Registration No. 333-

UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549 FORM S-3

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) 27-5250881

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

Tecogen Inc. 45 First Avenue Waltham, MA 02451 (781) 466-6400

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

David A. Garrison Chief Financial Officer Tecogen Inc. 45 First Avenue Waltham, MA 02451

Tel: (781) 466-6400/Fax: (781) 622-1027

Copy to: Edwin L. Miller Jr. Sullivan & Worcester LLP **One Post Office Square** Boston, MA 02109

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Approximate date of commencement of proposed sale to the public: As soon as practicable after this registration statement becomes effective.

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. \Box

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. 🗵

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

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

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. \Box

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: \Box Accelerated filer: \Box Non-accelerated filer: □ Smaller reporting company:

Tel: (617) 338-2800/Fax: (617) 338-2880

CALCULATION OF REGISTRATION FEE

| Title of Each Class of Securities to be Registered | Amount to be Registered ¹ | Proposed Maximum Offering Price per Unit ² | Proposed Maximum Aggregate Offering Price ² | Amount of Registration Fee |
|---|---|--|--|-------------------------------|
| Common Stock, par value \$0.001 per share | 1,763,871 | \$5.00 | \$8,819,355.00 | \$888.11 |

(1) In accordance with Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement shall be deemed to cover any additional securities to be offered or issued from stock splits, stock dividends or similar transactions with respect to the securities being registered.

(2) Estimated pursuant to Rule 457(c) under the Securities Act of 1933, as amended, solely for purposes of calculating the registration fee, based upon the average of the high and low prices per share as reported on the NASDAQ Market on July 6, 2016. The proposed maximum offering price per share of common stock will be determined from time to time by the selling stockholders, named herein, or such additional selling stockholders, as may be named in one or more prospectus supplements, in connection with, and at the time of, the sale by such selling stockholders of the shares of common stock registered hereunder.

TECOGEN INC. HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL TECOGEN INC. 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 OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE SECURITIES AND EXCHANGE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(A), MAY DETERMINE. The information in this 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 prospectus is not an offer to sell these securities, and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

Subject to Completion, Dated July 7, 2016

PROSPECTUS



1,763,871 Shares of Common Stock by the Selling Stockholders

This prospectus relates to the public offering, which is not being underwritten, by the selling stockholders of Tecogen Inc identified in this prospectus and such additional selling stockholders as may be named in one or more prospectus supplements (collectively, the "Selling Stockholders") of 1,763,871 shares of our common stock, \$0.001 par value, from time to time in amounts, at prices and on terms that will be determined at the time of the offering. The common stock being registered does not include any special rights or preferences. Tecogen Inc will not receive any of the proceeds from the offer and sale of the shares.

The Selling Stockholders may sell shares of our common stock, to or through one or more underwriters, dealers and agents, or directly to purchasers, on a continuous or delayed basis. This prospectus describes some of the general terms that may apply to these shares of common stock. The specific terms of any securities to be offered will be described in one or more supplements to this prospectus. You should read this prospectus and the applicable prospectus supplement carefully before you invest. Our registration of the securities covered by this prospectus does not mean that the Selling Stockholders will offer or sell any shares of our common stock.

Tecogen Inc's common stock is traded on the NADSAQ Market under the symbol "TGEN". The last reported sales price of the common stock on the NADSAQ Market on July 6, 2016, was \$5.00 per share.

Our business and an investment in the securities offered hereby involve significant risks. See "<u>Risk Factors</u>" beginning on page 3 of this prospectus, in our periodic reports filed from time to time with the Securities and Exchange Commission, or the SEC, including in our most recent Annual Report on Form 10-K for the year ended December 31, 2015, or the Annual Report, and in the applicable prospectus supplement.

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

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

The date of this prospectus is _____, 2016

YOU SHOULD RELY ONLY ON THE INFORMATION CONTAINED IN THIS PROSPECTUS. WE HAVE NOT AUTHORIZED ANYONE TO PROVIDE YOU WITH INFORMATION DIFFERENT FROM THAT CONTAINED IN THIS PROSPECTUS. WE ARE OFFERING TO SELL, AND SEEKING OFFERS TO BUY, SHARES OF COMMON STOCK ONLY IN JURISDICTIONS WHERE OFFERS AND SALES ARE PERMITTED. THE INFORMATION CONTAINED IN THIS PROSPECTUS IS ACCURATE ONLY AS OF THE DATE OF THIS PROSPECTUS, REGARDLESS OF THE TIME OF DELIVERY OF THIS PROSPECTUS OR OF ANY SALE OF OUR COMMON STOCK. IN THIS PROSPECTUS, REFERENCES TO THE "COMPANY," "TECOGEN," "WE," "US" AND "OUR" REFER TO TECOGEN INC., A DELAWARE CORPORATION, AND ITS SUBSIDIARIES.

TABLE OF CONTENTS

| ABOUT THIS PROSPECTUS | <u>2</u> |
|---|----------|
| SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS | <u>2</u> |
| ABOUT THE COMPANY | <u>3</u> |
| RISK FACTORS | <u>4</u> |
| USE OF PROCEEDS | <u>4</u> |
| SELLING SHAREHOLDERS | <u>5</u> |
| PLAN OF DISTRIBUTION | <u>6</u> |
| LEGAL MATTERS | <u>7</u> |
| EXPERTS | <u>7</u> |
| WHERE YOU CAN FIND MORE INFORMATION | <u>8</u> |
| INCORPORATION OF DOCUMENTS BY REFERENCE | <u>8</u> |
| | |

ABOUT THIS PROSPECTUS

In this prospectus, references to "the Company," "we," "us," "our," "the registrant" or other similar terms refer to Tecogen Inc., or Tecogen.

You should rely only on the information contained in or incorporated by reference in this prospectus, any accompanying prospectus supplement or in any related free writing prospectus filed by us with the Securities and Exchange Commission (the "SEC"). We have not authorized anyone to provide you with different information. This prospectus and the accompanying prospectus supplement do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the securities described in the accompanying prospectus supplement or an offer to sell or the solicitation of an offer to buy such securities in any circumstances in which such offer or solicitation is unlawful. You should assume that the information appearing in this prospectus, any prospectus supplement and the documents incorporated by reference is accurate only as of their respective dates. Our business, financial condition, results of operations and prospects may have changed materially since those dates.

Our logo, trademarks and service marks are the property of the Company. Other trademarks or service marks appearing in this prospectus are the property of their respective holders.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the documents incorporated by reference herein, contain "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act, and the Private Securities Litigation Reform Act of 1995 and other federal securities laws. Such forward-looking statements involve substantial risks and uncertainties. All statements, other than statements of historical fact, included in this prospectus regarding our strategy, future operations, future financial position, future revenues, projected costs, prospects and plans and objectives of management are forward-looking statements. The words "anticipates," "believes," "estimates," "expects," "intends," "may," "plans," "projects," "will," "would" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words.

We have based these forward-looking statements on our current expectations and projections about future events. Although we believe that the expectations underlying our forward-looking statements are reasonable, these expectations may prove to be incorrect, and all of these statements are subject to risks and uncertainties. Therefore, you should not place undue reliance on our forward-looking statements. We have included important risks and uncertainties in the cautionary statements included in this prospectus, particularly the section called "Risk Factors" below and incorporated by reference herein from our SEC filings. We believe these risks and uncertainties could cause actual results or events to differ materially from the forward-looking statements that we make. Should one or more of these risks and uncertainties materialize, or should underlying assumptions, projections or expectations prove incorrect, actual results, performance or financial condition may vary materially and adversely from those anticipated, estimated or expected. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments we may make. We do not assume any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

ABOUT THE COMPANY

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. Through patented technology, the Company's cost-efficient, environmentally-friendly, and reliable products for distributed power generation 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 are 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, and additional domestic patent applications are still pending. This ultra clean emissions technology, which we have branded Ultera[™], 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.

In December 2015, the Company launched a joint venture, Ultra Emissions Technologies Limited ("ULTRATEK"), in conjunction with a group of European strategic investors to develop the Ultera emissions control technology for the automotive market. Tecogen contributed an exclusive license for use of Ultera in the automotive space to ULTRATEK, and the strategic partners have committed to financing the initial research, development and testing of a viable product.

3

In April 2016, the Company entered into numerous private placement share exchange agreements (the "Share Exchange Agreements") with shareholders (the "Exchanging Shareholders") of Ilios Inc., a majority owned subsidiary of the Company ("Ilios"). Pursuant to the Share Exchange Agreements, the Exchanging Shareholders agreed to exchange every 7.86 of their restricted Ilios shares of common stock for 1 share of the Company's restricted common stock. In addition, the Company granted each Exchanging Shareholder registration rights of the Company's common stock they received in exchange for their Ilios shares. Pursuant to the Share Exchange Agreements, the Company issued 576,321 shares of its common stock in exchange for shares of common stock of Ilios.

On May 19, 2016, the Company entered into a joint venture agreement (the "JVA") with Tedom a.s., a corporation incorporated in the Czech Republic ("Tedom"). Tedom is a European combined heat and power product manufacturer. Each of the Company and Tedom will hold a 50% participating interest in the joint venture. In connection with the JVA, the parties agreed to create a Delaware limited liability company, TTcogen LLC ("TTcogen"), to carry out the terms of the JVA. Under the terms of the JVA, Tedom granted to TTcogen the sole and exclusive right to market, sell, offer for sale, and distribute certain products as agreed to by the parties throughout the United States. Tecogen agreed to refer all appropriate sales leads to TTcogen regarding the products agreed to by the parties, and Tecogen shall have the first right to repair and maintenance the products sold by TTcogen.

Our principal executive offices are located at 45 First Avenue, Waltham, Massachusetts 02451, and our telephone number is 781-466-6400.

RISK FACTORS

Investing in our securities involves risk. Please see the risk factors under the heading "Risk Factors" in our Annual Report, as revised or supplemented by our quarterly reports on Form 10-Q filed with the SEC since the filing of our Annual Report, all of which are on file with the SEC and are incorporated by reference in this prospectus. Before making an investment decision, you should carefully consider these risks as well as other information we include or incorporate by reference in this prospectus and any prospectus supplement. The risks and uncertainties we have described are not the only ones facing the Company. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our business operations.

USE OF PROCEEDS

We will not receive any of the proceeds from the sale by any Selling Stockholder of the common stock covered by this prospectus. The principal purpose of this offering is to register shares issued to the Exchanging Shareholders pursuant to the Share Exchange Agreements and certain other long term shareholders in multiple private placements.

4

SELLING STOCKHOLDERS

The following table sets forth the number of shares beneficially owned by each Selling Stockholder as of July 7, 2016 and the number of shares that may be offered by each Selling Stockholder pursuant to this prospectus. We have assumed, when calculating the numbers in the table, that all of the shares owned by each Selling Stockholder and offered pursuant to this prospectus will be sold, but each Selling Stockholder may not sell any or all of the shares that are being offered by such Selling Stockholder pursuant to this prospectus.

As of July 6, 2016, there were 19,160,943 shares of Company common stock outstanding.

| | Shares owned before the offering | | | Shares owned after the offering | |
|--|----------------------------------|--|--------------------------------------|---------------------------------|------------------------------|
| Name of Beneficial Owner ⁽³⁾ | Number of Shares | Percentage of Outstanding Common Stock | Number of Shares Being Offered | Number of Shares | Percentage of Outstanding |
| Directors, Executive Officers and Affiliates | | | | | |
| John N. Hatsopoulos ⁽⁴⁾⁽⁵⁾⁽⁶⁾ | 3,846,165 | 20.1% | 127,226 | 3,718,939 | 19.4% |
| George N. Hatsopoulos ⁽⁷⁾ | 3,605,541 | 18.8% | 50,890 | 3,554,651 | 18.6% |
| Patricia Hatsopoulos ⁽⁸⁾ | 28,225 | * | 100 | 28,125 | * |
| Robert Panora ⁽⁹⁾ | 163,350 | * | 163,350 | | * |
| Michaelson Capital Special Finance Fund LP ⁽¹⁰⁾ | 1,197,536 | 6.2% | 890,207 | 307,329 | 1.6% |
| Charles T. Maxwell ⁽¹¹⁾ | 100,000 | * | 25,000 | 75,000 | * |
| Company Employees | | | | | |
| Joseph Gehret | 6,361 | * | 6,361 | | * |
| Jeff Glick | 19,672 | * | 6,361 | 13,311 | * |
| John Freeman | 3,180 | * | 3,180 | | * |
| Jean Roy | 3,180 | * | 3,180 | | * |
| Ann Marie Pacheco | 1,272 | * | 1,272 | | * |
| Jeff Glick ⁽¹²⁾ | 6,950 | * | 6,950 | | * |
| David Pigeon ⁽¹²⁾ | 13,758 | * | 7,800 | 5,958 | * |
| Additional Selling Shareholders | | | | | |
| Jeremy Benjamin | 113,613 | * | 63,613 | 50,000 | * |
| Nettlestone Enterprises Ltd | 76,335 | * | 76,335 | | * |
| Aliki & Daphne Nikolaidis | 50,890 | * | 50,890 | | * |
| Giordano Venzi | 10,178 | * | 10,178 | | * |
| Fabio Mioni | 4,452 | * | 4,452 | | * |
| Stefano Venzi | 636 | * | 636 | | * |
| Franco Venzi | 1,272 | * | 1,272 | | * |
| Jean Skeparnias | 2,544 | * | 2,544 | | * |
| Athanassios Kyranis | 2,647 | * | 1,272 | 1,375 | * |
| Ioannis Retsos | 7,544 | * | 2,544 | 5,000 | * |
| Theodoros Matarangas | 1,272 | * | 1,272 | | * |
| Andrew & Susan Hirsch | 184,224 | 1.0% | 50,890 | 133,334 | * |
| Yiannis Monovoukas | 6,361 | * | 6,361 | | * |
| Adam C. Schachter | 3,816 | * | 3,816 | | * |
| Jeffrey Duplaise | 1,908 | * | 1,908 | — | * |
| Jack Whiting | 636 | * | 636 | | * |
| Keith Davidson & Debra Davidson | 2,544 | * | 2,544 | — | * |
| RBC cees Nominees Ltd B2599 / B3957 | 462,540 | 2.4% | 159,025 | 303,515 | 1.6% |
| RBC cees Nominees Ltd B2618 / B3923 | 823,228 | 4.3% | 31,806 | 791,422 | 4.1% |

* Represents less than 1%.

 Includes vested and unvested shares. For each Selling Stockholder, the total number of shares listed assumes that any outstanding options held by such Selling Stockholder are fully vested and exercised, whether or not they would be deemed to have beneficial ownership of such shares as of the date hereof.

- (2) Beneficial ownership is determined in accordance with Rule 13d-3(d) of the Exchange Act. To our knowledge, each of the persons named in the table has sole voting and investment power with respect to all shares of common stock shown as beneficially owned by it, subject to the information contained in the footnotes to this table.
- (3) Unless otherwise stated, the shares of Common Stock held by the Additional Selling Shareholders that are being registered pursuant to this Registration Statement were acquired pursuant to the Share Exchange Agreements.
- (4) Mr. Hatsopoulos is a Co-Chief Executive Officer and Director of the Company. Through his positions with the Company, his ownership of the Company, and his relationships with certain affiliates of the Company, he is considered an affiliate. Mr. Hatsopoulos's 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.
- (5) Includes:
 - a. 2,135,210 shares of Common Stock held by J&P Enterprises LLC for the benefit of: John N. Hatsopoulos and Patricia L. Hatsopoulos. John N. Hatsopoulos is the Executive Member of J&P Enterprises LLC and has voting and investment power with respect to the shares of Common Stock held by J&P Enterprises, LLC;
 - b. 593,770 shares of Common Stock held by John N. Hatsopoulos and his wife, Patricia L. Hatsopoulos, as joint tenants with rights of survivorship, each of whom share voting and investment power; and
 - c. 989,859 shares of Common Stock held by The John N. Hatsopoulos Family Trust 2007 for the benefit of: Patricia L. Hatsopoulos, Alexander J. Hatsopoulos, and Nia Marie Hatsopoulos, for which Dr. George N. Hatsopoulos and Ms. Patricia L. Hatsopoulos are the trustees.
- (6) On June 15, 2015, the Company entered into a non-revolving line of credit agreement, (the "Credit Agreement") with Mr. Hatsopoulos. Under the terms of the 2015 Credit Agreement, Mr. Hatsopoulos agreed to lend the Company up to \$250,000 per financial calendar quarter beginning in the third quarter 2015, for a period of two years with the aggregate maximum borrowings not to exceed \$2,000,000. The term of the 2015 Credit Agreement is from July 1, 2015 to July 1, 2017. Any amounts borrowed by the Company pursuant to the 2015 Credit Agreement bear interest at 6%. Repayment of the principal amount borrowed pursuant to the 2015 Credit Agreement, plus all accrued and unpaid interest and all other amounts payable pursuant to the terms of the Credit Agreement will be due on June 15, 2017. The 2015 Credit Agreement is subordinated in right of payment to the Senior Convertible Promissory Note dated December 23, 2013, issued by the Company to and in favor of Michaelson Capital Special Finance Fund LP.
- (7) George Hatsopoulos is the brother of John Hatsopoulos and is a former director of the Company.
- (8) Patricia Hatsopoulos is the spouse of John Hatsopoulos.
- (9) Robert Panora is the President and Chief Operating Officer of the Company. A portion of his shares being registered were acquired through restricted stock grants from the Company.
- (10) These shares are being registered pursuant to that certain Senior Convertible Promissory Note, dated December 23, 2013, as amended effective April 1, 2016 (as so amended, the "Michaelson Note"), by the Company in favor of Michaelson Capital Special Finance Fund LP ("Michaelson"). The principal amount of the Michaelson Note is \$3,150,000, that Michaelson Note matures on December 23, 2018, and the conversion price is \$3.54 per share.
- (11) Mr. Maxwell is an affiliate of the Company. He is a member of the Company's board of directors and is Chairman of the Company's Audit Committee. Mr. Maxwell is also the Chairman of the Board of Directors of American DG Energy, an affiliate of the Company. All of his shares being registered were acquired through restricted stock grants from the Company.
- (12) All of these shares were acquired through restricted stock grants from the Company.

PLAN OF DISTRIBUTION

The shares offered in this prospectus may be offered and sold from time to time for the account of each Selling Stockholder, including donees, transferees, pledgees, distributees or other successors in interest that receive such shares as a gift or through another non-sale related transfer from such Selling Stockholder.

The Selling Stockholders will act independently of Tecogen in making decisions with respect to the timing, manner and size of any sale. The Selling Stockholders may sell the shares:

- at then-prevailing prices and
- terms;
- at prices related to the then-current market price;
- or

•

- at negotiated
- prices.

The sales may be made in the over-the-counter market, on the NASDAQ Market, or on any exchange on which the shares are listed. Each Selling Stockholder may sell such Selling Stockholder's shares in one or more of the following types of transactions:

- one or more block trades in which the broker or dealer will attempt to sell as agent or principal all or a portion of the shares held by such Selling Stockholder;
- purchases by a broker or dealer as principal and resale by such broker or dealer for its account pursuant to this
 prospectus;
- ordinary brokerage transactions and transactions in which a broker solicits purchasers;

- in negotiated transactions;
- through other means.

Each Selling Stockholder may enter into hedging transactions when selling the shares. For example, each Selling Stockholder

may:

- sell shares short and redeliver such shares to close out such Selling Stockholder's short positions;
- enter into transactions involving short sales by the brokers or dealers;
- enter into option or other types of transactions that require such Selling Stockholder to deliver shares to a broker or dealer, who then resells or transfer the shares under this prospectus; or
- loan or pledge the shares to a broker or dealer, who may sell the loaned shares or, in the event of default, sell the pledged shares.

Each Selling Stockholder may affect sales through brokers, dealers or agents, who in turn may arrange for other brokers or dealers to participate. The brokers, dealers or agents may receive discounts, concessions, commissions or fees from such Selling Stockholder and/or purchasers of the shares in amounts to be determined prior to the sale. Under the federal securities laws, these brokers or dealers and any other participating brokers or dealers may be deemed to be "underwriters" and any discounts, concessions or commissions received by them may be deemed to be "underwriting compensation" under the Securities Act. Because such Selling Stockholder may be deemed to be an "underwriter" within the meaning of the Securities Act, such Selling Stockholder will be subject to the prospectus delivery requirements of the Securities Act.

In addition to selling the shares, each Selling Stockholder may:

- sell such Selling Stockholder's shares under Rule 144 of the Securities Act, if the transaction meets the requirements of Rule 144;
- transfer the shares by gift, distribution or other transfer not involving market makers or established trading markets; or
- agree to indemnify any broker, dealer or agent that participates in transactions involving the sale of the shares against certain liabilities, including liabilities arising under the Securities Act.

No Selling Stockholder is subject to any underwriting agreement. The Selling Stockholders, or any parties who receive the shares from any Selling Stockholder by way of a gift, donation, distribution or other transfer, may sell the shares covered by this prospectus.

The Company will pay all expenses incident to the offering and sale of the shares to the public other than any discounts, concessions, commissions or fees of underwriters, brokers, dealers or agents.

Some states require that any shares sold in that state only be sold through registered or licensed brokers or dealers. In addition, some states require that the shares be registered or qualified for sale in that state, or that there exists an exemption from the registration or qualification requirements and that the exemption has been complied with.

The Company intends to maintain the effectiveness of this prospectus until the shares registered pursuant to this prospectus may be resold by the Selling Stockholders without restriction. The Company may suspend any Selling Stockholder's right to resell shares under this prospectus.

The Company shall inform the Selling Stockholders that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of shares in the market and to the activities of the Selling Stockholders and their respective affiliates.

The Company will not receive any proceeds from this offering. The Selling Stockholders will pay or assume brokerage commissions or other similar charges and expenses incurred in the resale of the shares.

LEGAL MATTERS

Unless an applicable prospectus supplement indicates otherwise, the validity of the issuance of the securities offered by this prospectus will be passed upon for us by Sullivan & Worcester LLP, Boston, Massachusetts.

EXPERTS

The Company's financial statements appearing in the Annual Report and incorporated by reference in this prospectus, have been so incorporated in reliance on the report of Wolf & Company, P.C., independent registered public accountants, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy any document we file at the SEC's public reference room located at: 100 F Street N.E., Washington, DC 20549. You can request copies of these documents by writing to the Public Reference Section of the SEC, 100 F Street N.E., Washington, DC 20549 or by calling the SEC at 1-800-SEC-0330. Our SEC filings are also available at the SEC's website at http://www.sec.gov. This website address is included in this document as an inactive textual reference only.

You may also obtain information about us, including copies of our SEC reports, through our website at www.tecogen.com. This website address is not an active link to the registration statement of which this prospectus is a part, and any documents, references, links or other materials of any kind contained or referred to on such website are not part of the registration statement of which this prospectus is a part. Requests for documents may also be addressed in writing or by telephone to: David A. Garrison, Chief Financial Officer, Tecogen Inc., 45 First Avenue, Waltham, MA 02451, Phone: (781) 466-6400.

INCORPORATION OF DOCUMENTS BY REFERENCE

The SEC requires us to "incorporate by reference" into this prospectus information that we file with the SEC in other documents. This means that we can disclose important information to you by referring you to other documents that contain that information. The information we incorporate by reference is considered to be part of this prospectus. Information contained in this prospectus and information that we file with the SEC in the future and that we incorporate by reference in this prospectus automatically updates and supersedes previously filed information. We incorporate by reference the documents listed below and any future filings we make after the date of the initial filing of the registration statement of which this prospectus is a part made with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act until the offering of the securities made by this prospectus is completed or terminated:

- The Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2015, filed with the SEC on March 30, 2016.
- The Company's Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2016, filed with the SEC on May 11, 2016.
- The Company's two Current Reports on Form 8-K filed with the SEC on April 15, 2016.
- The Company's Current Report on Form 8-K filed with the SEC on May 24, 2016.
- The Company's Current Report on Form 8-K filed with the SEC on June 28, 2016.
- The Company's Current Report on Form 8-K filed with the SEC on June 30, 2016.
- The Company's definitive Proxy Statement for its 2016 Annual Meeting of Shareholders, as filed with the SEC on April 29, 2016.
- The description of the Company's common stock, contained in the Company's registration statement on Form S-1, dated December 22, 2011, including any amendments thereto.

A statement contained in a document incorporated by reference into this prospectus shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus, any prospectus supplement or in any other subsequently filed document which is also incorporated in this prospectus modifies or replaces such statement. Any statements so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

You may request a copy of these documents, which will be provided to you at no cost, by writing to or telephoning: David A. Garrison, Chief Financial Officer, Tecogen Inc., 45 First Avenue, Waltham, MA 02451, Phone: (781) 466-6400.

* * *

This information is part of a registration statement we filed with the SEC. You should rely only on the information and representations provided in this prospectus. We have authorized no one to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information in this prospectus is accurate as of any date other than the date on the front of the document.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 14. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION.

The following table sets forth an estimate of the expenses we expect to incur and pay in connection with the issuance and distribution of the securities being registered:

| | A | mount |
|---|----|--------|
| Securities and Exchange Commission registration fee | \$ | 888 |
| Legal fees and expenses | | 7,000 |
| Accounting fees and expenses | | 3,500 |
| Printing and miscellaneous | | |
| Total | \$ | 11,388 |

ITEM 15. INDEMNIFICATION OF DIRECTORS AND OFFICERS.

Section 102 of the Delaware General Corporation Law allows a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit. We have included such a provision in our Restated Certificate of Incorporation.

Section 145 of the Delaware General Corporation Law provides that a corporation has the power to indemnify a director, officer, employee or agent of the corporation and certain other persons serving at the request of the corporation in related capacities against amounts paid and expenses incurred in connection with an action or proceeding to which he is or is threatened to be made a party by reason of such position, if such person shall have acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal proceeding, if such person had no reasonable cause to believe his conduct was unlawful; provided that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the adjudicating court determines that such indemnification is proper under the circumstances.

Our charter includes a provision that eliminates the personal liability of our directors for monetary damages for breach of fiduciary duty as a director, except for liability:

- for any breach of the director's duty of loyalty to the Company or its stockholders;
- for acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- under section 174 of the Delaware General Corporation Law regarding unlawful dividends and stock purchases; or
- for any transaction from which the director derived an improper personal benefit.

Our charter also provides that:

- we must indemnify our directors and officers to the fullest extent permitted by Delaware law;
- we may, to the extent authorized from time to time by our Board of Directors, indemnify our other employees and agents to the same extent that we indemnified our officers and directors; and
- in the event we do not assume the defense in a legal proceeding, we must advance expenses, as incurred, to our directors and executive officers in connection with a legal proceeding to the fullest extent permitted by Delaware law.

The indemnification provisions contained in our Restated Certificate of Incorporation and Amended and Restated Bylaws are not exclusive of any other rights to which a person may be entitled by law, agreement, vote of stockholders or disinterested directors or otherwise.

In addition, we maintain insurance on behalf of our directors and executive officers that insures them against any liability asserted against them in their capacities as directors or officers or arising out of such status.

ITEM 16. EXHIBITS.

The following exhibits, required by Item 601 of Regulation S-K, are filed as a part of this registration statement. Exhibit numbers, where applicable, in the left column correspond to those of Item 601 of Regulation S-K.

| Exhibit | |
|---------|---|
| Number | Description of Exhibit |
| 4.1 | Specimen Common Stock Certificate of Tecogen Inc (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)). |
| 5.1 | Legal Opinion of Sullivan & Worcester LLP (Filed herewith) |
| 23.1 | Consent of Wolf & Company, P.C. (Filed herewith) |
| 23.2 | Consent of Sullivan & Worcester LLP (Included in Exhibit 5.1) |
| 24.1 | Power of Attorney (Filed herewith) |

ITEM 17. UNDERTAKINGS

(a) The undersigned registrant hereby

T 1 11 1

- undertakes:
- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;
 - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (a)(1)(i), (ii) and (iii) do not apply if the registration statement is on Form S-3 and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

- (5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities: The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:
 - (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
 - (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
 - (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
 - (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
- (b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

11

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Waltham, Commonwealth of Massachusetts on July 7, 2016.

TECOGEN INC.

By: <u>/s/ David A. Garrison</u> David A. Garrison Chief Financial Officer

POWER OF ATTORNEY

The undersigned officers and directors of the Company hereby constitute and appoint John N. Hatsopoulos and David Garrison, and each of them singly, with full power of substitution, our true and lawful attorneys-in-fact and agents to take any actions to enable the Company to comply with the Securities Act of 1933, and any rules, regulations and requirements of the Securities and Exchange Commission, in connection with this registration statement, including the power and authority to sign for us in our names in the capacities indicated below any and all amendments to this registration statement and any other registration statement filed pursuant to the provisions of Rule 462 under the Securities Act of 1933.

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

| Signature | Title | Date | |
|--|--|--------------|--|
| * | Director and Co-Chief Executive Officer | July 7, 2016 | |
| John N. Hatsopoulos | (Principal Executive Officer) | | |
| * | Co-Chief Executive Officer | July 7, 2016 | |
| Benjamin M. Locke | (Principal Executive Officer) | | |
| /s/ David A. Garrison | Treasurer, Secretary and Chief Financial Officer | July 7, 2016 | |
| David A. Garrison | (Principal Financial and Accounting Officer) | | |
| * | Chairman of the Board | July 7, 2016 | |
| Angelina Galiteva | | | |
| * | Director | July 7, 2016 | |
| Ahmed F. Ghoniem | | | |
| * | Director | July 7, 2016 | |
| Joseph E. Aoun | | | |
| * | Director | July 7, 2016 | |
| Charles Maxwell | | | |
| * | Director | July 7, 2016 | |
| Earl Lewis | | , , | |
| <u>*By: /s/ David A. Garrison</u> David A. Garrison, attorney-in-fact | | | |
| | 12 | | |

EXHIBIT INDEX

| Exhibit Number | Description of Exhibit |
|-------------------|---|
| 4.1 | Specimen Common Stock Certificate of Tecogen Inc (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)). |
| 5.1 | Legal Opinion of Sullivan & Worcester LLP (Filed herewith) |
| 23.1 | Consent of Wolf & Company, P.C. (Filed herewith) |
| 23.2 | Consent of Sullivan & Worcester LLP (Included in Exhibit 5.1) |
| 24.1 | Power of Attorney (Filed herewith) |

Sullivan & Worcester LLP One Post Office Square Boston, MA 02109

July 7, 2016

Tecogen Inc. 45 First Avenue Waltham, Massachusetts 02451

Re: Registration Statement on Form S-3

Ladies and Gentlemen:

In connection with the registration statement on Form S-3 (the "Registration Statement") under the Securities Act of 1933, as amended (the "Act"), filed by Tecogen Inc., a Delaware corporation (the "Company"), the following opinion is furnished to you to be filed with the Securities and Exchange Commission (the "Commission"), as Exhibit 5.1 to the Registration Statement in connection with the offering and sale from time to time by the selling stockholders identified therein of 1,763,871 shares of common stock, par value \$0.001 per share, of the Company (the "Shares").

In connection with this opinion, we have examined and relied upon originals or copies of the Company's Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws and such other records, agreements and instruments of the Company, certificates of public officials and of officers of the Company and such matters of law, as we have deemed necessary as a basis for the opinion hereinafter expressed. In making such examination, we have assumed the genuineness of all signatures, the legal capacity of all natural persons, the authenticity of all documents submitted to us as originals and the conformity to the originals of all documents submitted to us as copies, which facts we have not independently verified.

The opinion rendered herein is limited to the laws of the Commonwealth of Massachusetts, the Delaware General Corporation Law (including the applicable provisions of the Delaware Constitution and reported judicial decisions interpreting these laws) and the federal laws of the United States.

Other than our examination of the documents indicated above, we have made no other examination in connection with this opinion. We express no opinion herein concerning any state securities or blue sky laws.

We have necessarily assumed in connection with the opinion expressed below that the terms and conditions of the agreements under which the Shares were issued and any related agreements and instruments, were, and that any related proceedings of the Company conducted after the date hereof will be, conducted (i) in accordance with all applicable laws and the Company's Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws and (ii) not in conflict with any contractual or other restrictions which are binding on the Company.

Relying on the foregoing, and without further inquiry on our part, we are of the opinion that the Shares to be sold as described in the Registration Statement have been duly authorized and are legally and validly issued, fully paid and non-assessable.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement and to the reference to our firm in the prospectus forming a part of the Registration Statement. In giving such consent, we do not thereby admit that we come within the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission promulgated thereunder.

Very truly yours,

<u>/s/ Sullivan & Worcester LLP</u> Sullivan & Worcester LLP Boston, Massachusetts

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-3 of Tecogen Inc. of our report dated March 30, 2016, relating to our audit of the consolidated financial statements, which appear in the Annual Report on Form 10-K of Tecogen Inc., for the year ended December 31, 2015.

We also consent to the reference to our Firm under the caption "Experts" in the Prospectus, which is part of this Registration Statement.

/s/ Wolf & Company, P.C. Boston, Massachusetts July 7, 2016