iconic glass landmark that has forever changed downtown Brooklyn. The 37 story building offers 240 condominium homes with breathtaking floor-to-ceiling views of the Manhattan skyline and New York Harbor as well as the opportunity to live in the most environmentally advanced high-rise residential building in New York, perhaps even in the U.S.

Toren was designed and built using strategies aimed at improving performance across all the metrics that matter most: energy savings, water efficiency, CO2 emissions reduction, improved indoor environmental quality, and stewardship of resources.

Toren's super-efficient, ultraclean mechanical systems, designed by Energy Concepts

Engineering, uses five Tecogen InVerde 100kW cogeneration modules, located on-site, to meet much of the building's energy needs. At Toren, the cogen modules provide electricity and the waste heat they produce is used to heat interior spaces, provide domestic hot water, heat the pool and even run the air conditioning.



**Tecogen's cogeneration system reduces Toren's carbon footprint by more than 2000 tons of CO2 each year while providing an annual energy cost savings of \$540,000.**

Toren's CHP plant is designed to automatically follow the building's electric demand. As demand for electricity increases and decreases within the building, the electrical output from each of the five CHP modules will also increase and decrease. Through highly sophisticated load control software built into each unit, the amount of electricity being purchased from Consolidated Edison, the electric utility in Brooklyn, can be maintained at less than 20kW. "For a building of this size, and with its luxury features, to be consuming less than 20kW from Con Edison is extremely satisfying" says Bill Cristofaro from Energy Concepts Engineering.

Another innovative, unique and very desirable feature of Toren's cogen system is that it is a "Microgrid" with the ability to run independent from the grid in "Island Mode", providing power for the building if New York should ever experience a blackout like the one in 2002.

## Nationwide Factory Service

Besides selling machines, which in many cases are one-off deals, Tecogen generates plenty of revenues through service contracts. This is a reliable and growing part of the Company's total sales. In fact, as of year-end 2015, more than half of Tecogen's installed units had a service contract.

Tecogen's experts are available to provide a wide array of useful services to its customers:

- ❑ **Application Support** – Tecogen can help a potential customer decide if the facility is a good fit for CHP, by analyzing the current utility bills and loads. It can also quantify the environmental and economic benefits, so that the end user knows exactly how much the facility will benefit. In addition, assistance can be given with the engineering and permitting process.
- ❑ **Full "Turnkey" Installation, or Just Partial Installation Support** – Tecogen's 25+ years of practical application and installation experience means that it can provide a completely installed and working system, including all engineering, and utility interface. Tecogen's turnkey capabilities ensure that a facility gets the full benefits of CHP, with single-point responsibility and expert management of the entire process.
- ❑ **Factory Service** – For customers selecting long term maintenance agreements, Tecogen's expert factory technicians will ensure that a customer's equipment is properly taken care of throughout its lifetime.
- ❑ **Parts Support** – Tecogen provides a full range of spare parts for all the equipment it sells.

Most of the service revenue is in the form of annual service contracts. Customers are invoiced in level, predictable amounts base on equipment run-time hours without unforeseen add-ons for such items as unscheduled repairs or engine replacements.

Tecogen offers service support on all its CHP products nationwide through a network of nine field service centers in California, the Midwest, and the Northeast. These centers are staffed by full-time Tecogen technicians, who exclusively work on Tecogen products.

This established service infrastructure has been an essential part of Tecogen's growth and success through the years, as good factory support from Tecogen allow its customers to focus on their core missions and businesses. Factory service also keeps Tecogen in close touch with its customers and their specific site issues.

## Competition

Tecogen's 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.

The Company's CHP products use reciprocating engines originally designed for gasoline fuel and modified to run on natural gas. Diesel-fueled reciprocating engines will remain prominent in the CHP market, but only in larger, custom-designed systems (one MW or more), so these products don't really compete with Tecogen's.

In smaller CHP sizes, competitors have been able to duplicate Tecogen's older designs, where an engine is coupled to a single-speed generator and where controls and heat recovery systems are added. Tecogen, however, is confident that no other company has developed a product that competes with its inverter-based InVerde e+ CHP, which is highly efficient, facilitates battery or solar array integration, and is compliant with the NFPA 110 standard for emergency and standby power systems.

If competitors wanted to develop a similar product, development time and costs would be significant. In addition, certain Tecogen patents and licenses for microgrid software would prevent others from offering certain important functions.

## TECHNOLOGY

Combined Heat & Power (CHP) is truly a way to get “two for the price of one”. It makes the electricity or cooling power that a customer needs, and it captures much of the thermal energy that is normally lost during the energy conversion into power. With CHP, the “waste” thermal energy gets captured and put to good use on site, for heating water or building spaces. Waste heat captured from the cogeneration system can even be fed into a device called an absorption chiller, which is able to convert the waste heat into cooling. As such, a normally very energy intensive task, such as heating and cooling, is now accomplished at no additional cost to the customer or environment.

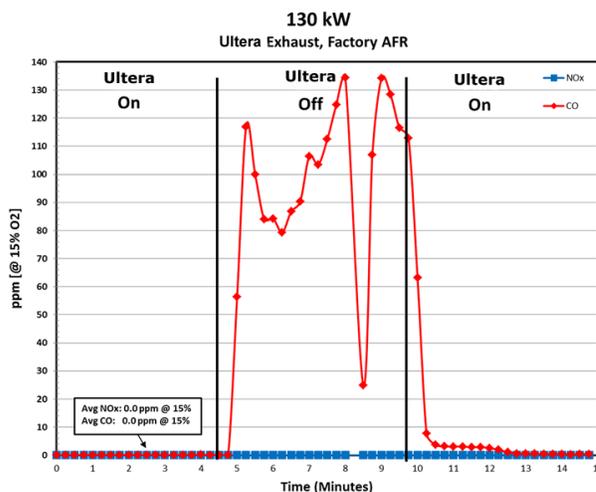
Tecogen’s products also address the global objective of reducing greenhouse gas emissions. When burned to generate power, natural gas produces lower carbon emissions per unit of energy than any fossil fuel, according to the EPA combined heat and power emissions calculator.

The Company’s products, in addition to using the lowest amount of carbon fuel, further reduce CO<sub>2</sub> emissions (greenhouse gases) because of a CHP’s higher efficiency. The graph below compares the CO<sub>2</sub> output of a Tecogen product to that of the national electric grid and other generation technologies. It’s clear that the Tecogen systems are far superior to the grid and even outperform the CHP technologies of fuel cells and microturbines at a fraction of the cost.

Furthermore, one Tecogen 100-kW CHP unit will reduce carbon emissions by 390 tons per year (based on 8,000 run-hours), which, according to the EPA website’s calculator, is the equivalent of 64 cars on the road. A microturbine of the same size would reduce carbon emissions by only 245 tons per year, the equivalent of 41 cars, which is less than

two-thirds the emissions reduction of Tecogen’s CHP product.

In addition to reducing greenhouse gases, the Tecogen CHP’s fitted with Ultra low-emission controls improve air quality by reducing such pollutants as hydrocarbons, NO<sub>x</sub> and CO. The annual output of emissions of the InVerde unit equipped with the Ultra technology is extremely low and compares with alternative energy technologies producing the equivalent energy output on an annual basis (100 kW, 670,000 Btu/hr).



**The Ultra system’s impact on emissions when switched on and off. NO<sub>x</sub> emissions (blue) and CO emissions (red).**

Tecogen offers three types of CHP systems that are each discussed below. Also, the highly efficient Ultra system that makes CHPs meet the most stringent emissions standards is detailed below.

### Combined Heat and Power

Tecogen’s premier cogeneration product is the recently launched InVerde e+ CHP system. The revolutionary unit combines the best technologies in the field, and features a unique set of proprietary innovations by the Tecogen team.

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 maximize efficiency at varying loads. The inverter then converts the generator’s variable output to the constant-

frequency power required by customers (50 or 60 Hertz).

Thanks to the cutting edge inverter technology, an innovative power control, and a new and improved engine, the InVerde e+ reaches an electrical efficiency of 33%, while its nearest competitor achieves efficiencies between 27 and 29 percent.



The new InVerde e+ CHP combines the best technologies in the field, along with a unique set of proprietary innovations by the Tecogen team.

Note that this efficiency only refers to the produced electricity and that the harvested heat to produce thermal energy is not taken into account. A Tecogen CHP system that also uses the recovered heat, achieves efficiency between 80 to 90 percent.

The DC input capability, facilitating battery or solar array integration, is another huge innovation. It allows for a seamless transfer of energy between the CHP, other energy generators, such solar panels, windmills, and backup batteries, eliminating the need for costly converters. This way, the CHP basically becomes a complete **Building Energy Management System**. We're not aware of any CHP competitor having this feature.

Moreover, the new units automatically start up within 10 seconds in the event of a full blackout of the grid, making the CHPs compliant with the new strict Type 110 standard for emergency and standby power systems by the National Fire Protection Association (NFPA). This is yet another innovation that very few competitors offer.

### **BUILDING ENERGY MANAGEMENT SYSTEM (BEMS)**

An energy management system (BEMS) is a sophisticated method to monitor and control a building's energy needs. Next to energy management, the system can control and monitor a large variety of other aspects of the building regardless of whether it is residential or commercial. Examples of these functions are heating, ventilation and air conditioning (HVAC), lighting or security measures.

The global market for building energy management systems continues to grow as technologies reach maturity and customers gain understanding of the business value generated by investment. According to Navigant Research, the global BEMS market reached \$2.4 billion in 2015 and is expected to grow to \$10.8 billion by 2024. Although Tecogen is a smaller player in this market, it does indicate the strong demand and growth potential.

The NFPA 110 standard covers performance requirements for emergency and standby power systems providing an alternate source of electrical power in buildings and facilities in the event that the normal electrical power source fails. Amongst these requirements is that the backup equipment needs to supply electrical power within 10 seconds of the blackout in order for it to qualify.

This is also the first engine-driven product to carry full UL 1741 Certification for "utility-safe" interconnection. So it doesn't need any additional permitting for interconnecting to the electric grid.

Robert Panora, Tecogen's President and Chief Operating Officer commented, "The new InVerde e+ is a real testament to Tecogen's devotion to continuous product improvement. It 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."

The best applications for Tecogen cogeneration systems are in facilities that have consistent electrical and thermal needs

such as hospitals, nursing homes, colleges, schools, recreational facilities, government buildings, large residential facilities, industrial facilities, hotels, and ice rinks.

### Ilios High-Efficiency Water Heaters

The Ilios water heater product operates like an electric heat pump but uses 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. Heat pumps extract heat from outside and move it indoors. In both cases, fluids move the heat around by flowing through heat exchangers. At various points the fluids are compressed or expanded, which absorbs or releases heat.

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.



**An Ilios multi-unit installation.**

The net effect is that the efficiency of an Ilios' heat pump far surpasses that of conventional boilers for water heating. This translates directly to lower fuel consumption and, for heavy use customers, significantly lower operating costs. Gas engine heat pumps can deliver efficiencies in excess of 200%.

The Ilios market continues to expand both geographically and into different end-market segments. The high-efficiency water heater is ideal for locations with a gas demand of at least 4000 Therms/month, such as water parks, swimming pools, hotels, hospitals, apartment buildings and recreation centers. The Ilios system also attracts customers that consistently have the simultaneous need for heating and cooling, such as manufacturing and R&D type facilities.

### Chillers

TECOCHILL natural gas engine-driven chillers provide building owners with a reliable, proven, efficient, and cost-effective alternative to conventional electric motor-powered chillers. It's the only natural gas powered chiller on the North American market in its size range.



**TECOCHILL chillers are powered by TecoDrive 7400 engines, industrial versions of the General Motors Mark V 7.4L V8, modified to Tecogen specifications.**

This technology was 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 hot water or heating. 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 TECOCHILL's benefits are significant. It cuts a building's cooling costs in half, by eliminating most of the electrical demand (kW) associated with providing cooling. In addition, it offers optional "waste" heat that is

always available at the same time. This high-quality heat source (up to 230°F hot water) literally comes for free, whenever the chiller is running.

The TECOCHILL chillers are available in capacities ranging from 25 to 400 tons, with the smaller units air-cooled and the larger ones water-cooled. They are ideal in facilities where new chilling capacity is desired, as replacements for aging electric chilling equipment, where the local electric utility's kW demand charges are high, or where the site's electrical capacity is limited.

Basically, they make sense wherever large chillers are needed, including hospitals, colleges, schools, office buildings, aquariums, government buildings, large residential facilities, industrial facilities, hotels, and ice rinks.

## Ultra

In 2008 there was a dramatic change in the air quality regulations in Southern California. At that time no technology could meet the new, stricter, emission standards.



**The Ultra Emissions System mounted to a CHP unit. The Ultra is designed to deliver simple, cost-effective solutions for natural gas engines to meet stringent emissions standards.**

In reaction to the new regulations, Tecogen developed the Ultra technology between 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 emissions from natural-gas engines and CHP systems into compliance with California's standards, which are now the most stringent in the United States.

Tecogen decided to look at the chemistry of emissions instead of the mechanical controls of the engine to simultaneously get rid of NOx compounds, CO and hydrocarbons. They broke the catalyst process into two steps and ran each step at a different temperature.

By controlling the temperature in the first stage, the system could achieve very low NOx emissions. In a second stage process the remaining pollutants were oxidized by injecting a little air between the first and second stages and altering the process conditions.

Tecogen conducted three validation programs for its revolutionary technology:

■ **Third-party laboratory verification**

- The AVL California Technology Center, a long-standing research and technology partner with the international automotive industry, confirmed Ultra's results in their state-of-the-art dynamometer test cell, which was outfitted with sophisticated emissions measurement equipment.

■ **Verifying longevity and reliability in the field**

- One of Tecogen's 75-kW units, already operating at a customer location in Southern California, was equipped with the Ultra low-emissions technology and a device to monitor emissions continuously. The Ultra 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.

■ **Additional independent tests**

- During the field test, two companies, licensed in California to test emissions, each verified the results at different times. The results from one of these tests (obtained in August 2011) enabled the Company to qualify for New Jersey's fast-track permitting for low emissions equipment. Virtually every state nationwide requires some kind of permit related to local air quality, but New Jersey allows an exemption for systems such as

Tecogen's that demonstrate superior emissions performance. This certification was granted in November 2011.

In 2012, a 75 kW CHP unit equipped with the Ultra system became the first unit to obtain a conditional air permit in Southern California since the strict regulations went into place in 2009. A state-certified source test, administered in January 2013, verified that the emissions levels of the system were well below the new permitting requirements, and the final permit version was approved in August 2013.

After a successful field test of more than a year, the Ultra technology was commercially introduced as an option for all of Tecogen's products under the trade name Ultra, which was recently rebranded to Ultra.

This technology was patented in the United States in October 2013 with many foreign patents granted or applications pending. The Ultra low-emissions technology repositions the Company's engine-driven products in the marketplace, making them comparable environmentally with emerging technologies such as fuel cells, but at a much lower cost and greater efficiency.

Tecogen originally developed and patented the Ultra-low emission control technology for its own CHP products and has since decided to make the technology available for retrofit on non-Tecogen applications.

**The Ultra retrofit kits deliver simple, cost-effective and robust solutions for meeting even the most stringent emissions standards. The patented system provides peace of mind to its customers by lowering NOx and CO to near-zero levels without the need for complex additional controls or frequent maintenance.**

Adapting the Ultra technology to gasoline fueled engines, represents an exciting and game-changing new market for Tecogen. The prospect of vehicle and stationary engines, with standard engine technology, but realizing fuel cell like emissions is tremendously

compelling from a policy and market standpoint.

The Volkswagen emissions scandal obviously provides an excellent opportunity for Tecogen to prove that its technology is the best way to meet these stringent standards.

In order to do so, Tecogen has formed Ultra Emissions Technologies Ltd (Ultratek), a joint venture with a group of strategic investors, to test, verify and develop the Ultra technology for vehicular applications. Initial research indicates that the near-zero emissions technology may work for gasoline fueled engines. (Also read 'Growth Drivers').

Important to know is that the Ultra patents secure use of the technology for any spark-ignited rich burn engine, a category that gasoline powered automotive engines fall under.

## THE MARKET

During the 20th century, fossil-fuel power plants worldwide evolved toward large, complex central stations using high-temperature steam turbines. This technology, though steadily refined, reaches a maximum efficiency of about 40%. According to official numbers by the US Environmental Protection Agency (EPA), the average efficiency of fossil-fuel power plants in the United States is 33% and has remained virtually unchanged for four decades.

CHP, which harnesses waste energy from the power generation process and puts it to work on-site, boosts the efficiency of energy conversion to nearly 90%, a better than two-fold improvement over the average efficiency fossil fuel plant. The implications of the CHP approach are significant. If CHP were applied on a large scale, global fuel usage might be curtailed dramatically.

A majority of potential customers in the U.S. require less than 1 MW of electric power and less than 1,200 tons of cooling capacity. This is ideal, as Tecogen's systems have a capacity exactly suited for these types of customers.

The Company's products are sold directly to end-users by its own sales team and by

established sales agents and representatives, who are compensated by commissions, including American DG Energy and EuroSite Power. Various agreements are in place with distributors and outside sales representatives for certain territories and product lines.

Tecogen has shipped more than 2,300 units, some of which have been operating for almost 25 years. This is a well-established and respected company in the industry.

## GOVERNMENT REGULATIONS

Several kinds of government regulations affect the Company's current and future business, such as:

- ▣ Air pollution regulations, which govern the emissions allowed in engine exhaust;
- ▣ State and federal incentives for CHP technology; and
- ▣ Electric utility pricing and related regulations
- ▣ Electric grid interconnection regulations

Strict regulations that control **air quality and greenhouse gases** increasingly favor Tecogen's low-emission products. In some states that have strict emissions regulations, such as California, the pollution from natural gas engines presents a challenge.

However, the development of the Ultera low-emissions technology has addressed this issue. In January 2013, a state-certified source test at a customer's site verified that emissions levels of a CHP equipped with the Ultera technology, were well below the new permitting requirements.

Likewise, in New Jersey, where emissions regulations are trending towards California levels, the Company has already established its Ultera CHP as a certified technology; a unique status that separates it from the competition.

In addition, there are currently 23 states that recognize CHP as part of their Renewable Portfolio Standards. New York and New

Jersey, for example, have **incentive programs** that rebate a significant portion of the CHP project cost. Similar incentive programs also exist in Massachusetts, Rhode Island, and Maryland albeit with different structures and terms. Massachusetts has an additional CHP incentive in the form of an annual rebate proportional to the carbon savings versus conventional technology.

Finally, the Company is also 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 modular units in groups so as to assure redundancy and peak demand savings.

## RECENT EVENTS

### \$2 Million Order Added to Substantial Backlog

A couple of weeks ago, Tecogen was awarded a contract worth approximately \$2 million for the sale of multiple CHP units to a school district in Long Island, NY. The order includes a mix of InVerde 100 kW and CM-75 kW CHPs, as well as load modules, factory engineered accessories, and long-term service agreements. All units will also incorporate Tecogen's patented Ultera emissions control technology.

The CHP systems will provide electrical power for the schools and supplement various onsite heating systems, resulting in significant cost savings as well as a reduced carbon footprint. The smallest two systems, both to be installed in district middle schools, will utilize a single CHP unit while the largest, a high school, will use five units.

The new contract will be added to Tecogen's already impressive backlog of \$12.2 million as of March 21, 2016.

The contract was awarded by a construction firm under subcontract by a large multi-national energy services company (ESCO) which is providing a broader range of efficiency services to the district.

Initially, the project for this school district was for 14 CHP units in six different schools, consisting of two high schools and four middle schools. After conducting the necessary engineering and feasibility work, it was concluded that not all six schools had the loads required to justify CHP installations.

The CHP systems that will be installed are sized for the energy requirements of each individual school. That way energy savings are maximized and the carbon footprint is significantly reduced. The CHP systems total 900 kW, and will cut carbon emissions by 2,086 tons per year, equivalent to removing 398 cars from the road annually.

In the recent past several other public school projects, in which Tecogen systems were procured, were completed with the same construction firm and multinational ESCO. This is a validation of Tecogen's technology and a clear indication that the Company's strategy of working with ESCOs to participate in their large programs, often encompassing many buildings, is working well.

### High Potential Partnership with Gas Company

Last month, Tecogen partnered with a gas company in the United States, which has obtained the exclusive right to market and sell Tecogen's gas engine-driven heating and cooling systems in its area of operation. This is a big plus for Tecogen, as gas companies are already recognized and trusted suppliers.

In return, the gas company will receive a commission on each machine sale that it makes. In addition, by installing these long-life Tecogen units at their customers' site, they're able to ensure a steady off-take for their gas.

This is the first agreement for Tecogen with a gas company. And it's the intention to close many similar deals in the future. What's particularly interesting is that in the territory where the gas company is active, Tecogen had only sold a handful of systems so far, suggesting the Company is clearly expanding its geographic footprint.

The gas company will first focus on selling Ilios water heaters and TECOCHILL chillers. Selling Combined Heat and Power (CHP) systems will be added at a later stage assuming certain milestones are met.

The reason for taking this approach is that it's easier to find local skilled technicians that can service water heaters and chillers, while servicing a CHP unit really requires a trained technician. Consequently, only when there's a critical mass of installed water heaters and chillers in a certain area, a dedicated Tecogen service rep is added to the region. At that moment, it makes sense for CHPs to be sold in that territory.

The gas company will initially target industrial and commercial customers because they're larger users and the Tecogen equipment is more appropriate for them.

Speaking about the partnership, Mr. Locke, Tecogen's co-CEO commented, "We have been vocal about our growth initiatives and this partnership is the first of what we hope will be many similarly structured gas company selling agreements for other territories. Gas companies are natural partners for Tecogen as our equipment offers significant value to gas company customers while ensuring a steady demand of gas for the gas partner."

## GROWTH DRIVERS

### Ultratek - Ultera Gasoline Engine Application

Early January 2016, following the outbreak of the Volkswagen emissions scandal, Tecogen formed Ultra Emissions Technologies Ltd (Ultratek), a 50/50 joint venture with a group of strategic investors, to develop the Company's Ultera near-zero emissions technology for gasoline powered engines.

Tecogen received a 50% equity interest in the new 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 interest was purchased for \$3,000,000 by a small group of offshore investors. Note that Tecogen retains

the rights to its Ultra emissions control technology for all other applications.

Although the emissions scandal for vehicles has primarily been about diesel engines, for which the Ultra technology is not suited, the emissions performance of gasoline engines has also been brought into question. While there has been no suggestion of improper testing, compliance testing has been negatively described as not being representative of real world conditions. Moreover, future vehicle emissions regulations will become progressively more difficult to reach through 2025. As a result, the Ultra could be a much needed solution for the car industry.

In addition to the joint venture agreement financing, the strategic investors have collectively purchased 890,208 shares in Tecogen at a trailing 30 day average price of \$3.37, bringing their total initial investment to \$6 million.

The investors also received warrants to purchase 900,000 shares of Tecogen's common stock at a \$4 strike price, providing Tecogen an additional \$3 million in capital if exercised. The warrants expire in June 2016. With this additional financing, the Promissory Note of \$3,000,000 that is due at the end of 2016 appears secure thanks to the infusion of capital.

Ultratek first gained a better understanding of the current regulatory framework that applies to vehicles and the future course of these regulations. The group determined that vehicle emissions regulations are fairly generous compared with the strict regulations that the Company faces in the stationary market today. Moreover, many vehicles may perform well when tested, but actually underperform in real-life driving scenarios. Discussions with experts in the industry have also highlighted that as of 2017, tests will become increasingly more rigorous, which is excellent news for Ultra and Ultratek.

And earlier this month, baseline testing on a standard 2016 vehicle platform was initiated by AVL North America at their state-of-the-art California Technology Center in Lake Forest, CA. AVL is the world's largest independent

company for the development, simulation, and testing of powertrain systems for passenger cars, trucks, and large internal combustion engines. For more than 60 years, AVL, which reached 1.15 billion euro in sales in 2014 and employs 7,500 people, has been working in partnership with companies all over the world.



**Part of the AVL test lab, which offers mechanical testing for the verification and validation of engines, transmissions, exhaust gas aftertreatment and hybrid systems.**

Following the baseline tests, the Ultra emissions control kit will be fitted to the vehicle, repeating the same testing conditions. Results of the baseline vehicle emissions will then be compared to results produced by the Ultra-equipped vehicle and analyzed by AVL's expert team and Ultratek's premier consultants. Insights will then be used to inform phase 2 testing, which is slated to begin in Massachusetts in the coming months.

"We're thrilled to get the process started with AVL," said Dr. Elias Samaras Ultratek co-CEO. "Ultra has already been successfully tested on a variety of diverse natural gas stationary engines, and in each scenario has proven to consistently reduce the emissions of pollutants contributing to smog (NOx, CO, and hydrocarbons) to near zero levels, on par with those emissions produced by super clean fuel cells. We're by all means optimistic our patented technology can be applied to gasoline powered automotive engines as well and revolutionize the transportation industry."

## First Chiller Sales to Vast Agriculture Market

In February of this year, MadeWell Ventures LLC, which runs an indoor growing facility in Denver, Colorado, purchased two 150-ton TECOCHILL natural gas engine-driven chillers, the first chiller sales into the agriculture industry for Tecogen.

Although this particular customer will use the chillers in the cannabis production industry, there are thousands of farmers with greenhouses or indoor facilities that grow fruits, vegetables, plants or flowers, that could also benefit from a similar installation.

Indoor growing facilities often use 1000-watt, high-intensity U.V. lightbulbs. This necessary lighting equipment generates a lot of unwanted heat, which has to be removed from the indoor environment with air conditioners and ventilation systems. This farmer, however, opted for a much more economical TECOCHILL.



**A greenhouse growing a multitude of crops.**

According to the customer's engineering estimates, the Tecogen chillers and specified ancillary equipment are expected to save the facility over \$100,000 per year by significantly reducing the building's electrical demand and energy usage.

In addition, the units provide free high-quality waste heat from the engines for heating and humidity control, and carbon dioxide (CO<sub>2</sub>) from the cleaned exhaust stream will be used as fertilizer to improve growing conditions.

It's important to note that plants grow by converting the CO<sub>2</sub> that's found in air to carbon through photosynthesis, and greenhouse plants absorb even more CO<sub>2</sub> because of the artificial lighting.

In the agriculture space, TECOCHILL's potential uses are unmistakably large. By running on inexpensive and reliable natural gas, the chillers can help agricultural customers avoid punitive peak electrical demand charges. As an added bonus, customers are assured their greenhouses will remain cool and their crops will not experience adverse temperature fluctuations during power outages, because the chillers are fed by reliable natural gas.

Moreover, growing indoors is becoming more popular as it has a host of benefits as opposed to traditional gardening outdoors. For example, an environment can be created that is ideal for the plants. Depending upon the crop, key factors which may be controlled include temperature, levels of light and shade, irrigation, fertilizer application, and atmospheric humidity, etc.

Also, by having an indoor garden, one can eliminate many parasites that are more common outdoors, reducing the need for pesticides. In addition, farmers are able grow the same product throughout the year, making greenhouses increasingly important in the food supply of certain countries. And plants or flowers can grow indoors where they normally can't because it may be too cold outside.

Additionally, many garden facilities were either constructed without large capacity electric infrastructure or are housed in converted warehouses without the necessary wiring for a traditional large scale electric solution. A natural gas powered system allows such facilities to avoid costly upgrades of their building's electrical infrastructure, saving the operator on both installation and ongoing electric bills.

One final advantage is the growing desire of consumers to "eat local". There is an increasing awareness of the carbon footprint of long distance delivery systems as well as the need for a constant local supply of fresh

and organic food. On average, food in North America travels over 1,500 miles before it's sold in a grocery store and consumed. According to research, food travel accounts for approximately 16% of energy use in the United States.

Consumers realize that importing food from thousands of miles away is a cost heavy, carbon intensive endeavor and public opinion has shifted to the more eco-friendly delivery models such as proximity-to-market.

**We expect Tecogen to generate more sales in the agriculture sector, because it's unsustainable that 16% of North America's energy bill comes from food transportation. Therefore more food needs to be grown locally.**

## FINANCIALS

**Product revenue** is derived from the sale of the various cogeneration and chiller units. Because the equipment is built to last 20 or more years, most of the product sales are to first time customers. Recurring sales also occur to ESCO partners or long time customers, such as the recent TECOCHILL contract mentioned under 'Recent Events'.

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. The cogeneration and chiller modules are built to order and revenue is recognized upon shipment.

The Company's **service revenue**, however, lends itself to recurring revenues from particular customers. For the last two fiscal years, close to one third of Tecogen's revenues were generated from long-term maintenance contracts, which provide the Company with a somewhat predictable revenue stream.

The service revenue has grown each year since 2005, with New York City/New Jersey, New England and to some extent California experiencing the majority of the growth. This growth is consistent with the sale of new units into those territories.

Tecogen's net sales for the year ended December 31, 2015 were \$21.4 million,

compared to \$19.3 million in 2014, an increase of 11%. Gross profit increased to \$7,633,226 for 2015 compared to \$6,399,064, an increase of 19%.

Amounts in \$000's	12/31/15	12/31/14
<b>Products</b>		
Cogeneration	7,883	5,365
Chiller & Heat Pump	2,172	3,260
<b>Total Product Sales</b>	<b>10,055</b>	<b>8,625</b>
<b>Services</b>		
Service Contracts	7,832	7,438
Installations	3,555	3,280
<b>Total Services Sales</b>	<b>11,387</b>	<b>10,718</b>
<b>Total Sales</b>	<b>21,443</b>	<b>19,343</b>
<b>Net sales by product line and services for the fiscal years ended December 31, 2015 and 2014.</b>		
<b>Source: Company Filing</b>		

Machine sales in 2015 grew 16.6% to \$10,055,237 versus \$8,625,034 in 2014. This solid performance was mainly driven by strong sales of cogeneration equipment, posting over 45% growth in sales in this category over the prior year. This again demonstrates the Company's strong market traction of its InVerde CHPs. Similar strong sales are expected from the newly launched InVerde e+.

Besides selling machines, which in many cases are one-off deals, Tecogen generates plenty of revenues through service contracts, which is a reliable and growing part of the Company's total sales. Service revenues in 2015 were \$11,387,420, up 6.2% compared with \$10,717,630 in 2014.

Equally as important, gross margins for both product and service revenues climbed considerably in 2015. Product margins improved by 260 basis points to 29%, as a result of ongoing cost saving initiatives and product price adjustments. While service margins improved by nearly 300 basis points to 41.4%.

Because service margins are higher, Tecogen is intensifying its efforts in that area. It has established a sales office in Florida to serve the southeastern United States and the Caribbean, bringing the total number of sales offices in the United States to four.

Amounts in \$000's	12/31/15	12/31/14
Net Sales	21,443	19,343
Cost of Sales	13,809	12,944
Operating Expenses	10,277	10,102
<b>Loss From Operations</b>	<b>2,643</b>	<b>3,703</b>
Total Other Expenses	158	168
<b>Net Loss</b>	<b>2,727</b>	<b>3,746</b>
Diluted Shares Outs.	16,860	16,608
Diluted EPS	(0.16)	(0.24)

**Most important income statement data for the fiscal years ending December 31, 2015 and December 31, 2014. Source: Company Filing**

Noteworthy is that despite the 11% sales increase, operating expenses have hardly risen in 2015. Also in 2016 it remains one of management's key goals to tighten and decrease spending.

Backlog of equipment and installations was \$11.6 million at year end 2015 compared to \$9.9 million at the end of 2014, a 17% increase. As of March 21, 2016 the backlog stood at \$12.2 million, well ahead of the Company's ongoing goal of backlog above \$10 million. Note that the backlog number doesn't include service contract revenues, which were more than 1/3 of TGEN's revenues in 2015.

### Balance Sheet as of December 31, 2015

Tecogen finished 2015 with close to \$5.5 million in cash. In June 2015, it secured a two year \$2 million line of credit from its founder and Co-Chief Executive Officer, John Hatsopoulos. That funding was followed in August of this year when it sold in a single transaction 1.25 million shares of common stock at \$4.00 for a total raise of \$5,000,000.

Thanks to these funds, Tecogen is well positioned to fund ongoing operating expenses and future growth initiatives. Similarly, in conjunction with the launch of the Ultratek joint venture, Tecogen raised a further \$3 million via private placement, solidifying the balance sheet.

The Company's inventory was increased from slightly over \$4 million at the end of 2014, to about \$5.7 million at the end of 2015 in anticipation of increased sales.

Consolidated working capital on December 31, 2015 was \$14,027,370 compared to \$7,217,583 at December 31, 2014, a strong increase of \$6,809,787. Tecogen has a very solid current ratio of 3.61.

Amounts in \$000's	12/31/15	12/31/14
Cash and Cash Eq.	5,486	1,186
Accounts Receivable	5,287	4,750
Unbilled Revenue	1,072	697
Inventory	5,683	4,090
Total Current Assets	19,403	12,308
Property & equipment	544	658
<b>Total Assets</b>	<b>21,091</b>	<b>14,122</b>
Accounts Payable	3,312	2,416
Accrued Expenses	1,067	1,008
Deferred Revenue	997	1,667
Total Current Liabilities	5,376	5,091
Convertible Note	3,000	3,000
<b>Total Liabilities</b>	<b>8,649</b>	<b>8,298</b>
Total Stockholder Equity	12,442	5,823

**Most important balance sheet data for the periods ending December 31, 2015 and December 31, 2014. Source: Company Filing**

## OUTLOOK & VALUATION

Tecogen Inc. continues the tradition of combining ground breaking research with successful technology application and product advancement. The Company's proprietary cogeneration technology, which improves efficiency, emissions, and grid resiliency, is truly disruptive to the traditional methods of heating, cooling, and powering buildings and infrastructure.

These cogeneration units produce electricity, or mechanical power, while capturing the waste heat that is normally lost. This waste heat is then used on-site for hot water or heating purposes at no additional cost to the customer or environment. The result is significant energy and cost savings, as well as proportional decreases in carbon footprint and greenhouse gas emissions.

The fundamental economics of CHP, such as high electric rates, low gas rates, and grid resiliency concerns continue to be in the Company's favor.

These trends are already visible in the Company's financials. We're convinced that with the launch of the new InVerde e+ and the expansion of the sales efforts these results will continue to improve.

With faster production lead times and longer service intervals, Tecogen's new InVerde e+ CHP module is a natural fit for building managers looking for a hassle-free, economic, and environmentally friendly solution to their heating and power needs.

The Company hasn't disclosed the cost for the new CHP unit yet, but because it has so much additional technology and advantages, it's safe to assume that it will be situated at the high end of a CHP's price range. That should clearly have a positive impact on Tecogen's revenues and backlog as sales start to ramp up.

Furthermore, we expect significant news in 2016 from the stationary emissions aftertreatment market. A simple natural gas generator that can be permitted without any use restriction has real value in a very large market. Current sales of natural gas engines in the 50 to 500 horsepower range in North America are over 80,000 units, many of which are for backup power.

By retrofitting an Ultera, which reduces the emissions of pollutants contributing to smog (NOx, CO, and hydrocarbons) to near zero levels, owners in emission-sensitive areas would be able to utilize their otherwise inactive back-up generators to peak shave their electric use, removing the most punitive kilowatt-hours from their monthly utility bill.

Finally, we're very excited about Ultratek, the joint venture with a group of strategic investors, to test, verify and develop the Company's Ultera technology for vehicular applications. The prospect of gasoline engine vehicles, operating with standard engine technology, but realizing fuel cell like emissions is tremendously compelling from a policy and market standpoint. Good progress is being made in the area, and phase I testing by AVL North America is currently ongoing.

In a few months, first results should indicate if the Ultera system can be adapted to

automotive engines. It's clear that if successful, Ultratek will revolutionize the car industry and Tecogen won't be a \$70 million company for much longer.

Tecogen continues to grow its revenues and move closer to profitability. Its stable service revenue has grown each year since 2005, with New York City/New Jersey, New England and to some extent California experiencing the majority of the growth. This growth is consistent with the sale of new units into those territories.

## Valuation

Given the still emerging nature of Tecogen's earnings, a multiple-based valuation is challenging. Instead, we apply a Discounted Cash Flow (DCF) model.

The intrinsic value of Tecogen Inc.'s shares derived from our model is \$9.02, which is up from US\$8.87 in our previous report.

**Based on these numbers, we reiterate our buy recommendation for Tecogen Inc. with a price target of \$9.02, which is 142% above today's stock price.**

## SHARE DATA & OWNERSHIP

As of December 31, 2015, Tecogen had 18,478,990 common shares outstanding.

In addition, the Company has 1.26 million options outstanding with an average exercise price of \$3.06. It also has 900,000 warrants outstanding at an exercise price of \$4.00. And finally, Tecogen has \$3 million convertible debt, which is convertible into 625,000 shares of common stock.

The principal owners of the Company's common stock are George Hatsopoulos (19.5%), John Hatsopoulos (16.8%), Michaelson Capital Partners (6.5%), Joseph Ritchie (4.9%), and Clear Harbor Asset Management (3.7%).

## MANAGEMENT

▣ **DR. JOHN N. HATSOPoulos – CO-CHIEF EXECUTIVE OFFICER**

Dr. Hatsopoulos has been the Chief Executive Officer of the Company since the organization of Tecogen in 2000. He has also been the Chief Executive Officer of American DG Energy Inc. since 2000, and the Chairman of EuroSite Power Inc. since 2009. Mr. Hatsopoulos is a co-founder of Thermo Electron Corporation, which is now Thermo Fisher Scientific (NYSE: TMO), and the retired President and Vice Chairman of the Board of Directors of that company. Mr. Hatsopoulos graduated from Athens College in Greece, and holds a bachelor's degree in history and mathematics from Northeastern University, as well as honorary doctorates in business administration from Boston College and Northeastern University.

▣ **BEJAMIN LOCKE - CO-CHIEF EXECUTIVE OFFICER**

Mr. Locke was named Co-Chief Executive Officer in October, 2014. He joined Tecogen in June, 2013 as the Director of Corporate Strategy and was promoted to General Manager prior to his appointment as Co-CEO. Previously Mr. Locke was the Director of Business Development and Government Affairs at Metabolix, responsible for developing and executing plans for partnerships, joint ventures, acquisitions, and other strategic arrangements for commercializing profitable clean energy technologies. Mr. Locke has a B.S. in Physics from the University of Massachusetts, an M.S. in Electrical Engineering from Tufts University, and an MBA in Corporate Finance from Boston University.

▣ **ROBERT PANORA - CHIEF OPERATIONS OFFICER**

Mr. Panora has served as President of Tecogen since 2000. He had been General Manager of Tecogen's Product Group since 1990 and Manager of Product Development, Engineering Manager, and Operations Manager of the Company since 1984. Over his

27-year tenure with Tecogen, he has been responsible for sales and marketing, engineering, service, and manufacturing. Mr. Panora contributed to the development of Tecogen's first product, the CM-60 cogeneration module, and was Program Manager for the cogeneration and chiller projects that followed. Mr. Panora has B.S. and M.S. degrees in Chemical Engineering from Tufts University.

▣ **DAVID A. GARRISON - CHIEF FINANCIAL OFFICER**

Mr. Garrison has been the Chief Financial Officer, Treasurer and Secretary of Tecogen since August of 2014. Prior to joining Tecogen, Mr. Garrison was Executive Vice President and Chief Financial Officer of Arrhythmia Research Technology, Inc. and its subsidiary Micron Products, Inc. since 2002. Leading the finance department of this NYSE listed company, Mr. Garrison oversaw all aspects of SEC compliance, internal controls and raising capital through debt in a capital intensive medical device manufacturing business. Mr. Garrison hold a B.S. in Finance from Miami University and a Master in Business Administration from Boston University.

▣ **JOSEPH GEHRET - CHIEF TECHNOLOGY OFFICER**

Mr. Gehret is Tecogen's Chief Technical Officer. He is responsible for leading technology development at Tecogen and defining the Company's research and development efforts. With an expansive depth and breadth of classic as well as cutting edge technology, he has been integral in the development of all Tecogen products and technology for 30 years. He is the primary author on all of Tecogen's major patents. He has a B.S. in Mechanical Engineering as well as an M.S. in Nuclear Engineering, both from the Massachusetts Institute of Technology.

## ANNUAL INCOME STATEMENT FY 2012 – FY 2015

All numbers in thousands

PERIOD ENDING	FY 2012	FY 2013	FY 2014	FY 2015
<b>Total Revenue</b>	<b>15,254</b>	<b>15,850</b>	<b>19,343</b>	<b>21,443</b>
Cost of Revenue	9,389	10,820	12,944	13,809
<b>Gross Profit or (Loss)</b>	<b>5,865</b>	<b>5,030</b>	<b>6,399</b>	<b>7,633</b>
<b>Operating Expenses</b>				
General & Administrative	6,643	5,931	7,265	7,998
Selling	1,226	1,424	1,796	1,687
R&D	-	1,087	1,041	592
Total Operating Expenses	7,869	8,700	10,102	10,277
<b>Operating Income or (Loss)</b>	<b>(2,004)</b>	<b>(3,670)</b>	<b>(3,703)</b>	<b>(2,643)</b>
<b>Other Income or (Expense)</b>				
Interest & Other Income	48	4	10	14
Interest Expense	(71)	(141)	(177)	(172)
Income or (Loss) attributable to the non-controlling interest	389	357	125	74
<b>Net (Loss) attributable to Tecogen Inc.</b>	<b>(1,637)</b>	<b>(3,449)</b>	<b>(3,746)</b>	<b>(2,727)</b>

Annual Income Statement FY 2012 – FY 2015. Source: Company Filings



**NASDAQ: TGEN**

**Company Headquarters**

45 First Avenue  
Waltham, MA 02451  
United States

**Company Contact Information**

Ariel F. Babcock, CFA, IR & Media Contact  
Phone: + 1 781-466-6413  
Email : Ariel.Babcock@tecogen.com

**About Smallcaps Investment Research**

We're proud that Smallcaps Investment Research is recognized as one of the most trusted online sources on U.S. and Canadian small cap stocks. We've earned that trust because we only highlight stable, ethical companies to our visitors and newsletter subscribers. We focus on fundamentally undervalued companies with a market cap below \$100 million, and we have a special interest in stocks with a high potential, innovative product or service. Read our [About](#) for more information.

This Company Report is prepared and distributed by Smallcaps Investment Research.

Contact: [editor@smallcaps.us](mailto:editor@smallcaps.us)

## DISCLOSURES

This publication has been prepared by Smallcaps Investment Research, which owns and operates the website <http://www.smallcaps.us>. Smallcaps Investment Research is not a registered financial advisor, nor is it a stockbroker or investment advisor.

This publication is provided for information purposes only and is not intended to be an offer, or the solicitation of an offer, to buy or sell the securities referred to herein.

Investors must make their own determination of the appropriateness of an investment in any securities referred to herein based on the merits and risks involved, their own investment strategy and their legal, fiscal and financial position. Past performance is no guarantee for future results. Smallcaps Investment Research nor any of its employees shall be responsible for any investment decision.

The information herein has been obtained from, and any opinions herein are based upon, sources believed reliable. However its accuracy and completeness is not guaranteed. All opinions, forecasts and estimates herein reflect the judgment of Smallcaps Investment Research on the date of this publication.

This Company Report may contain certain "forward-looking statements" within the meaning of applicable securities laws, including without limitation, statements related to the Company's plans, strategies, objectives, expectations, intentions and adequacy of resources. Investors are cautioned that such forward-looking statements involve risks and uncertainties including without limitation the following: (i) the Company's plans, strategies, objectives, expectations and intentions are subject to change at any time at the discretion of the Company; (ii) the Company's plans and results of operations will be affected by the Company's ability to manage its growth, and (iii) other risks and uncertainties indicated from time to time in the Company's public filings.

Smallcaps Investment Research has been compensated by Tecogen Inc. to develop and execute a communication plan to enhance the Company's exposure to the investor community.

Smallcaps Investment Research and/or its employees may hold positions in companies mentioned. However, it is prohibited for Smallcaps Investment Research and/or its employees to trade in financial instruments of companies one week prior to publication of the initial Company Report or a rating change until one week thereafter.

No part of this publication may be reproduced in any manner without the prior written consent of Smallcaps Investment Research. © 2003 - 2016 Smallcaps Investment Research.