

TECOGEN INC.  
Form S-1/A  
September 30, 2013

As filed with the Securities and Exchange Commission on September 30, 2013

**Registration No. 333-189042**

**UNITED STATES SECURITIES AND EXCHANGE  
COMMISSION  
Washington, DC 20549**

**Amendment No. 2  
to  
Form S-1  
REGISTRATION STATEMENT UNDER THE  
SECURITIES ACT OF 1933**

**Tecogen Inc.**

*(Exact name of registrant as specified in its charter)*

Delaware  
(State or other jurisdiction of  
incorporation or organization)

3585  
*(Primary Standard Industrial  
Classification Code Number)*

04-3536131  
*(I.R.S. Employer  
Identification Number)*

Tecogen Inc.  
45 First Avenue

**John N. Hatsopoulos  
Chief Executive Officer**

Tecogen Inc.

Waltham, MA 02451  
(781) 622-1120  
*(Address, including zip code, and telephone number,  
including area code, of registrant's principal executive  
offices)*

**Tecogen Inc.**  
**45 First Avenue**  
**Waltham, MA 02451**  
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**Approximate date of commencement of proposed sale to the public:** As soon as practicable after the effective date hereof.

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

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

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company.

Large accelerated filer:  Accelerated filer:  Non-accelerated filer:  Smaller reporting company:

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



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The information in this preliminary prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state or other jurisdiction where the offer or sale is not permitted.

**SUBJECT TO COMPLETION, DATED SEPTEMBER 30,  
2013**

**PRELIMINARY PROSPECTUS**

**3,000,000 Shares**

**Tecogen Inc.**

**Common Stock**

Tecogen Inc. is offering shares of our common stock. Prior to this offering, there has been no public market for our common stock. We expect that the public offering price will be between \$5.50 and \$7.50 per share.

We have applied to list our common stock on the NASDAQ Capital Market under the symbol TGEN.

We are an emerging growth company, as that term is used in the Jumpstart Our Business Startups Act of 2012, or JOBS Act, and, as such, have elected to comply with certain reduced public company reporting requirements for this prospectus and future filings. See Prospectus Summary Implications of Being an Emerging Growth Company.

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

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

|  | Per Share | Total |
|--|-----------|-------|
| Public offering price                  | \$        | \$    |
| Underwriting discounts and commissions | \$        | \$    |
| Proceeds to us (before expenses)       | \$        | \$    |

See Underwriting beginning on page 81 of this prospectus for a description of the compensation payable to the underwriters.

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We have granted a 30-day option to the underwriters to purchase up to 450,000 additional shares on the same terms and conditions set forth above solely to cover over-allotments, if any.

The underwriters expect to deliver the shares offered hereby through the facilities of the Depository Trust Company on or about \_\_\_\_\_, 2013.

*Joint Bookrunning Managers*

NORTHLAND CAPITAL MARKETS

**SCARSDALE EQUITIES**

The date of this prospectus is \_\_\_\_\_, 2013.

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**You should rely only on the information contained in this prospectus and any free writing prospectus prepared by or on behalf of us or to which we have referred you. We have not authorized anyone to provide you with information that is different. We are offering to sell our common stock, and seeking offers to buy our common stock, only in jurisdictions where offers and sales are permitted. The information in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or any sale of our common stock.**

For investors outside of the United States: Neither we nor any of the underwriters have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. You are required to inform yourselves about and to observe any restrictions relating to this offering and the distribution of this prospectus.

In this prospectus, unless the context otherwise requires, Tecogen, Company, we, us, or our, refer to Tecogen Inc. and its subsidiary.

This prospectus includes statistical, market, and industry data and forecasts that we obtained from publicly available information and independent industry publications and reports that we believe to be reliable sources. These publicly available industry publications and reports generally state that they obtain their information from sources that they believe to be reliable, but they do not guarantee the accuracy or completeness of the information. Although we believe that these sources are reliable, we have not independently verified the information contained in such publications.

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## PROSPECTUS SUMMARY

*The following summary highlights information contained elsewhere in this prospectus. It is not complete and does not contain all of the information that you should consider before investing in our common stock. You should read the entire prospectus carefully, especially the risks of investing in our common stock discussed under Risk Factors and our consolidated financial statements and accompanying notes.*

### Company Overview

Tecogen designs, manufactures, sells, and services systems that produce electricity, hot water, and air conditioning for commercial installations and buildings and industrial processes. Our systems, powered by natural gas engines, drive electricity generators or compressors, which reduce the amount of electricity purchased from local utilities. Because our systems are designed to capture waste engine heat, they tend to be more energy efficient since otherwise-wasted energy can be used for water heating, space heating and/or air conditioning. The relative costs of natural gas and electricity at a proposed system site determine whether a system is economically efficient as well as energy efficient.

This type of cogeneration technology is referred to as combined heat and power, or CHP.

Tecogen manufactures three types of CHP products:

Cogeneration units that supply electricity and hot water;  
Chillers that provide air-conditioning and hot water; and  
High-efficiency water heaters.

All of our products are standardized, modular, small-scale CHP products that reduce energy costs, carbon emissions, and dependence on the electric grid. Market drivers include the price of natural gas, local electricity costs, and governmental energy policies, as well as customers' desire to become more socially responsible. Traditional customers for our cogeneration and chiller 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; however, the economic feasibility of using our systems is not limited to these customer types. We have shipped approximately 2,000 units, some of which have been operating for almost 25 years. We have 66 full-time employees and 3 part-time employees, including 6 sales and marketing personnel and 39 service personnel.

### Our Technology

Our CHP technology uses low-cost, mass-produced engines manufactured by General Motors Company, or GM, or Ford Motor Company, or Ford, which we modify to run on natural gas. Because our systems are fueled by natural gas, they typically produce lower levels of criteria air pollutants (those that are regulated by the Environmental Protection Agency, or EPA, because they can harm human health and the environment) compared with systems fueled by propane, gasoline, distillates, or residual fuel oil. We offer our new advanced emission system, *Ultra*, as an option in our CHP systems. With *Ultra*, our CHP products have achieved emission levels that qualify under strict existing and proposed California emission standards. Other emerging technologies, such as fuel cells, may also meet those standards, but we are not aware that any appear economically viable at this time.

Our products are designed as compact modular units that are intended to be applied in multiples when utilized for larger CHP plants. Approximately 68% of our CHP modules are installed in multi-unit sites ranging up to 12 units. This approach has significant advantages over utilizing single, larger units, such as building placement in constrained



urban settings and redundancy during service outages. Redundancy is particularly relevant in regions where the electric utility has formulated tariff structures that have high peak demand charges. Such tariffs are common in many areas of the United States, 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 assess 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 is highly detrimental to the monthly savings of the system. For multiple unit sites, a full system outage is less likely and consequently these customers have a greater probability of capturing peak demand savings.

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Our in-licensed microgrid technology enables our *InVerde* CHP product to provide backup power in the event of power outages that may be experienced by local, regional, or national grids.

Our 63.7%-owned subsidiary Ilios, Inc., which does business under the name Ilios Dynamics in Massachusetts, or Ilios, has developed and distributes a line of high-efficiency water heaters. Ilios technology is designed to capture available energy in the environment due to ambient temperature differences. The physical laws of thermodynamics determine the portion of this available energy that can be theoretically captured. If the cost of capturing a portion of that available energy is less than the value of that energy, additional system efficiencies may be obtained. Thus, Ilios systems in certain cases may be more efficient than conventional boilers in commercial installations and industrial processes.

## **Markets, Customers, and Suppliers**

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., or American DG Energy, and EuroSite Power Inc., or EuroSite Power, which are affiliated companies. Our principal engine supplier is GM, and the other principal components of our CHP systems are also mass-produced. Other than service revenue, our products generally do not produce recurring revenue as they typically constitute a one-time capital expenditure by a customer. We do not consider ourselves dependent on one or a few customers, including our affiliated customers, American DG Energy and EuroSite Power. We strive to obtain long-term services contracts for the products we manufacture through our factory-owned service centers in California, the Midwest, and the Northeast United States. Between 2007 and 2012, approximately 68% of our installations also included service contracts.

## **Strategy**

While we believe that our products and services provide efficient solutions to customers throughout the United States and around the world, our strategy for increased revenue and profitability is to expand our operations in our existing territories where we perceive the demand for our products and services is strongest, and where our products have particular advantages over our competition. Specifically, our CHP systems provide energy-efficient power with technically superior emissions control, while also serving as backup power that may allow customers in some areas to provide surplus power to an electrical grid. Our sales and technical staff operate from our existing service centers in California and the Northeast. These regions have strict emissions regulations, which favor our products equipped with our *Ultra* low-emission technology. Also, these regions have high peak demand rates, which favor utilization of our modular units in groups so as to assure redundancy and peak demand savings, as discussed above. Some of these regions also have generous rebates that improve the economic viability of our systems. We will also focus on customers that value our microgrid technology that enables the CHP plant to serve the facility to provide backup power during outages. Our sales staff will support our existing sales channels, but will also focus on selling complete design and installation services for customers in these regions. We believe that these design and build services, or turnkey services, will expand our sales significantly because they increase revenue per unit sale substantially, as they include the portion of the sale related to installation. We believe that turnkey installation services will improve our service contract retention from its current rate of 68% between 2007 and 2012, to a near universal proportion. Moreover, we see the turnkey model as a vehicle to expand our service offering to customers to include portions of the system outside of our factory produced module that may improve the long-term operation of the CHP plant. Such items might include ancillary pumps, controls, and heat exchangers, among other components.

Our business model of establishing satellite service, sales, and installation centers will be our strategy in emerging domestic markets such as the mid-Atlantic region and areas in the Midwest. For our overseas markets we will

continue to develop regional allies for sales and service, such as EuroSite Power in the United Kingdom, and our analogous allies in other international markets such as Mexico and Australia.

In markets we have identified to focus our attention, we will continue our strategy of engaging the consulting engineering community through direct contact and also through engineering societies and trade shows. Our sales staff will engage building owners and their management companies to explain the energy-efficient products and solutions we offer with the goal of providing comprehensive turnkey installations.

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## **Risks Associated with Our Business**

Our business is subject to a number of risks of which you should be aware before making an investment decision. These risks are discussed more fully in the Risk Factors section of this prospectus immediately following this prospectus summary. These risks include, but are not limited to, the following:

*History of Operating Losses.* 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, which may be several years. We may not have adequate cash resources to reach the point of profitability, and we may never become profitable. Even if we do achieve profitability, we may be unable to increase our sales and sustain or increase our profitability in the future.

*Dependence on Key Suppliers.* We rely on a small number of key suppliers, and the loss one of them could materially and adversely affect our business. Further, from time to time, shipments to us of key system components can be delayed because of industry-wide or other shortages, and the components we receive may not meet our quality or cost requirements.

*Dependence on Technology Development.* Our products incorporate proprietary technology, and our future success will depend upon our ability to continue to develop and provide innovative products and product enhancements. 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.

*Changes in governmental regulation could adversely affect us.* We operate in a highly regulated business environment, and changes in regulation could impose significant costs on us or could make our products less economical.

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

*There has been a material weakness in our disclosure controls and procedures and in our internal control over financial reporting.* Although we consider the size of our accounting staff sufficient to meet our business needs, a need for improved controls and procedures surrounding technical accounting practices, information technology, and financial reporting currently exists.

*Our chief executive officer and chief financial officer have responsibilities to affiliated companies.* Our key executives spend a significant portion of their time performing management functions for one or more of our affiliated companies. John N. Hatsopoulos is the Company's Chief Executive Officer and is also the Chief Executive Officer of American DG Energy. In the past Mr. Hatsopoulos has spent approximately 50% of his business time on the affairs of the Company. Although such amount varies widely depending on the needs of the business, he has actively fulfilled all his duties as the Company's CEO and feels confident that he will be able to continue fulfilling such duties in the future. Bonnie Brown is the Company's Chief Financial Officer and is also Chief Financial Officer of Ilios, the Company's majority-owned subsidiary.

## Recent Developments

The U.S. Patent and Trademark Office, or the U.S. PTO, has advised us that it intends to publish a formal notice of allowance with respect to our patent application relating to the assembly and method for reducing nitrogen oxides and hydrocarbons in exhausts of internal combustion engines, which is the underlying process used in our *Ultra* low-emissions technology. The claims describe a method of operating an engine exhaust treatment system that reduces certain criteria pollutants, the common air pollutants determined to be hazardous to human health and regulated under the Environmental Protection Agency's National Ambient Air Quality Standards, to extremely low values by converting most of the toxic compounds in the engine exhaust to benign compounds.

## Implications of Being an Emerging Growth Company

We are an emerging growth company, as that term is used in the JOBS Act and, for as long as we continue to be an emerging growth company, we may choose to take advantage of exemptions from various

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reporting requirements applicable to other public companies but not to emerging growth companies, including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. We could be an emerging growth company for up to five years, or until the earliest 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 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 Securities Exchange Act of 1934, or the Exchange Act. We are choosing to opt out of the extended transition periods available under the JOBS Act for complying with new or revised accounting standards, and intend to take advantage of the other exemptions.

## Corporate History

Tecogen began in the early 1960s as a research division of Thermo Electron Corporation, now Thermo Fisher Scientific Inc., which is a publicly traded company listed on the NYSE under the symbol TMO. In 2000, Tecogen was sold to private investors including Thermo Electron's original founders, Dr. George N. Hatsopoulos and John N. Hatsopoulos.

We were incorporated in the State of Delaware on September 15, 2000. Our offices are located at 45 First Avenue, Waltham, Massachusetts 02451. Our telephone number is 781-466-6400. Our Internet address is <http://www.tecogen.com>. The information on, or that may be accessed through, our website is not incorporated by reference into this prospectus and should not be considered a part of this prospectus.

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## THE OFFERING

|   |                   |
|---|-------------------|
| Common Stock offered by Tecogen:                    | 3,000,000 shares  |
| Common Stock to be outstanding after this offering: | 16,574,474 shares |
| Overallotment Option:                               | 450,000 shares    |

Use of proceeds:

We estimate that we will receive net proceeds of approximately \$17.4 million from the sale of the shares of common stock offered in this offering, or approximately \$20.2 million if the underwriters exercise their overallotment option in full, based on an assumed public offering price of \$6.50 per share (the midpoint of the price range set forth on the cover page of this prospectus) and after deducting the estimated underwriting discount and estimated offering expenses payable by us. We intend to use the net proceeds of this offering to pay off outstanding debt, for working capital and general corporate purposes, including expanding our turnkey business, constructing a dedicated manufacturing facility for Ilios, expanding our low emission technology to other markets, and continuing product development.

Proposed NASDAQ Capital Market symbol:

TGEN

Unless we indicate otherwise, common stock outstanding after this offering is based on 13,574,474 shares of our common stock outstanding as of June 30, 2013, and excludes as of that date the following:

1,134,000 shares of common stock issuable upon the exercise of stock options outstanding prior to this offering under our stock incentive plan, at a weighted average exercise price of \$2.00 per share;

97,683 shares of common stock available for future grants under our stock incentive plan;

75,806 shares of common stock issuable pursuant to convertible debentures with an outstanding principal amount of \$90,967 and a conversion price of \$1.20 per share; and

450,000 shares of common stock issuable if the underwriters exercise their option to purchase additional shares.

Except as otherwise noted, all information in this prospectus and the number of shares outstanding as of June 30, 2013:

gives retroactive effect to a one-for-four reverse stock split effective July 22, 2013;

assumes no exercise of outstanding options or warrants or conversion of convertible securities; and

assumes no exercise by the underwriters of their over-allotment option to purchase additional shares of common stock from us.

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The summary consolidated statements of operations data for each of the years ended December 31, 2012, 2011, and 2010 and the summary consolidated balance sheet data as of December 31, 2012, have been derived from our audited consolidated financial statements that are included elsewhere in this prospectus. The summary consolidated statement of operations data for the six months ended June 30, 2013 and 2012, and the consolidated balance sheet data as of June 30, 2013, have been derived from our unaudited condensed consolidated financial statements included elsewhere in this prospectus. The unaudited condensed consolidated financial statements were prepared on the same basis as our audited financial statements. In our opinion, such financial statements include all adjustments, consisting only of normal recurring adjustments that we consider necessary for a fair presentation of the financial information set forth in those statements.

You should read this information together with the consolidated financial statements and related notes and other information under Management's Discussion and Analysis of Financial Condition and Results of Operations included elsewhere in this prospectus.

| Consolidated Statement of Operations<br>Data: | Year Ended December 31, |               |               | Six Months Ended June<br>30, |              |
|---|-------------------------|---------------|---------------|------------------------------|--------------|
|   | 2012                    | 2011          | 2010          | 2013                         | 2012         |
|   | (audited)               | (audited)     | (audited)     | (unaudited)                  | (unaudited)  |
| Revenues                                      | \$ 15,253,972           | \$ 11,065,210 | \$ 11,311,229 | \$ 6,849,778                 | \$ 6,637,428 |
| Cost of sales                                 | 9,388,898               | 6,179,098     | 6,597,205     | 4,923,941                    | 3,835,375    |
| Gross profit                                  | 5,865,074               | 4,886,112     | 4,714,024     | 1,925,837                    | 2,802,053    |
| Operating expenses                            |                         |               |               |                              |              |
| General and administrative                    | 6,643,120               | 5,986,762     | 4,973,794     | 3,470,985                    |              |