

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.

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

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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
Over-allotment 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 over-allotment 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 Data:	Year Ended December 31,			Six Months Ended June 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	3,357,746
Selling	1,225,580	782,252	290,505	565,471	465,537
	7,868,700	6,769,014	5,264,299	4,036,456	3,823,283
Loss from operations	(2,003,626)	(1,882,902)	(550,275)	(2,110,619)	(1,021,230)
Other income (expense)					
Interest and other income	48,397	38,402	23,574	6,537	28,166
Interest expense	(71,208)	(40,294)	(37,280)	(59,764)	(35,604)
	(22,811)	(1,892)	(13,706)	(53,227)	(7,438)
Loss before income taxes	(2,026,437)	(1,884,794)	(563,981)	(2,163,846)	(1,028,668)
Consolidated net loss	(2,026,437)	(1,884,794)	(563,981)	(2,163,846)	(1,028,668)
Less: Loss attributable to the noncontrolling interest	389,480	310,293	208,673	212,973	193,382
Net loss attributable to Tecogen Inc.	\$(1,636,957)	\$(1,574,501)	\$(355,308)	\$(1,950,873)	\$(835,286)
Net loss per share - basic and diluted	\$(0.12)	\$(0.13)	\$(0.03)	\$(0.15)	\$(0.06)
Weighted average shares outstanding - basic and diluted	13,135,071	12,052,914	11,470,658	13,209,165	13,064,879

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	As of December 31, 2012 (audited)	As of June 30, 2013 (unaudited)	Pro Forma ⁽¹⁾	Pro Forma As Adjusted ⁽²⁾
Consolidated Balance Sheet Data:	Actual	Actual	Pro Forma ⁽¹⁾	Pro Forma As Adjusted ⁽²⁾
Cash and cash equivalents	\$ 1,572,785	\$ 269,817	\$ 269,817	\$ 15,166,067
Short-term investments (restricted)	181,859			
Working capital	4,078,704	1,205,612	1,296,579	17,530,329
Total assets	9,117,249	8,141,798	8,141,798	23,038,048
Total liabilities	4,334,214	5,561,138	5,470,168	2,982,671
Total stockholders' equity	\$ 4,783,035	\$ 2,580,660	\$ 2,671,627	\$ 20,055,377

(1) The pro forma consolidated balance sheet data in the table above give effect to conversion of convertible debentures with an outstanding principal amount of \$90,967 upon the closing of this offering.

The pro forma as adjusted consolidated balance sheet data in the table above give effect to our receipt of the estimated net proceeds to us from this offering at an assumed public offering price of \$6.50 per share, which is the midpoint of the range listed on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, and repayment of our outstanding debt, including an additional \$1,150,000 outstanding under our working capital line of credit as of August 29, 2013, which was not outstanding at June 30, 2013.

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RISK FACTORS

The shares of common stock offered hereby are highly speculative and should be purchased only by persons who can afford to lose their entire investment. You should carefully consider the following risk factors and other information in this prospectus before deciding to purchase our common stock. If any of the following risks actually occur, our business and financial results could be negatively affected to a significant extent.

Risks Relating to Our Business

Our business faces many risks. If any of the events or circumstances described in the following risks occur, our business, financial condition, or results of operations could suffer and the trading price of our common stock (if and when it becomes publicly traded) could decline. Investors and prospective investors should consider the following risks and the information contained under the heading **Special Note Concerning Forward-Looking Statements** before deciding whether to invest in our common stock.

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

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

We experience significant fluctuations in revenues from quarter to quarter due to a preponderance of one-time sales.

We have low volume, high dollar sales for projects that are generally non-recurring, and therefore our sales have fluctuated significantly from period to period. For example, when compared to the previous quarter, our revenues in 2010 decreased during the first, second and fourth quarters and increased during the third quarter. In 2011, our revenues decreased during the first and fourth quarters and increased during the second and third quarters. In 2012, our revenues increased during the first, second and fourth quarters and decreased during the third quarter. Our revenues decreased during the first and second quarters of 2013. Fluctuations cannot be predicted because they are affected by the purchasing decisions and timing requirements of our customers, which are unpredictable.

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

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

We believe that our existing resources, including cash and cash equivalents, future cash flows from operations and our working capital line of credit with John N. Hatsopoulos, our Chief Executive Officer, are sufficient to meet the working capital requirements of our existing business through 2013. After that our cash requirements may increase.

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

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

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

We use third-party suppliers for components in many of our products. Our engine supplier is GM. The generator supplier for our cogeneration products, other than the *InVerde*, is Marathon Electric. To produce air conditioning, our engines drive a compressor purchased from J&E Hall International. The loss of one of our suppliers could materially and adversely affect our business if we are unable to replace them. While alternate suppliers for the manufacture of our engine, generator, and compressor have been identified, should the need arise, there can be no assurance that alternate suppliers will be available and able to manufacture our engine, generator or compressor on acceptable terms.

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

We expect significant competition for our products and services.

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

The Executive Order to accelerate investments in industrial energy efficiency may lead to increased competition.

An Executive Order to accelerate investments in industrial energy efficiency, including CHP, was promulgated in August 2012. The goal of the Executive Order is to supply 40 gigawatts, or GW, of energy by 2020 from greater efficiency sources such as CHP systems. With this Executive Order, it is expected that a number of barriers to CHP development will be removed with effective programs, policies, and financing opportunities resulting in significant new capital investment in CHP. This initiative by the U.S. government may lead to increased competition in the CHP market.

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

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

However, this requires that we successfully anticipate and respond to technological changes in design and manufacturing processes in a cost-effective and timely manner. The development of new, technologically advanced products and enhancements is a complex and uncertain process requiring high levels of innovation, as well as the

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

accurate anticipation of technological and market trends. There can be no assurance that we will successfully identify new product opportunities, develop and bring new or enhanced products to market in a timely manner, successfully lower costs, and achieve market acceptance of our products, or that products and technologies developed by others will not render our products or technologies obsolete or noncompetitive.

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

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Our intellectual property may not be adequately protected.

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

We have applied for and obtained patents on certain key components used in our products. Specifically, the Company holds two patents, both of which are utilized in our products. The first patent, from 2007, protects the incorporation of an inverter into an engine-driven CHP module and applies to our *InVerde* model. The second patent, also from 2007, pertains to algorithms used for combustion control in our engines. In addition, we have rights to a 2006 University of Wisconsin patent enabling us to use that patent's microgrid control algorithms for our specific use: engine-based power generation fueled by natural gas and diesel for engines less than 500 kW in electric power output.

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

We have filed for patents for our *Ultra* low-emissions technology in the United States, Europe, Australia, Brazil, Canada, China, Costa Rica, the Dominican Republic, India, Israel, Japan, Mexico, New Zealand, Nicaragua, Republic of Korea, Singapore, and South Africa. The outcome of the patent office application review is important because this technology will apply to all of our gas engine-driven products and may have licensing application to other natural gas engines. As discussed under Recent Developments, the U.S. PTO has advised us that it intends to allow our patent application. There is no assurance, however, that the *Ultra* low-emissions patent applications will be approved in any other countries.

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

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

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

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

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

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Our business is subject to product liability and warranty claims.

Our business exposes us to potential product liability claims, which are inherent in the manufacturing, marketing, and sale of our products, and we may face substantial liability for damages resulting from the faulty design or manufacture of products or improper use of products by end users. We currently maintain a moderate level of product liability insurance, but there can be no assurance that this insurance will provide sufficient coverage in the event of a claim.

Also, we cannot predict whether we will be able to maintain such coverage on acceptable terms, if at all, or that a product liability claim would not harm our business or financial condition. In addition, negative publicity in connection with the faulty design or manufacture of our products would adversely affect our ability to market and sell our products.

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

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

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

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, thereby affecting demand for our products.

Several kinds of government regulations at federal, state, and local levels and in other countries affect our current and future business (see *Government Regulation and Its Effect on Our Business* in the *Business* section of this prospectus). Our products must comply with various local building codes and must undergo inspection by local authorities. Our products are also certified by a third party to conform to specific standards. These certifications require continuous verification by a company that monitors our processes and design every three months. Our *InVerde* product is also certified to Europe's standard CE mark (European Conformity), which is mandatory for products imported into the European Union for commercial sale. If our products ceased to meet the criteria necessary for the applicable certifications, we may lose the ability to sell our products in certain jurisdictions, which may materially and adversely affect our business.

Regulatory agencies may further impose special requirements for the implementation and operation of our products that could significantly affect or even eliminate some of our target markets. We also may incur material costs or

liabilities in complying with future government regulations. Furthermore, our potential utility customers must themselves comply with numerous laws and regulations, which may be complicated by further deregulation of the utility industry. We cannot determine how such deregulation may ultimately affect the market for our products. Changes in regulatory standards or policies could reduce the level of investment in the research and development of alternative power sources, including our products. Any reduction or termination of such programs could increase the cost to our potential customers, making our systems less desirable and thereby adversely affect our business and financial condition.

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

Utilities or governmental entities on occasion have placed barriers to the installation of our products or their interconnection with the electric grid, and they may continue to do so. Utilities may charge additional

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fees to customers who install on-site CHP and rely on the grid for back-up power. These types of restrictions, fees, or charges could make it harder for customers to install our products or use them effectively, as well as increasing the cost to our potential customers. This could make our systems less desirable, thereby adversely affecting our revenue and other operating results.

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

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

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

Our affiliates American DG Energy and EuroSite Power have certain exclusive sales representation rights to our cogeneration products only (not including chillers). As a result of these agreements, we have limited control over our distribution of certain products in New England (Connecticut, Rhode Island, Massachusetts, New Hampshire, Vermont, and Maine), and this could have a material adverse effect on our business and results of operations.

Commodity market factors impact our costs and availability of materials.

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

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

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

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

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

The economic viability of our CHP products depends on the spread between natural gas fuel and electricity prices. Volatility in one component of the spread, such as the cost of natural gas and other fuels (e.g., propane or distillate oil), can be managed to some extent by means of futures contracts. However, the regional rates charged for both base load and peak electricity may decline periodically due to excess generating capacity or general economic recessions.

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Our products could become less competitive if electric rates were to fall substantially in the future. Also, potential customers may perceive the unpredictable swings in natural gas and electricity prices as an increased risk of investing in on-site CHP, and may decide not to purchase CHP products.

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

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

We may make acquisitions that could harm our financial performance.

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

Our ability to access capital for the repayment of debts and for future growth is limited because the financial markets are currently in a period of disruption and recession, and we do not expect these conditions to improve in the near future.

Our ability to continue to access capital could be impacted by various factors including general market conditions and the continuing slowdown in the economy interest rates, the perception of our potential future earnings and cash distributions, any unwillingness on the part of lenders to make loans to us, and any deterioration in the financial position of lenders that might make them unable to meet their obligations to us.

Our business is affected by general economic conditions and related uncertainties affecting the markets in which we operate. The current unstable economic conditions including the global recession could adversely impact our business in 2013 and beyond.

The current unstable economic conditions could adversely impact our business in 2013 and beyond, resulting in reduced demand for our products, increased rate of order cancellations or delays, increased risk of supplier bankruptcy, increased rate of supply order cancellation or delays, increased risk of excess and obsolete inventories, increased pressure on the prices for our products and services, and greater difficulty in collecting accounts receivable.

Risks Related to this Offering and Ownership of our Common Stock

No public market for our common stock currently exists, and an active trading market for our common stock may not develop or be sustained following this offering.

Prior to this offering, there has been no public market for our common stock. The public offering price for our common stock will be determined through negotiations with the underwriters. This price will not necessarily reflect the price at which investors in the market will be willing to buy and sell our shares following this offering. Although we have applied to list our common stock on the NASDAQ Capital Market, an active trading market for our shares may never develop or, if developed, be maintained following this offering. If an active market for our common stock does not develop or is not maintained, it may be difficult for you to sell shares you purchase in this offering without depressing the market price for the shares or at all. An inactive trading market may also impair our ability to raise capital to continue to fund operations by selling shares and may impair our ability to acquire other companies or technologies by using our shares as consideration.

The NASDAQ Capital Market may not list our securities for quotation on its exchange which could limit investors' ability to make transactions in our securities and subject us to additional trading restrictions.

We have applied for, and anticipate that, our securities will be listed on the NASDAQ Capital Market, a national securities exchange, upon consummation of this offering. Although, after giving effect to this offering, we expect to meet, on a pro forma basis, the NASDAQ Capital Market's minimum initial listing standards,

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which generally only mandate that we meet certain requirements relating to stockholders' equity, market capitalization, aggregate market value of publicly held shares and distribution requirements, we cannot assure you that we will be able to meet those initial listing requirements. If the NASDAQ Capital Market does not list our securities for trading on its exchange, we could face significant material adverse consequences, including:

a limited availability of market quotations for our securities;
reduced liquidity with respect to our securities;

a determination that our shares of common stock are penny stock which will require brokers trading in our shares of common stock to adhere to more stringent rules, possibly resulting in a reduced level of trading activity in the secondary trading market for our shares of common stock;

a limited amount of news and analyst coverage for us; and
a decreased ability to issue additional securities or obtain additional financing in the future.

The National Securities Markets Improvement Act of 1996, which is a federal statute, prevents or preempts the states from regulating the sale of certain securities, which are referred to as covered securities. Because we expect that our common stock will be listed on the NASDAQ Capital Market, such securities would be covered securities. Although the states are preempted from regulating the sale of our securities, the federal statute does allow the states to investigate companies if there is a suspicion of fraud, and, if there is a finding of fraudulent activity, then the states can regulate or bar the sale of covered securities in a particular case. Further, if we were no longer listed on the NASDAQ Capital Market, our securities would not be covered securities and we would be subject to regulation in each state in which we offer our securities.

Our failure to meet the continued listing requirements of the NASDAQ Capital Market could result in a de-listing of our common stock.

If after listing we fail to satisfy the continued listing requirements of the NASDAQ Capital Market, such as the corporate governance requirements or the minimum closing bid price requirement, NASDAQ may take steps to de-list our common stock. Such a de-listing would likely have a negative effect on the price of our common stock and would impair your ability to sell or purchase our common stock when you wish to do so. In the event of a de-listing, we would take actions to restore our compliance with NASDAQ's listing requirements, but we can provide no assurance that any such action taken by us would allow our common stock to become listed again, stabilize the market price or improve the liquidity of our common stock, prevent our common stock from dropping below the NASDAQ minimum bid price requirement or prevent future non-compliance with NASDAQ's listing requirements.

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

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

Investment in our common stock is subject to price fluctuations and market volatility, which could subject us to securities class action litigation and prevent you from being able to sell your shares at or above the offering price.

Historically, valuations of many small companies have been highly volatile. The securities of many small companies have experienced significant price and trading volume fluctuations, unrelated to the operating performance or the prospects of such companies. The public offering price for our shares will be determined by negotiations between us and the representatives of the underwriters and may not be indicative of prices that

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will prevail in the trading market. The market price of shares of our common stock could be subject to wide fluctuations in response to many risk factors listed in this section, and others beyond our control, including:

- results and timing of our product development;
- results of the development of our competitors' products;
- regulatory actions with respect to our products or our competitors' products;
- actual or anticipated fluctuations in our financial condition and operating results;
- actual or anticipated changes in our growth rate relative to our competitors;
- actual or anticipated fluctuations in our competitors' operating results or changes in their growth rate;
- competition from existing products or new products that may emerge;
- announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures, collaborations, or capital commitments;
- issuance of new or updated research or reports by securities analysts;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- share price and volume fluctuations attributable to inconsistent trading volume levels of our shares;
- additions or departures of key management or personnel;
- disputes or other developments related to proprietary rights, including patents, litigation matters, and our ability to obtain, maintain, defend or enforce proprietary rights relating to our products and technologies;
- announcement or expectation of additional financing efforts;
- sales of our common stock by us, our insiders, or our other stockholders; and
- general economic and market conditions.

Furthermore, the stock markets have experienced extreme price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. These broad market and industry fluctuations, as well as general economic, political, and market conditions such as recessions, interest rate changes, or international currency fluctuations, may negatively impact the market price of shares of our common stock. In addition, such fluctuations could subject us to securities class action litigation, which could result in substantial costs and divert our management's attention from other business concerns, which could potentially harm our business. If the market price of shares of our common stock after this offering does not exceed the public offering price, you may not realize any return on your investment in us and may lose some or all of your investment.

Purchasers in this offering will experience immediate and substantial dilution in the book value of their investment.

The public offering price of the shares offered by this prospectus will be substantially higher than the pro forma as adjusted net tangible book value per share of our common stock based on the total value of our tangible assets less our total liabilities immediately following this offering. Therefore, if you purchase shares of our common stock in this offering, you will experience immediate and substantial dilution of approximately \$4.64 per share in the price you pay for shares of our common stock as compared to the pro forma as adjusted net tangible book value per share, 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). To the extent outstanding options to purchase shares of common stock are exercised, there will be further dilution. Investors who purchase shares in this offering will contribute approximately 51.5% of the total amount of equity capital raised by us

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through the date of this offering, but will only own approximately 18.1% of the shares outstanding immediately following the completion of this offering. For further information on this calculation, see the Dilution section of this prospectus.

We could issue additional common stock, which might dilute the book value of our common stock.

Our Board of Directors has the authority, without action or vote of our stockholders, to issue all or a part of any authorized but unissued shares. Such stock issuances may be made at a price that reflects a discount from the then-current trading price of our common stock. We may issue securities that are convertible into or exercisable for a significant amount of our common stock. These issuances would dilute your percentage ownership interest, which would have the effect of reducing your influence on matters on which our stockholders vote, and might dilute the book value of our common stock. You may incur additional dilution of net tangible book value if holders of stock options, whether currently outstanding or subsequently granted, exercise their options or if warrant holders exercise their warrants to purchase shares of our common stock. There can be no assurance that any future offering will be consummated or, if consummated, will be at a share price equal or superior to the price paid by our investors even if we meet our technological and marketing goals.

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

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

Our quarterly operating results are subject to fluctuations, and if we fail to meet the expectations of securities analysts or investors, our share price may decrease significantly.

Our annual and quarterly results may vary significantly depending on various factors, many of which are beyond our control. If our earnings do not meet the expectations of securities analysts or investors, the price of our stock could decline. Also, because our sales are primarily made on a purchase order basis, customers may generally cancel, reduce, or postpone orders, resulting in reductions to our net sales and profitability.

Future sales of common stock by our existing stockholders may cause our stock price to fall.

The market price of our common stock could decline as a result of sales by our existing stockholders of shares of common stock in the market or the perception that these sales could occur. These sales might also make it more difficult for us to sell equity securities at a time and price that we deem appropriate and thus inhibit our ability to raise additional capital when it is needed.

Because we do not intend to pay cash dividends, our stockholders will receive no current income from holding our stock.

We have paid no cash dividends on our capital stock to date and we currently intend to retain all of our future earnings, if any, to fund the development and growth of our business. In addition, the terms of any future debt or credit facility may preclude us from paying these dividends. As a result, capital appreciation, if any, of our common stock will be your sole source of gain for the foreseeable future.

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

George N. Hatsopoulos and John N. Hatsopoulos, who are brothers, beneficially own approximately 53.4% of our outstanding shares of common stock. These stockholders have the ability to control various corporate decisions, including our direction and policies, the election of directors, the content of our charter and bylaws, and the outcome of any other matter requiring stockholder approval, including a merger, consolidation and sale of substantially all of our assets, or other change of control transaction. The concurrence of our minority stockholders will not be required for any of these decisions. This concentration of

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voting power could delay or prevent an acquisition of us on terms that other stockholders may desire. The interests of this group of stockholders may not always coincide with your interests or the interests of other stockholders and they may act in a manner that advances their best interests and not necessarily those of other stockholders, including seeking a premium value for their common stock, which might affect the prevailing market price for our common stock.

We are controlled by our two founding shareholders, George N. Hatsopoulos and John N. Hatsopoulos. These shareholders have registered all of their holdings for resale, and therefore are able to sell all of their common stock.

George N. Hatsopoulos and John N. Hatsopoulos have registered all of their holdings of the Company's securities for resale primarily for estate planning purposes. For that reason, the timing and the amount of any future sales by them is difficult to predict. George Hatsopoulos is a director but not an officer of the Company. John Hatsopoulos is the Chief Executive Officer and a key employee of the Company. If John Hatsopoulos or George Hatsopoulos were to sell a substantial portion of their shares in the Company, they would no longer have a substantial continuing interest in the Company. If that were to occur, it may have a material adverse effect on their performance as director or Chief Executive Officer, as applicable, and on the business of the Company. Further, substantial sales of their common stock may result in a decline in the market price of our common stock. The Company's securities held by each of John Hatsopoulos and George Hatsopoulos will be subject to 180-day lock-up periods pursuant to the lock-up agreements described in the Underwriting section of this prospectus.

We have broad discretion in the use of net proceeds from this offering and may not use them effectively.

Our management will have broad discretion in the application of the net proceeds from this offering, including for any of the purposes described in the section entitled Use of Proceeds, and you will not have the opportunity as part of your investment decision to assess whether the net proceeds are being used appropriately. Because of the number and variability of factors that will determine our use of the net proceeds from this offering, their ultimate use may vary substantially from their intended use. The failure by our management to apply these funds effectively could harm our business. Pending their use, we may invest the net proceeds from this offering in short-term, investment-grade, interest-bearing securities. These investments may not yield a favorable return to our stockholders. Further, we anticipate that a certain portion of the proceeds from this offering will be used to finance Ilios, an entity of which we own only 63.7%. As such, your investment in our common stock may result in benefits of which you may only experience a portion.

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

As of our fiscal year end, December 31, 2012, our principal executive officer and principal accounting officer performed an evaluation of controls and procedures and concluded that our controls were not effective to provide reasonable assurance that information required to be disclosed by our Company in reports that we file under the Exchange Act is recorded, processed, summarized, and reported as when required. Management conducted an evaluation of our internal control over financial reporting and based on this evaluation, management concluded that

We are controlled by a small group of majority stockholders, and our minority stockholders will be unable to effect ch

the company's internal control over financial reporting was not effective as of December 31, 2012. The Company currently does not have personnel with a sufficient level of accounting knowledge, experience, and training in the selection, application, and implementation of generally acceptable accounting principles as it relates to complex transactions and financial reporting requirements. The Company also has a small number of employees dealing with general controls over information technology security and user access. This constitutes a material weakness in financial reporting. Any failure to implement effective internal controls could harm our operating results or cause us to fail to meet our reporting obligations. Inadequate internal controls could also cause investors to lose confidence in our reported financial information, which could have a negative effect on the trading price of our common stock, and may require us to incur additional costs to improve our internal control system.

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Trading of our common stock may be restricted by the SEC's penny stock regulations, which may limit a stockholder's ability to buy and sell our stock.

The SEC has adopted regulations that generally define "penny stock" to be any equity security that has a market price less than \$5.00 per share or an exercise price of less than \$5.00 per share, subject to certain exceptions. Our securities may be covered by the penny stock rules, which impose additional sales practice requirements on broker-dealers who sell to persons other than established customers and accredited investors. The penny stock rules require a broker-dealer, prior to a transaction in a penny stock not otherwise exempt from the rules, to deliver a standardized risk disclosure document in a form prepared by the SEC that provides information about penny stocks and the nature and level of risks in the penny stock market. The broker-dealer also must provide the customer with current bid and other quotations for the penny stock, the compensation of the broker-dealer and its salesperson in the transaction, and monthly account statement showing the market value of each penny stock held in the customer's account. The bid and offer quotations, and the broker-dealer and salesperson compensation information, must be given to the customer orally or in writing prior to effecting the transaction and must be given to the customer in writing before or with the customer's confirmation. In addition, the penny stock rules require that prior to a transaction in a penny stock not otherwise exempt from these rules, the broker-dealer must make a special written determination that the penny stock is a suitable investment for the purchaser and receive the purchaser's written agreement to the transaction. These disclosure and suitability requirements may have the effect of reducing the level of trading activity in the secondary market for a stock that is subject to these penny stock rules. Consequently, these penny stock rules may affect the ability of broker-dealers to trade our securities. We believe that the penny stock rules may discourage investor interest in and limit the marketability of our capital stock. Trading of our capital stock may be restricted by the SEC's penny stock regulations, which may limit a stockholder's ability to buy and sell our stock.

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

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

For so long as we remain an emerging growth company, we will not be required to:

have an auditor report on our internal controls over financial reporting pursuant to Section 404(b) of the Sarbanes-Oxley Act;

comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements (i.e., an auditor discussion and analysis);

submit certain executive compensation matters to shareholder non-binding advisory votes;

submit for shareholder approval golden parachute payments not previously approved; and

disclose certain executive compensation related items such as the correlation between executive compensation and financial performance and comparisons of the Chief Executive Officer's compensation to median employee

Trading of our common stock may be restricted by the SEC's penny stock regulations, which may limit a stockholder's ability to buy and sell our stock.

compensation, when such disclosure requirements are adopted.

In addition, Section 107 of the JOBS Act also provides that an emerging growth company can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act of 1933, as amended, or the Securities Act, for complying with new or revised accounting standards. An emerging growth company can therefore delay the adoption of certain accounting standards until those standards would

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otherwise apply to private companies. However, we are choosing to opt out of such extended transition period, and as a result, we will comply with new or revised accounting standards on the relevant dates on which adoption of such standards is required for non-emerging growth companies. Section 107 of the JOBS Act provides that our decision to opt out of the extended transition period for complying with new or revised accounting standards is irrevocable.

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

We will incur significantly increased costs and devote substantial management time as a result of operating as a public company particularly after we are no longer an emerging growth company.

As a public company, we will incur significant legal, accounting and other expenses that we did not incur as a private company. For example, we will be required to comply with certain of the requirements of the Sarbanes-Oxley Act and the Dodd-Frank Wall Street Reform and Consumer Protection Act, as well as rules and regulations subsequently implemented by the SEC, and the NASDAQ Capital Market, our anticipated stock exchange, including the establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. We expect that compliance with these requirements will increase our legal and financial compliance costs and will make some activities more time consuming and costly. In addition, we expect that our management and other personnel will need to divert attention from operational and other business matters to devote substantial time to these public company requirements. In particular, we expect to incur significant expenses and devote substantial management effort toward ensuring compliance with the requirements of Section 404 of the Sarbanes-Oxley Act.

As noted above, for as long as we remain an emerging growth company as defined in the JOBS Act, we intend to take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies. However, after we are no longer an emerging growth company, we expect to incur additional management time and cost to comply with the more stringent reporting requirements applicable to companies that are deemed accelerated filers or large accelerated filers, including complying with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act. We cannot predict or estimate the amount of additional costs we may incur as a result of becoming a public company or the timing of such costs.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements that involve substantial risks and uncertainties. All statements, other than statements of historical facts, contained in this prospectus, including statements regarding our strategy, future operations, future financial position, future revenues, projected costs, prospects, plans, and objectives of management, are forward-looking statements. The words anticipate, believe, estimate, expect, intend, may, predict, project, target, potential, will, would, could, should, continue, and similar expressions are in forward-looking statements, although not all forward-looking statements contain these identifying words.

The forward-looking statements in this prospectus include, among other things, statements about:

- our future financial performance, including our revenue, cost of revenue, operating expenses, and ability to achieve and maintain profitability;
- our ability to market, commercialize, and achieve market acceptance for our combined heat and power systems, or any other product candidates or products that we may develop;
 - our ability to innovate and keep pace with changes in technology;
 - the success of our marketing and business development efforts;
 - our ability to maintain, protect and enhance our intellectual property;
 - the effects of increased competition in our market;
- our ability to effectively manage our growth and successfully enter new markets; and
- the attraction and retention of qualified employees and key personnel.

We may not actually achieve the plans, intentions, or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions, and expectations disclosed in the forward-looking statements we make. We have included important factors in the cautionary statements included in this prospectus, particularly in the Risk Factors section, that we believe could cause actual results or events to differ materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures, or investments we may make.

You should read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement of which this prospectus is a part completely and with the understanding that our actual future results may be materially different from what we expect. The forward-looking statements contained in this prospectus are made as of the date of this prospectus, and we do not assume any obligation to update any forward-looking statements except as required by applicable law.

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USE OF PROCEEDS

We estimate that we will receive net proceeds of approximately \$17.4 million from our sale of common stock 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 discounts and commissions and estimated offering expenses payable by us.

Each \$1.00 increase (decrease) in the assumed public offering price of \$6.50 per share (the midpoint of the price range set forth on the cover page of this prospectus) would increase (decrease), the expected net cash proceeds of the offering to us by approximately \$2.8 million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Each 500,000 increase (decrease) in the assumed number of shares of common stock sold in this offering would increase (decrease) the expected net cash proceeds of the offering to us by approximately \$3.0 million, assuming the public offering price (the midpoint of the range set forth on the cover page of this prospectus) remains the same.

We currently expect to use the net proceeds from this offering to:

Expand our turnkey design and installation contracting services business in our core markets in the Northeast United States and California. Proceeds will be used for additional sales and technical staff to support the business and for working capital to complete these projects. We anticipate expanding our service and turnkey operations to new territories, which will likewise require startup capital.

Further expand our business into foreign markets.

Construct a dedicated manufacturing facility for our Ilios subsidiary to increase throughput and decrease product manufacturing costs.

Expand our low-emissions technology business to other markets, including applying our emissions technology to non-Tecogen engines in a wider range of industrial markets.

Refine our existing models and develop new products, including additional CHP and Ilios heat pump products that will use the advanced engine developed under the recently completed research contract with the California Energy Commission (see R&D Capabilities below).

Repay amounts owed under our non-convertible debt, including our line of credit with our Chief Executive Officer. The remainder of the net proceeds from this offering may be used for working capital and general corporate purposes.

The actual amount we spend for such purposes will depend on then-existing conditions, including our financial condition, operating results, business prospects, and other factors that we may deem relevant. Accordingly, our management will have significant flexibility in applying the net proceeds of this offering. Pending our use of the net proceeds from this offering, we intend to invest the net proceeds in a variety of capital preservation investments, including short-term, investment-grade, interest-bearing instruments, and U.S. government securities.

We have no current understandings, commitments or agreements with respect to any material acquisition of or investment in any technologies, products, or companies.

We have demand notes (i) with an original principal amount of \$250,000 issued to John N. Hatsopoulos, our Chief Executive Officer, and Patricia Hatsopoulos, his wife, which bear interest at 5% per year; and (ii) with an aggregate original principal amount of \$1,050,000, issued to John N. Hatsopoulos, which bear interest at 6% per year. As of August 29, 2013, the aggregate amount owed under these notes, including interest, was approximately \$1,440,000.

We also have a line of credit for up to \$1.5 million with John N. Hatsopoulos, which matures on March 31, 2014. As of August 29, 2013, there was \$1,150,000 outstanding under the line of credit and the interest rate is equal to 4.75%.

TABLE OF CONTENTS**DIVIDEND POLICY**

We have never declared or paid any cash dividends on our common stock and do not anticipate paying any cash dividends in the foreseeable future. Payment of cash dividends, if any, in the future will be at the discretion of our Board of Directors.

CAPITALIZATION

The following table sets forth our cash and cash equivalents and our capitalization as of June 30, 2013:

on an actual basis;

on a pro forma basis to give effect to the voluntary conversion of our outstanding convertible debentures at the closing of the offering into 75,806 shares of common stock; and

on a pro forma, as adjusted basis, to also give effect to the sale of 3,000,000 shares of common stock in this offering at 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), after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, and repayment of our outstanding debt, including an additional \$1,150,000 outstanding under our working capital line of credit as of August 29, 2013, which was not outstanding at June 30, 2013.

You should read this table in conjunction with the sections titled "Selected Consolidated Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and related notes included elsewhere in this prospectus.

	June 30, 2013 (unaudited)		
	Actual	Pro Forma	Pro Forma, as adjusted
Cash and cash equivalents	\$269,817	\$269,817	\$15,166,067
Convertible Debentures	90,967		
Demand notes payable	1,337,500	1,337,500	
Common Stock, par value \$0.001 per share 100,000,000 shares authorized; 13,574,474 issued shares, actual; 13,650,280 issued shares pro forma; and 16,650,280 issued shares, pro forma as adjusted	54,298	54,374	57,374
Additional paid-in capital	16,297,928	16,388,819	33,769,569
Accumulated deficit	(13,710,596)	(13,710,596)	(13,710,596)
Noncontrolling interest	(60,970)	(60,970)	(60,970)
Total shareholders' equity	2,580,660	2,671,627	20,055,377
Total capitalization	\$2,580,660	2,671,627	20,055,377

Each \$1.00 increase (decrease) in the assumed public offering price of \$6.50 per share (the midpoint of the price range set forth on the cover page of this prospectus) would increase (decrease), respectively, the amount of cash, cash equivalents and short-term investments, additional paid-in capital, total stockholders' equity (deficit) and total capitalization by approximately \$2.8 million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The number of our shares of common stock to be outstanding immediately after this offering excludes:

1,134,000 shares of common stock issuable upon the exercise of stock options outstanding as of June 30, 2013 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; and

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

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TABLE OF CONTENTS**DILUTION**

Purchasers of the shares offered by this prospectus will suffer immediate and substantial dilution in the net tangible book value per share of common stock. Our net tangible book value as of June 30, 2013, was approximately \$1,755,760, or \$0.129 per share. Net tangible book value per share is calculated by subtracting our total liabilities from our total tangible assets, which is total assets less intangible assets, and dividing this amount by the number of shares of common stock outstanding.

Dilution in net tangible book value per share represents the difference between the amount per share paid by purchasers in this offering and the as adjusted pro forma net tangible book value per share of our common stock immediately after this offering. After giving effect to the sale by us of all 3,000,000 shares offered in this offering at 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 estimated underwriting discounts and commissions and estimated offering expenses payable by us, our as adjusted net tangible book value as of June 30, 2013, would have been approximately \$19,189,510, or \$1.16 per share. This represents an immediate increase in the net tangible book value of \$1.031 per share to our existing shareholders and an immediate dilution in net tangible book value of \$4.64 per share to investors in this offering. The following table illustrates this per share dilution:

Price per share to investors	\$ 6.50
Net tangible book value per share as of June 30, 2013	\$ 0.129
Increase in net tangible book value per share attributable to this offering	\$ 1.25
As adjusted net tangible book value per share as of June 30, 2013, after giving effect to this offering	\$ 1.155
Dilution in net tangible book value per share to investors	\$ 4.64

The above table is based on 13,574,474 shares of our common stock outstanding as of June 30, 2013, reflects the one-for-four reverse stock split effective July 22, 2013, and excludes as of June 30, 2013, the following:

1,134,000 shares of common stock issuable upon the exercise of stock options outstanding 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.

Each \$1.00 increase (decrease) in the assumed public offering price of \$6.50 per share (the midpoint of the price range set forth on the cover page of this prospectus) would increase (decrease), our pro forma as adjusted net tangible book value by approximately \$2.8 million, our as adjusted net tangible book value per share by approximately \$0.17, and dilution per share to new investors by approximately \$0.76, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same. A 500,000 increase (decrease) in the number of shares of common stock offered by us would increase (decrease) our pro forma as adjusted net tangible book value by approximately \$3.0 million, our as adjusted net tangible book value per share by approximately \$0.15, and dilution per share to new investors by approximately \$0.10, assuming the public offering price (the midpoint of the range set forth on the cover of this prospectus) remains the same.

To the extent that any options are exercised, new options are issued under our stock option or stock incentive plans, or we otherwise issue additional shares of common stock in the future, there will be further dilution to new investors.

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SELECTED CONSOLIDATED FINANCIAL DATA

The following selected consolidated financial data should be read together with our financial statements and accompanying notes and Management's discussion and analysis of financial condition and results of operations appearing elsewhere in this prospectus. The selected consolidated financial data in this section are not intended to replace our financial statements and the related notes. Our historical results are not necessarily indicative of our future results.

The selected statement of operations data for the years ended December 31, 2012, 2011, and 2010, and the selected balance sheet data as of December 31, 2012 are derived from our audited financial statements appearing elsewhere in this prospectus. The selected statement of operations data for the six months ended June 30, 2013 and 2012, and the selected balance sheet data as of June 30, 2013 are derived from our unaudited financial statements appearing elsewhere in this prospectus. In our opinion, our interim 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.

	Year Ended December 31,		Six Months Ended June 30,	
Consolidated Statement of Operations Data:	2012	2011	2013	2012