

PROSPECTUS



Up to 4,507,603 shares of common stock by selling stockholders

This prospectus relates to up to 4,507,603 shares of our common stock, \$.001 par value per share (*"common stock"*), that may be re-offered and re-sold by the selling stockholders named in this prospectus. The shares will be re-offered and re-sold by the selling stockholders from time to time.

We will not receive any part of the proceeds from the sale of the shares.

The selling stockholders or their respective pledgees, donees, transferees or other successors-in-interest may offer the shares from time to time through brokers or dealers at market prices then prevailing, in underwritten transactions at prices related to then-current market prices or in individually negotiated transactions at such prices as may be agreed upon, or by a combination of these methods. See *"Plan of Distribution."*

Our common stock is listed on the NYSE American LLC (*"NYSE American"*) under the symbol "TGEN." The last reported sale price of our common stock on the NYSE American on August 28, 2026, was \$3.11 per share.

We will pay all expenses of the registration of the shares under the Securities Act of 1933, as amended (*"Securities Act"*), including the preparation of this prospectus, but all selling and other expenses incurred by the selling stockholders will be borne by them. See *"Plan of Distribution."*

No shares of our common stock may be sold without delivery of this prospectus describing the method and terms of the offering of such shares. **Investing in our securities involves a high degree of risk. You should carefully review the section entitled *"Risk Factors"* in this prospectus, in any applicable prospectus supplement, and in the documents incorporated herein and therein by reference for a discussion of matters that investors in our securities should consider. Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus or any accompanying prospectus supplement. Any representation to the contrary is a criminal offense.**

The date of this prospectus is September 3, 2026.

TABLE OF CONTENTS

About this Prospectus	3
Cautionary Note Regarding Forward-Looking Statements	4
Industry and Market Data	5
Prospectus Summary	6
The Offering	14
Use of Proceeds	14
Description of Our Capital Stock	15
Selling Stockholders	19
Plan of Distribution	21
Legal Matters	23
Experts	23
Where You Can Find Additional Information	23
Incorporation of Documents by Reference	24
Disclosure of Commission Position on Indemnification	24

You should rely only on the information contained in this prospectus and any applicable prospectus supplement. We have not authorized anyone to provide you with information different from that contained in this prospectus and any applicable prospectus supplement. The selling stockholder may offer to sell and seek offers to buy shares of our common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or any sale of our common stock.

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission (“SEC”) using a “shelf” registration process. Under this shelf process, the selling stockholders or their permitted transferees may from time to time offer the shares described in this prospectus in one or more offerings up to a total share amount of 4,507,603 shares.

In the future, we may provide you with a prospectus supplement which may add, update or change information contained in this prospectus. You should read both this prospectus and any prospectus supplement, including all documents incorporated herein or therein by reference, together with additional information described below under “Where You Can Find Additional Information” and “Incorporation of Documents by Reference.”

Neither we nor any selling stockholder have authorized any dealer, agent or other person to give any information or to make any representation other than those contained or incorporated by reference in this prospectus and any accompanying prospectus supplement, if any. You must not rely upon any information or representation not contained or incorporated by reference in this prospectus or any accompanying prospectus supplement. This prospectus and the accompanying prospectus supplement do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the registered securities to which they relate, nor do this prospectus or the accompanying prospectus supplement constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction.

You should not assume that the information contained in this prospectus and any applicable prospectus supplement is accurate on any date subsequent to the date of this prospectus or that any information we have incorporated herein by reference is correct on any date subsequent to the date of the document incorporated by reference (as our business, financial condition, results of operations and prospects may have changed since that date), even though this prospectus and any applicable prospectus supplement is delivered or securities are sold on a later date.

You should note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference in this prospectus were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreement, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

To the extent there are inconsistencies between this prospectus, any prospectus supplement, and any documents incorporated by reference, the document with the most recent date will control.

As permitted by the rules and regulations of the SEC, the registration statement, of which this prospectus forms a part, includes additional information not contained in this prospectus. You may read the registration statement and the other reports we file with the SEC at the SEC’s web site or at the SEC’s offices described below under the heading “Where You Can Find Additional Information.”

In this prospectus, unless the context otherwise requires, references to “Tecogen,” “Company,” “we,” “our,” or “us,” refer to Tecogen Inc., a Delaware corporation, and its subsidiaries.

Our logo, trademarks and service marks are the property of Tecogen. Other trademarks or service marks appearing in this prospectus are the property of their respective holders. Solely for convenience, the trademarks, service marks, trade names and copyrights referred to in this prospectus may appear without the TM, SM, ® or © symbols, but such references are not intended to indicate, in any way, that we or any third-party will not assert, to the fullest extent under applicable law, their rights or the right of the applicable licensor to these trademarks, service marks, trade names and copyrights.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, any accompanying prospectus supplement and the documents incorporated by reference herein or therein contain, in addition to historical information, certain forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Securities Exchange Act of 1934, as amended (*"Securities Exchange Act"*), that include information relating to future events, future financial performance, strategies, expectations, competitive environment, regulatory environment and availability of resources. Such forward-looking statements include those that express plans, anticipation, intent, contingency, goals, targets or future developments and/or otherwise are not statements of historical fact. These forward-looking statements are based on our current expectations and projections about future events, and they are subject to risks and uncertainties known and unknown that could cause actual results and developments to differ materially from those expressed or implied in such statements.

In some cases, you can identify forward-looking statements by terminology, such as *"expects," "anticipates," "intends," "estimates," "plans," "believes," "seeks," "may," "should," "could"* or the negative of such terms or other similar expressions. Accordingly, these statements involve estimates, assumptions and uncertainties that could cause actual results to differ materially from those expressed in them. Any forward-looking statements are qualified in their entirety by reference to the factors discussed throughout this prospectus or any accompanying prospectus supplement or incorporated herein or therein by reference.

Risks, uncertainties and other factors that may cause our actual results, performance or achievements to be different from those expressed or implied in our written or oral forward-looking statements may be found in this prospectus and any accompanying prospectus supplement under the heading *"Risk Factors"* and in our Annual Report on Form 10-K for the year ended December 31, 2025, under the headings *"Risk Factors"* and *"Business,"* and in our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2026, and June 30, 2026, under the heading *"Risk Factors,"* as the same may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future and any prospectus supplement, including the following:

- our operating history is characterized by net losses;
- we are dependent on a limited number of third-party suppliers for key components for our products;
- we depend on a small number of customers for a substantial portion of our product revenues; our products involve a lengthy sales cycle and we may not appropriately anticipate sales levels, impairing our operations;
- the economic viability of our projects depends on the price spread between natural gas and other fuel and electricity;
- we may be exposed to substantial liability claims if we fail to fulfill our obligations to customers or if our on-site equipment malfunctions;
- we are dependent upon the continued contributions of our senior management and other key employees whose loss could adversely affect our business, operating results, and financial condition;
- the reduction, elimination or expiration of government and economic incentives for applications of our equipment could reduce demand for our equipment and harm our business;
- our directors and executive officers are among our largest stockholders, and can exert influence over our business, and may have actual or potential interests that differ from other stockholders;
- because we have not and do not intend to pay cash dividends, our stockholders receive no current income from holding our stock; as of the end of the period covered by our Annual Report on Form 10-K for the year ended December 31, 2025, and the periods covered by our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2026, and June 30, 2026, our principal executive officer and principal financial officer concluded that there is a material weakness in our disclosure controls and procedures and our internal control over financial reporting; and
- Delaware law and our certificate of incorporation and bylaws contain certain provisions, including anti-takeover provisions, that limit the ability of stockholders to take certain actions, and could delay or discourage takeover attempts that stockholders may consider favorable.

Forward-looking statements speak only as of the date they are made. You should not put undue reliance on any forward-looking statements. We assume no obligation to update forward-looking statements to reflect actual results,

changes in assumptions or changes in other factors affecting forward-looking information, except to the extent required by applicable securities laws. If we do update one or more forward-looking statements, no inference should be drawn that we will make additional updates with respect to those or other forward-looking statements.

New factors emerge from time to time, and it is not possible for us to predict which factors will arise. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. We qualify all of the information presented in this prospectus, any accompanying prospectus supplement and incorporated herein or therein by reference, and particularly our forward-looking statements, by these cautionary statements.

INDUSTRY AND MARKET DATA

This prospectus, any accompanying prospectus supplement and the documents incorporated herein or therein by reference contain industry and market data which have been obtained from industry publications, market research and other publicly available information. Such information is supplemented, where necessary, with our own internal estimates, taking into account publicly available information about other industry participants and the judgment of our management where information is not publicly available.

Industry publications and market research generally state that the information they contain has been obtained from sources believed to be reliable, but that the accuracy and completeness of such information is not guaranteed and that the projections they contain are based on a number of significant assumptions. In some cases, the sources from which this data is derived is not expressly referred to. While we compiled, extracted and reproduced industry data from these sources, and believe that the information used is reliable, we did not independently verify the data that was extracted or derived from such industry publications or market reports, and cannot guarantee its accuracy or completeness.

The industry and market data that appears in or is incorporated by reference into this prospectus and any accompanying prospectus supplement is inherently uncertain, involves a number of assumptions and limitations and may not necessarily be reflective of actual market conditions and you are cautioned not to give undue weight to such industry and market data because it may differ from current data due to material changes in market conditions or otherwise. Such statistics are based on market research, which itself is based on sampling and subjective judgements by both the researchers and the respondents, including judgements about what types of products and transactions should be included in the relevant market. Forecasts and other forward-looking information obtained from these sources are subject to the same qualifications and uncertainties as the other forward-looking statements in this prospectus or the documents incorporated herein by reference. These and other factors could cause results to differ materially from those expressed in any forecast or estimate.

We do not intend or assume any obligation to update industry or market data set forth in this prospectus or any accompanying prospectus supplement. Because market behavior, preferences and trends are subject to change, prospective investors should be aware that market and industry information in this prospectus, any accompanying prospectus supplement, or incorporated herein or therein by reference and estimates based on any data therein may not be reliable indicators of future market performance or our future results of operations. Notwithstanding anything in this prospectus or any accompanying prospectus supplement to the contrary, we are responsible for all disclosures in this prospectus and any accompanying prospectus supplement.

PROSPECTUS SUMMARY

The following summary highlights information contained elsewhere or incorporated by reference into this prospectus. It may not contain all the information that may be important to you. You should read this entire prospectus, any prospectus supplement, including all documents incorporated herein by reference, carefully, especially the "Risk Factors" contained in or incorporated by reference into this prospectus and any accompanying prospectus supplement and under similar headings in the other documents that are incorporated by reference into this prospectus and accompanying prospectus supplement, including our Annual Report on Form 10-K for the year ended December 31, 2025, our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2026, and June 30, 2026, and our other SEC filings, as well as our consolidated financial statements and related notes and other information incorporated by reference into this prospectus and accompanying prospectus supplement before making an investment decision with respect to our securities. Please see the sections titled "Where You Can Find Additional Information" and "Incorporation of Documents by Reference" in this prospectus.

Overview

Our Company

We produce commercial and industrial, natural-gas-fueled engine-driven, combined heat and power (CHP) products that reduce energy costs, decrease greenhouse gas emissions and alleviate congestion on the national power grid. Our products supply electric power or mechanical power for cooling, while heat from the engine is recovered and purposefully used at a customer facility. We provide cost efficient, environmentally friendly and reliable products for distributed power generation that, through patented technologies, nearly eliminate criteria pollutants and significantly reduce a customer's carbon footprint. The majority of our customers are located in regions with the highest utility rates, typically California, the Midwest and the Northeast.

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

We manufacture four types of CHP products:

- Cogeneration units that supply electricity and hot water
- Chillers that provide air conditioning and hot water
- Chillers that provide air conditioning and hot waterRefrigeration compressors with natural gas engine drives, and
- High-efficiency water heaters

Our business operations are comprised of three business segments:

- *Products Segment* - designs, manufactures and sells industrial and commercial cogeneration systems
- *Services Segment* - provides operations and maintenance ("O&M") services for our products under long-term service contracts, and
- *Energy Production Segment* - installs, operates and maintains distributed generation electricity systems that we own and sell the energy generated by such systems in the form of electricity, heat, hot water and cooling to our customers under long-term energy sales agreements

Our Growth Strategies

Artificial Intelligence Data Centers

We believe artificial intelligence data centers represent a significant growth opportunity for Tecogen because our chiller and on-site power generation solutions can help alleviate power constraints faced by data centers. By using our natural gas cooling systems instead of an electric cooling system, a data center can increase the amount of available power for computing. This increase in available power has the potential to increase a data center's revenue and profits.

A single data center could use upwards of 10,000 tons of cooling which would require approximately 20 Tecogen DTx chillers or 36 of our dual power source chillers, which could exceed our average historical annual product sales. An electric chiller plant of a similar size would require approximately 12kW of power allocation (electric chiller full load 1.1 to 1.2kW/refrigeration ton for air cooled chillers). This could represent up to \$28 million in lost revenue to a data center based on current rental rates for data centers (national average of \$195.94/KW/month based upon the CBRE North American Data Center Trends H2 2025). If this power is allocated to an electric chiller, it is not available for computing, reducing the revenue potential of a data center by a commensurate amount.

On February 28, 2025, to begin marketing our product solutions to data centers, we signed a global partnership agreement with Vertiv Corporation (“Vertiv”) for the marketing and sale of our products for data center cooling applications in the U.S. and abroad. We agreed to provide Vertiv with reasonable discounts for purchases of significant volumes of our chillers, and Vertiv agreed to use commercially reasonable efforts to assist us in securing favorable terms for engineering components and supplies for manufacturing our chillers. Pursuant to the agreement with Vertiv we have granted Vertiv the exclusive right to market and sell our DTx chillers for data center cooling applications outside the United States, and the non-exclusive right to market and sell our chillers for such applications within the United States. We have also agreed to grant Vertiv the exclusive right to market and sell our DTx chillers for data center cooling applications in the United States if Vertiv achieves and maintains agreed sales levels. The foregoing description of the agreement with Vertiv is not complete and is qualified in its entirety by reference to the full text thereof, a copy of which was filed as Exhibit 99.01 to our Current Report on Form 8-K filed with the SEC on February 28, 2025. Vertiv is a global provider of critical digital infrastructure and continuity solutions, including for data and communications centers.

Although there can be no assurance, management believes that, if we are able to penetrate the data center market, the data center market may represent a significant revenue growth opportunity for us. At the end of 2025, 5,994 MW of new data center capacity was under construction. *See CBRE North America Data Center Trends H2 2025*. Construction activity was driven in part by robust demand and extended timelines due to power constraints at existing data centers. Power consumption and the requisite cooling requirements have been increasing with each new generation of chips. For example, the maximum thermal design power for the Rubin architecture increased to 2.3kW in 2026 (from 1.4kW for the Blackwell Ultra in 2025) and is expected to increase to 4.0kW for Rubin Ultra chips in 2027.

During the third quarter of 2021, we began development of the Tecochill Hybrid-Drive Air-Cooled Chiller. We recognized that there were many applications where the customer wanted an easy to install chiller. Using the inverter design from our InVerde e+ cogeneration module, the system can simultaneously take two inputs, one from the grid or a renewable energy source and one from our natural gas engine. This allows a customer to seek the optimum blend of operational cost savings and greenhouse gas benefits while providing added resiliency from two power sources (which can be blended as desired). In some cases, if data centers can shed load on demand from electric utilities, they are likely to reduce the time it takes to get power from electric utilities. *See Flexible Data Centers: A Faster, More Affordable Path to Power December 2025*.

We introduced the Tecochill Hybrid-Drive Air-Cooled Chiller at the AHR Expo in February 2023 and received an order on February 8, 2024, for three hybrid-drive air-cooled chillers for a utility company in Florida which were shipped in the second and third quarter of 2025. In March 2024, the US Patent and Trademark Office granted patent 11,936,327: "Hybrid Power System With Electric Generator and Auxiliary Power Source."

Our chillers also provide customers with reduced operating costs compared to an equivalent electric chiller. In many of the regions in which we operate, such as New England and New York, the prevailing electricity prices can exceed \$0.16/kWh while the equivalent natural gas costs are less than \$0.04/kWh. Typically, chiller projects also have the advantage of faster construction timelines than power generation projects because there is limited electrical work needed. Our chiller solutions can be deployed as retrofits or as part of new construction.

If further power is needed, our on-site power generation systems also offer some unique advantages for data centers. Our InVerde cogeneration units are modular, inverter based and UL certified. They can be installed indoors or outdoors and include the CERTs microgrid algorithm. During off-grid operation, the CERTS microgrid algorithm provides stable control of reactive power and the microgrid as a whole by eliminating destabilizing circulating currents between generation sources.

Using a modular inverter-based system means a cluster of power generation units can be sited close to the point of use and be dedicated to a section of a building or a data center. A modular design also reduces the risk of a single failure point and is less susceptible to electrical conversion and distribution losses.

Our chiller and on-site power generation systems are equipped as standard with our patented Ultera emissions packages. This allows simplified air-permitting in many parts of the country including California and Massachusetts.

The Berkley Lab 2024 United States Data Center Energy Usage Report predicts that the co-location and hyperscale data centers will represent 80% or more of data centers by 2028 and consume 90% of the electricity consumed by data centers.

Controlled Environment Agriculture

On July 20, 2022, we announced our intention to focus on opportunities for the use of our cogeneration equipment in low carbon Controlled Environment Agriculture ("CEA"). We believe that CEA offers an exciting opportunity to apply our expertise in clean cooling, power generation, and greenhouse gas ("GHG") reduction to address critical issues affecting food and energy security.

CEA facilities enable multiple crop cycles (15 to 20 cycles) in one year compared to one or two crop cycles in conventional farming. In addition, growing produce close to the point of sale reduces food spoilage during transportation. Food crops grown in greenhouses typically have lower yields per square foot than in CEA facilities, and the push to situate facilities close to consumers in cities requires minimizing land area and maximizing yield per square foot. Yields are increased in CEA facilities by supplementing or replacing natural light with grow lights in a climate-controlled environment - which requires significant energy use.

In recent years, our cogeneration equipment has been used in numerous cannabis cultivation facilities because our systems reduce the facility's need for power, significantly reduce operating costs and the facility GHG footprint, and offer resiliency to grid outages. Our experience providing clean energy solutions to cannabis cultivation facilities has given us significant insight into requirements relating to energy-intensive indoor agriculture applications that we believe to be transferable to CEA facilities for food production.

Our Products Business

Our products offer customers energy savings, resiliency and a cleaner environmental footprint. Our cogeneration, chiller, and heat pump systems use an engine to generate electricity or shaft work and recover the waste heat from the engine. Our systems are greater than 88% efficient compared to typical electrical grid efficiencies of 40% to 50%. As a result, our GHG emissions are typically half that of the electrical grid. Our systems generate electricity and hot water or in the case of our Tecochill product, both chilled water and hot water. Our products are expected to run on Renewable Natural Gas (RNG) as it is introduced into the US gas pipeline infrastructure.

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

Our commercial product lines include:

- the InVerde e+® and TecoPower® cogeneration units that supply electricity and hot water
- Tecochill® air-conditioning and refrigeration chillers that produce chilled water and hot water
- Tecochill® hybrid-drive air-cooled chiller which is a gas engine-driven chiller that provides air conditioning and hot water
- Tecofrost® gas engine-driven refrigeration compressors that circulate refrigerant and provide hot water as a byproduct, and

- Ultra® emissions control technology

Generally, customers for our InVerde and TecoPower cogeneration products have a simultaneous need for electrical power and hot water. These include hospitals, nursing homes, schools, universities, health clubs, spas, hotels and motels, office and multi-unit residential buildings. Our Tecochill chiller products benefit customers who have a simultaneous need for cooling and hot water which is typical in sites such as hospitals, ice rinks, indoor agriculture and food processing. Our Tecofrost refrigeration compressors are applied primarily to industrial applications that include cold storage, wineries, dairies, ice rinks and food processing. The factors that drive the demand for such products include the price of natural gas, local electricity rates, environmental regulations, and governmental energy policies, as well as a customer's desire to become more environmentally responsible.

Our Tecochill and Tecofrost cooling and refrigeration products provide both cooling and make use of high-grade waste heat. This is of particular advantage in facilities that control both temperature and humidity. In such facilities, climate control is achieved by cooling the facility to remove humidity and then reheating to the required temperature. Using engine waste heat to perform the reheat while utilizing natural gas to generate the cooling provides significant economic and environmental benefits. As a result our products have significant competitive advantages in applications that operate year-round such as controlled environment agriculture, indoor ice rinks, and hospitals.

Our CHP products are designed as compact modular units that are intended to be installed in multiples. This approach has significant advantages over utilizing a single larger cogeneration or chiller unit, allowing placement in constrained urban settings and redundancy to mitigate service outages. Redundancy is particularly relevant in regions where the electric utility has formulated tariff structures that include high "peak demand" charges. Such charges are common in many areas of the country, and are applied by such utilities as Southern California Edison, Pacific Gas and Electric, Consolidated Edison of New York, and National Grid of Massachusetts. Because peak demand charges are assessed based on customers' peak monthly demand charge over a very short interval, typically only 15 minutes, a brief service outage for a system comprised of a single unit can create a high demand charge and, therefore, may be highly detrimental to the monthly savings of the system. Multiple unit sites dramatically reduce the likelihood of a full system outage that would result in a high demand charge, giving customers with multiple units a greater probability of capturing peak demand savings.

Our products are sold directly to customers by our in-house marketing team and by established independent sales agents and representatives. *See also "Our Growth Strategies – Artificial Intelligence Data Centers," above.*

Our Services Business

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

We have strived to maintain product service contracts for many years and work to maintain the integrity and performance of our equipment. Our products have a long history of reliable operation. Since 1995, we have had a remote monitoring system in place that connects to hundreds of units daily and reports their "availability," which is the amount of time a unit is running or is ready to run. In 2017, we improved our remote monitoring system capability through the introduction of a cloud-based system called CHP Insight. The CHP Insight platform allows us to collect, analyze and manage data regarding equipment operation continuously and in real time, providing improved insight into the functionality of our CHP fleet. As a result of our remote monitoring systems, more than 80% of the units operate above 90% availability, with the average being 93.8%. Our factory service agreements have directly impacted on these positive results and represent an important long-term annuity-like stream of revenue for us.

New equipment sold beginning in 2016 and select upgrades to the existing installed equipment fleet includes an industrial internet solution which enables Tecogen to collect, analyze, and manage valuable asset data continuously and in real-time. This provides the service team with improved insight into the functionality of our installed CHP fleet. Specifically, it enables the service department to perform remote monitoring and diagnostics and to view system results in real time via a computer, smart phone or tablet. Consequently, we can utilize monitoring data better, ensuring customers are capturing maximum possible savings and efficiencies from their installation. Through constant monitoring and analysis of equipment data, Tecogen expects to enhance the performance of installed equipment. In 2018, we migrated our cloud-based system from a third-party system to our CHP Insight system developed in-house to access and store operating data on the cloud and provide user interface features specific to CHP operation as well as sophisticated data analysis tools.

Our Energy Production Business

We distribute, own and operate clean, on-site energy systems that produce electricity, hot water, heat, and cooling for our customers. We own the equipment we install at customers' facilities and sell the energy produced by these systems to customers on a long-term contractual basis. We utilize energy equipment that we manufacture and equipment manufactured by other cogeneration manufacturers. Our cogeneration systems produce electricity from an internal combustion engine driving a generator, while the heat from the engine and exhaust are recovered and typically used to produce heat and hot water for use on-site. Also, we distribute and operate water chiller systems for building cooling applications that operate in a similar manner, except that the engines in the water chiller systems drive a large air-conditioning compressor while recovering heat for hot water.

Cogeneration systems reduce the amount of electricity that a customer must purchase from the local utility and produce valuable heat and hot water on-site to use as required. By simultaneously providing electricity, hot water, and heat, cogeneration systems also have a significant positive impact on the environment by reducing the carbon dioxide, or CO₂, produced by replacing a portion of the traditional energy supplied by the electric grid and conventional hot water boilers. Distributed generation of electricity, or DG, often referred to as cogeneration systems or combined heat and power systems, or CHP, is an attractive option for reducing energy costs and increasing the reliability of available energy.

We believe that the primary opportunity for our cogeneration and chiller DG systems are in regions of the U.S. where commercial electricity rates range between \$0.15 and \$0.31 per kW hour, or kWh, which are predominantly in the Northeast, Mid-Atlantic, Florida, California, and parts of Canada. Attractive DG economics are currently attainable in applications that include hospitals, nursing homes, multi-tenant residential housing, hotels, schools and colleges, recreational facilities, food processing plants, dairies, and other light industrial facilities. We also believe that the largest number of potential DG users in the U.S. require less than 1 MW of electric power and less than 1,200 tons of cooling capacity. We are able to design our systems to suit a particular customer's needs because of our ability to place multiple units at a site. This approach is part of what allows our products and services to meet changing power and cooling demands throughout the day (also from season-to-season) and greatly improves efficiency.

Our Energy Production segment sells energy in the form of electricity, heat, hot water and cooling to our customers under long-term sales agreements which represented 4.9% and 9.3% of our consolidated revenues for the years ended December 31, 2025 and 2024, respectively.

Sales & Distribution

Our products are sold directly to end-users by our sales team and by established sales agents and representatives. We have entered into various agreements with distributors and outside sales representatives who are compensated on a commission basis for certain territories and product lines. Our product sales cycle exhibits typical seasonality for the HVAC industry with sales of chillers generally stronger in the warmer months while heat pump sales are stronger in the cooler months. As discussed above, we recently entered into an agreement with Vertiv relating to the sale of our DTx chillers for data center cooling applications.

Markets and Customers

Worldwide, stationary power generation applications vary from huge central stationary generating facilities (traditional electric utility providers) to back-up generators as small as 2 kW. Historically, power generation in most developed countries such as the United States has been part of a regulated central utility system utilizing high-temperature steam turbines powered by fossil-fuels. This turbine technology, though steadily refined over the years, reached a maximum efficiency (where efficiency means electrical energy output per unit of fuel energy input) of approximately 40% to 50%.

Distributed power generation has been successfully implemented by others in large industrial installations over 10 Megawatts ("*MW*"), where the market has been growing for a number of years and is increasingly being accepted in smaller sized units because of technology improvements, increased energy costs, and better economics. We believe that our target market for distributed power generation for users of up to 1 MW, has been barely penetrated and that the reduced reliability of the utility grid and increasing cost pressures experienced by energy users will drive our near-term growth and penetration of this market.

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

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

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

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

On-site CHP not only eliminates the loss of electric power during transmission but also offsets the capital expense of upgrading or expanding the utility infrastructure. Decentralizing power generation or reducing energy requirements at a customer's site not only relieves the capacity burden on existing power plants, but also lessens the burden on transmission and distribution lines. This ultimately improves the grid's reliability and reduces the need for costly upgrades.

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

Traditional customers for our chillers, refrigeration compressors and heat pumps overlap with those for our cogeneration systems. Engine-driven chillers are often used as replacements for aging electric chillers because both types of chillers occupy similar amounts of floor space and require similar maintenance schedules. This is also the case with refrigeration compressors.

As more load is added to the utility grid in the form of data centers, EV charging, and other demands for power, customers are facing power constraints. We believe that these power constrained customers, in particular data centers and industrial facilities, represent a significant new market for growth opportunity.

Recent Developments

Uplist to NYSE American Stock Exchange

On April 30, 2025, we announced that our common stock had been approved for listing on the NYSE American LLC ("NYSE American") stock exchange. On May 6, 2025, our common stock began trading on the NYSE American under our current symbol "TGEN."

Recent Equity Financing

On July 21, 2025, we closed on the sale of an aggregate of 3,985,000 shares of our common stock, \$.001 par value per share ("*common stock*"), including an additional 485,000 shares of common stock to cover over-allotments, at a price to the public of \$5.00 per share (before deduction of underwriting discounts and commissions), in a firm commitment underwritten public offering pursuant to an underwriting agreement, dated July 18, 2025, between the Company and Roth Capital Partners, LLC, as sole underwriter and manager for the offering ("*Offering*"). The net proceeds from the Offering, after deducting underwriting discounts and commissions and offering expenses were approximately \$18,105,100.

We have used and intend to use the net proceeds of the Offering for continued product development, increased sales and marketing activities, sales, marketing, additional human resources, capital expenditures, repayment of related party promissory notes and other costs and expenses we may incur in connection with the anticipated expansion into the data center market, and for general working capital and corporate purposes.

Impact of Utility Power Constraints and Data Center Construction

As more load is added to the utility grid in the form of data centers, EV charging, and other demands for power, customers are facing power constraints. Tecogen believes that these power-constrained customers, in particular data centers and industrial facilities, represent a significant opportunity for growth. The customer need is driven by the ability to expand an existing facility or open a new facility quickly while taking advantage of utility expense savings long term. Our chiller products can reduce the electrical capacity needed on-site by 30% or more. Our InVerde product can provide on-site power generation which allows customers to eliminate long lead times associated with electrical switch gear and bridge any short fall in power from the utility.

Impact of Anti-fossil Fuel Sentiment

In some key markets such as New York City, the regulatory push to eliminate fossil fuels from buildings has impacted cogeneration unit sales. We believe that as regulations take into account scope 2 emissions and products like our hybrid chiller that can choose the cleanest fuel source will have a significant advantage in decarbonization efforts. The political environment following the 2024 elections in the United States has had a material impact on anti-fossil fuel sentiment and the regulatory environment that is more favorable to our business. We have also diversified our sales activities to reduce our reliance on markets like New York City.

Impact of Geopolitical Tensions

We have no operations or customers in Russia, the Ukraine, or in the Middle East, including Iran. The higher energy prices for natural gas as a result of these conflicts may affect the performance of our Energy Production Segment and the cost differential between grid generated energy and natural gas sourced energy using our cogeneration equipment. However, we have also seen higher electricity prices as much of the electricity production in the United

States is generated from fossil fuels. If electricity prices continue to rise, the economic savings generated by our products are likely to increase. In addition to the direct result of changes in natural gas and electricity prices, the war in Ukraine and the conflicts in the Middle East, including the conflict in Iran, may result in higher cybersecurity risks, increased or ongoing supply chain challenges, and volatility related to the trading prices of commodities.

Impact of Tariffs

The majority of our vendors are domestic. Although we have some exposure to Chinese and European suppliers, we do not anticipate any increases in tariffs to materially affect our operations. On July 23, 2026, President Trump imposed a broad tariff on countries around the world and the European Union, replacing expiring 10.0% global tariffs with new tariffs of 10-12.5% on imported commodities. We do not anticipate that these tariff increases will materially affect our operations.

Risk Factors

Investing in our securities involves a high degree of risk. Prior to deciding to invest in our securities, you should carefully consider the specific factors discussed under the heading “*Risk Factors*” in this prospectus and any prospectus supplement, together with all the other information contained in or incorporated by reference in this prospectus or prospectus supplement. You should also see the risk factors discussed under the heading “*Risk Factors*” under Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2025, and Part II of our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2026, and June 30, 2026, each as amended or supplemented or superseded from time to time by other reports we file with the SEC in the future, which are incorporated by reference in this prospectus and any prospectus supplement. The risks and uncertainties we have described are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our operations. The occurrence of any of these known or unknown risks might cause you to lose all or part of your investment in the securities offered.

Corporate Information

We were incorporated in the State of Delaware on September 15, 2000. Our principal executive offices are located at, and our mailing address is, 76 Treble Cove Road, Building 1, North Billerica, Massachusetts 01862. Our main telephone number is (781) 466-6400. Our corporate website address is: www.tecogen.com. The information contained on, or that can be accessed through, our website is not a part of this prospectus and should not be relied upon with respect to this offering.

THE OFFERING

We are registering for resale by the selling stockholders or their transferees up to 4,507,603 shares of our common stock.

Common stock offered by selling stockholders Up to 4,507,603 shares

Common stock outstanding as of August 28, 2026 30,187,822 shares

Market for our common stock Our shares of common stock are listed on the NYSE American LLC under the symbol “TGEN.” The last reported sale price of our shares on August 28, 2026, was \$3.11.

Use of proceeds The proceeds from the sale of the shares offered by this prospectus will be received directly by the selling stockholders. No proceeds will be received by us from the sale of the shares offered hereby. *See “Use of Proceeds.”*

Risk factors Investing in our shares of common stock involves a high degree of risk. *See “Risk Factors,”* below, and in the reports and other documents that are incorporated herein by reference for a discussion of the factors you should consider carefully before investing in our shares.

Lock-up Agreements The trustee for The Hatsopoulos 2012 Family Trust, and the George N. Hatsopoulos GST non-exempt QTIP Marital Trust has entered into a lock up agreement with respect to our shares held by such trusts for a period of 182 calendar days after the date the registration statement registering the shares for reoffer and resale by the selling stockholders (of which this prospectus forms a part) is declared effective by the SEC.

USE OF PROCEEDS

The proceeds from the sale of the shares will be received directly by the selling stockholders for their own accounts. No proceeds will be received by us from the sale of the shares offered hereby.

DESCRIPTION OF OUR CAPITAL STOCK

The following description of our capital stock is based upon, and qualified in its entirety by reference to, our Amended and Restated Certificate of Incorporation (our "certificate of incorporation"), our Amended and Restated By-laws (our "bylaws"), and applicable provisions of Delaware General Corporations Law ("DGCL"). You should read our certificate of incorporation, amendments to the foregoing, and our bylaws for a more detailed description of our securities.

Authorized Capital Stock Our authorized capital stock consists of 100,000,000 shares of common stock, \$.001 par value per share ("*common stock*"), and 10,000,000 shares of preferred stock, \$.001 par value per share ("*preferred stock*").

Common Stock

General. We are authorized to issue up to 100,000,000 shares of our common stock. As of August 28, 2026, 30,187,822 shares of our common stock were issued and outstanding. All of the issued and outstanding shares of common stock were fully paid and non-assessable.

Voting Rights. Each holder of common stock is entitled to one non-cumulative vote for each share held on all matters to be voted upon by stockholders.

Dividends. The holders of common stock, after any preferences of holders of any preferred stock, are entitled to receive dividends when and if declared by our board out of legally available funds. We anticipate that, for the foreseeable future, we will retain earnings, if any, to finance the operations of our businesses. The payment of dividends in the future will depend upon, among other things, our capital requirements and our operating and financial condition.

Liquidation and Dissolution. If we are liquidated or dissolved, holders of our common stock will be entitled to share in our assets available for distribution to stockholders in proportion to the amount of common stock they own. The amount available for common stockholders is calculated after payment of liabilities. Holders of any preferred stock may receive a preferential share of our assets before the holders of the common stock receive any assets.

Other Rights. Holders of the common stock have no right to:

- convert their shares into any other security
- have the shares redeemed,
- or purchase additional shares to maintain their proportionate ownership interest.

Holders of shares of our common stock are not required to make additional capital contributions.

We have never declared or paid a cash dividend on our common stock and do not anticipate paying cash dividends on our common stock in the foreseeable future. Payment of future cash dividends, if any, will be at the discretion of our board and will depend on our financial condition, results of operations, contractual restrictions and covenants included under our bank or other indebtedness, capital requirements, business prospects and other factors that our board considers relevant.

Preferred Stock We are authorized to issue up to 10,000,000 shares of preferred stock. As of the date of this prospectus, no shares of preferred stock were issued, outstanding or designated.

Subject to limitations prescribed by law, our board is authorized at any time to:

- issue one or more series of preferred stock
- determine the designations for any series of preferred stock,

- and determine the number of shares in any series.

Our board is also authorized to determine, for each series of preferred stock:

- the title and stated value of the preferred stock
- the dividend rate
- the dividend payment date or dates
- whether dividends on that series of preferred stock will be cumulative and, if so, from which date
- any conversion provisions applicable to that series of preferred stock
- the liquidation preference per share of that series of preferred stock, if any
- any redemption or sinking fund provisions applicable to that series of preferred stock
- the voting rights of that series of preferred stock, if any, and
- the terms of any other preferences or special rights applicable to that series of preferred stock, including the right to designate a member of our board.

Options

As of June 30, 2026, an aggregate of 2,451,609 options to purchase our common stock were issued and outstanding pursuant to our 2006 Stock Incentive Plan and our 2022 Stock Incentive Plan. The weighted average exercise price of such options was \$2.23 per share and 1,458,650 of such options are fully vested and exercisable.

Future Issuances of Preferred Stock

New issuances of shares of preferred stock with voting rights can affect the voting rights of the holders of outstanding shares of preferred stock and common stock by increasing the number of outstanding shares having voting rights and by the creation of class or series voting rights. Furthermore, additional issuances of shares of preferred stock with conversion rights can have the effect of increasing the number of shares of common stock outstanding up to the amount of common stock authorized by the certificate of incorporation and while providing flexibility in connection with possible acquisitions and other corporate purposes, could in some circumstances have the effect of delaying or preventing a change in control of Tecogen or otherwise adversely affecting the rights of holders of outstanding shares of preferred stock and common stock. To the extent permitted by our certificate of incorporation, a series of preferred stock may have preferences over the common stock (and other series of preferred stock) with respect to dividends and liquidation rights.

The foregoing description of our capital stock is based upon, and qualified in its entirety by reference to, our certificate of incorporation, our bylaws and applicable provisions of Delaware General Corporations Law ("DGCL"). You should read our certificate of incorporation and our bylaws for a more detailed description of our securities.

Delaware Anti-Takeover Law

We are subject to Section 203 of the DGCL, an anti-takeover law. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years following the date the person became an interested stockholder, unless (with certain exceptions) the "business combination" or the transaction in which the person became an "interested stockholder" is approved in a prescribed manner. Generally, a "business combination" includes a merger, asset, or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. Generally, an "interested stockholder" is a person who, together with affiliates and associates, owns (or within three years prior to the determination of interested

stockholder status, did own) 15% or more of the corporation's voting stock. The existence of this provision would be expected to have an anti-takeover effect with respect to transactions not approved in advance by the board, including discouraging takeover attempts that might result in a premium over the market price for the shares of common stock held by stockholders.

Our Certificate of Incorporation and Bylaws

Provisions of our certificate of incorporation and bylaws may delay or discourage transactions involving an actual or potential change of control or change in our management, including transactions in which stockholders might otherwise receive a premium for their shares, or transactions that our stockholders might otherwise deem to be in their best interests. Therefore, these provisions could adversely affect the trading price of our common stock.

Stockholder Nomination of Directors and Proposals. Our bylaws provide that a stockholder must notify us in writing of any stockholder nomination of a director or proposal for other business not less than 90 days and not more than 120 days prior to the first anniversary of the date of the preceding year's annual meeting; provided that if the date of the annual meeting is advanced by more than 20 days or delayed by more than 60 days from such anniversary date, to be timely, notice of a stockholder proposal to nominate a director must be delivered not later than the close of business on the 120th day prior to the date of such meeting or later than the 90th day prior to such annual meeting or the tenth day following the day on which notice of such annual meeting was mailed or public announcement of the date of such annual meeting is first made, whichever occurs first. The complete proxy access provision for director nominations is set forth in Section 1.10 of our bylaws. The complete proxy access provision for other stockholder proposals is set forth in Section 1.11 of our bylaws.

Removal of Directors by Stockholders. Our directors may only be removed for cause and then only upon the affirmative vote of the holders of at least two-thirds of the votes of all stockholders entitled to vote in an election of directors.

"Blank Check" Preferred Stock. Our board is authorized, without further action by our stockholders, to issue up to 10,000,000 shares of "blank check" preferred stock in one or more series possessing such specific terms, including dividend rates, conversion rights, conversion prices, voting rights, redemption prices, maturity dates and other special rights, preferences, qualifications, limitations, and restrictions thereof, as shall be determined in the resolution or resolutions providing for the issue of such preferred stock adopted by our board. The issuance of preferred stock could impede the completion of a merger, tender offer or other takeover attempt.

Annual and Special Meetings of Our Stockholders. Annual meetings of our stockholders are held on the date designated in accordance with our bylaws. Written notice must be mailed to each stockholder entitled to vote not less than ten nor more than 60 days before the date of the meeting. The presence in person or by proxy of the holders of record of a majority of our issued and outstanding shares entitled to vote at such meeting constitutes a quorum for the transaction of business at meetings of the stockholders, unless or except to the extent that the presence of a larger number may be required by our certificate of incorporation or DGCL. Special meetings of the stockholders may only be called by the board, the chairperson of the board or our chief executive officer. Except as may be otherwise provided by applicable law, our certificate of incorporation or our bylaws, all matters shall be decided by a majority of the votes cast by stockholders entitled to vote thereon at a duly held meeting of stockholders at which a quorum is present. Except as may be otherwise provided by our certificate of incorporation, a nominee shall be elected to the board by a plurality of votes cast by stockholders entitled to vote on the election of directors.

We have no plans or proposals to adopt any other provision or enter into any arrangements that may have a material anti-takeover consequence.

Authorized but Unissued Shares Our authorized but unissued shares of common stock and preferred stock are available for future issuance without stockholder approval and may be utilized for a variety of corporate purposes, including future public offerings to raise additional capital, corporate acquisitions and employee benefit plans, subject to any requirement or limitation under the rules of any stock exchange or over the counter market on which our shares are then listed or quoted. The existence of authorized but unissued and unreserved common stock and preferred stock could render more difficult or discourage an attempt to obtain control of our Company by means of a proxy contest, tender offer, merger or otherwise.

Transfer Agent and Registrar

Our transfer agent and registrar for our common stock is Vstock Transfer LLC, 18 Lafayette Place, Woodmere, New York 11598; telephone: 212-828-8436.

Stock Exchange Listing Our common stock became listed on the NYSE American under the symbol “TGEN.”

Dividend Policy We have never declared or paid cash dividends on our common stock. We intend to retain future earnings and do not expect to pay dividends in the future.

SELLING STOCKHOLDERS

We have filed a registration statement, of which this prospectus forms a part, to permit the selling stockholders or their respective transferees to re-offer and re-sell to the public up to 4,507,603 shares of our common stock. The selling stockholder may sell all, some, or none of the shares common stock in this offering. See “*Plan of Distribution.*”

The following table sets forth, based on information provided to us by the selling stockholder or as known to us, (i) the name of the selling stockholder, (ii) the number of shares and percentage of shares owned beneficially by each selling stockholder as of August 20, 2026, (iii) the number of shares which may be offered pursuant to this prospectus, and (iv) the number of shares and percentage of shares to be owned by each selling stockholder after this offering. Except as set forth below, the selling stockholders have not held any position or office or had any other material relationship with us or any of our affiliates within the previous three years other than as a result of ownership of our common stock. Because the selling stockholders may offer all, some or none of their respective shares of common stock, no definitive estimate as to the number of shares that will be held by any selling stockholder after this offering can be provided.

The selling stockholders have provided information regarding their holdings set forth in the table below. Each selling stockholder named in the table has sole voting and investment power with respect to all common stock shown as beneficially owned by the selling stockholder, except as described therein. A person is considered the beneficial owner of any securities as of a given date that can be acquired within 60 days of such date through the exercise of any option, warrant or right. Under SEC rules, common stock subject to options, warrants or rights which are currently exercisable or exercisable within 60 days are considered outstanding for calculating the ownership percentage of the person holding such options, warrants or rights, but are not considered outstanding for calculating the ownership percentage of any other person.

The “*Number of Shares Owned After Offering*” column assumes the sale of all shares offered. The “*Percent of Common Stock Owned After Offering*” column is based on 30,187,822 shares of common stock outstanding as of August 28, 2026.

We will not receive any proceeds from the resale of the common stock by the selling stockholders.

Name of Selling <u>Stockholder</u>	Number of Shares Beneficially Owned Before <u>Offering (1)</u>	Percent of Common Stock Owned Prior to <u>Offering (1)</u>	Number of Shares Being Offered <u>Hereby</u>	Number of Shares Owned After <u>Offering</u>	Percent of Common Stock Owned After <u>Offering (1)</u>
<u>Directors and Related Parties</u>					
<u>Directors</u>					
Earl R. Lewis, III	1,064,756 (2)	3.5 %	240,256	824,500	2.7 %
<u>Related Parties</u>					
Michael A. Bass, Trustee of The Hatsopoulos 2012 Family Trust	2,250,000	7.5 %	2,250,000	0	0

Michael A. Bass, and Daphne Haatsopoulos, Co-Trustees of The George N. Hatsopoulos GST non-exempt QTIP Marital Trust	1,812,468	6.0 %	1,225,714	586,754	*
Daphne Hatsopoulos, Trustee of the 1994 Hatsopoulos Family Trust f/b/o Marina Hatsopoulos	456,978	1.5 %	334,046	122,932	*
Daphne Hatsopoulos, Trustee of the 1994 Hatsopoulos Family Trust f/b/o Nicho Hatsopoulos	320,179	1.0 %	234,049	86,130	*
Daphne Hatsopoulos	150,440	0.5 %	78,937	71,503	*
Ann Marie Pacheco, Trustee of the John N. Hatsopoulos 1989 Family Trust f/b/o Nia Hatsopoulos Jephson	1,266,155	4.2 %	57,624	1,208,531	4.0 %
Ann Marie Pacheco, Trustee of the John N. Hatsopoulos 1989 Family Trust f/b/o Alexander Hatsopoulos	354,509	1.2 %	57,624	296,885	*
<u>Additional Selling Stockholders</u>					
GGCP, Inc.	23,000	*	23,000	0	0
The Lawlor Family LLC	6,250	*	6,250	0	0
Yiannis Monovoukas	100	*	100	0	0
Total			4,507,603		

(1) Beneficial ownership is determined in accordance with Rule 13d-3 under the Securities Exchange Act and is generally determined by voting power and/or investment power with respect to securities. Unless otherwise noted, all shares of common stock listed above are owned of record by each individual named as beneficial owner and such individual has sole voting and dispositive power with respect to the shares of common stock owned by each of them. Such person or entity's percentage of ownership is determined by assuming that any options or convertible securities held by such person or entity which are exercisable within 60 days from the date hereof have been exercised or converted as the case may be. Except as set forth below, the address of the beneficial owner is c/o Tecogen Inc., 76 Treble Cove Road, Bldg. 1, North Billerica, Massachusetts 01862.

(2) Includes: (a) 1,011,006 shares of common stock held by Mr. Lewis, and (b) 53,750 shares underlying currently exercisable options. Does not include 62,500 shares underlying options that are not currently exercisable.

* Less than one percent.

Shares of common stock covered by this prospectus may be reoffered and resold from time to time through the NYSE American, through brokers or otherwise at prices acceptable to the selling stockholders. To our knowledge, no specific brokers or dealers have been designated by any selling stockholder, nor has any agreement been entered into in respect of brokerage commissions or for the exclusive sale of any shares which may be offered pursuant to this prospectus. Alternatively, the selling stockholder may from time to time offer the shares through underwriters, dealers, or agents, which may receive compensation in the form of underwriting discounts, concessions, or commissions from the selling stockholders and/or the purchasers of the shares for whom they may act as agents. The selling stockholder and any underwriters, dealers, or agents that participate in the distribution of the shares may be deemed “underwriters” under the Securities Act and any profit on the sale of the shares by them and any discounts, commissions, or concessions received by any such underwriters, dealers, or agents may be deemed to be underwriting discounts and commissions under the Securities Act.

Under applicable rules and regulations promulgated under the Securities Exchange Act, any person engaged in a distribution of securities may not simultaneously bid for or purchase securities of the same class for a period commencing on the later of five business days prior to the determination of the offering price or such time as the person becomes a distribution participant. In addition, and without limiting the foregoing, the selling stockholders will be subject to applicable provisions of the Securities Exchange Act and the rules and regulations thereunder, including without limitation Rule 10b-5 and Regulation M, in connection with transactions in the shares during the effectiveness of the registration statement of which this prospectus is a part. All of the foregoing may affect the marketability of the shares.

Lock-up Agreements

Subject to certain limited exceptions, Mr. Michael Bass, as trustee of The Hatsopoulos 2012 Family Trust and The George N. Hatsopoulos GST non-exempt QTIP Marital Trust, has agreed not to offer, sell, contract to sell, lend, pledge, or grant any security interest in or otherwise transfer or dispose of the shares held by such trusts for a period of 182 calendar days after the date the registration statement registering the shares for reoffer and resale by the selling stockholders (of which this prospectus forms a part) is declared effective by the SEC.

PLAN OF DISTRIBUTION

Each of the selling stockholders of our common stock and any of their pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their shares of common stock on the NYSE American or any other stock exchange, market or trading facility on which the shares are then traded or in private transactions. These sales may be at fixed or negotiated prices. A selling stockholder may use any one or more of the following methods when selling shares:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- through trading plans entered into by a selling stockholder pursuant to Rule 10b5-1 under the Securities Exchange Act that are in place at the time of an offering pursuant to this prospectus and any applicable prospectus supplement hereto that provide for periodic sales of their securities on the basis of parameters described in such trading plans;
- through one or more underwritten offerings on a firm commitment or best-efforts basis;
- settlement of short sales entered into after the effective date of the registration statement of which this prospectus is a part;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- a combination of any such methods of sale; or

- any other method permitted pursuant to applicable law.

The selling stockholders may also sell shares under Rule 144 under the Securities Act of, if available, rather than under this prospectus.

The selling stockholders have the sole and absolute discretion not to accept any purchase offer or make any sale of our shares if they deem the purchase price to be unsatisfactory at any particular time. The selling stockholder also may transfer the shares of common stock in other circumstances, in which case the transferees, pledgees or other successors-in-interest will be the selling beneficial owners for purposes of this prospectus. Upon being notified by a selling stockholder that a donee, pledgee, transferee, other successor-in-interest intends to sell our securities, we will, to the extent required, promptly file a supplement to this prospectus to name specifically such person as a selling stockholder.

Broker-dealers engaged by the selling stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling stockholders (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated, but (except as set forth in this prospectus or a supplement to this prospectus) in the case of an agency transaction shall not be in excess of a customary brokerage commission in compliance with Financial Industry Regulatory Authority, Inc. ("*FINRA*") Rule 2121 and, in the case of a principal transaction, a markup or markdown in compliance with such FINRA rule.

In connection with the sale of the common stock or interests therein, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the common stock in the course of hedging the positions they assume. The selling stockholders may also sell shares of the common stock short and deliver these securities to close out their short positions, or loan or pledge the common stock to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The selling stockholders and any broker-dealers or agents that are involved in selling the shares may be deemed to be "underwriters" within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Each selling stockholder has informed us that such stockholder does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the common stock.

Because selling stockholders may be deemed to be "underwriters" within the meaning of the Securities Act, they will be subject to the prospectus delivery requirements of the Securities Act including Rule 172 thereunder. In addition, any securities covered by this prospectus which qualify for sale pursuant to Rule 144 under the Securities Act may be sold under Rule 144 rather than under this prospectus. There is no underwriter or coordinating broker acting in connection with the proposed sale of the resale shares by the selling stockholders.

The resale shares will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the resale shares may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

The underwriters, broker-dealers and agents may engage in transactions with us or a selling stockholder, or perform services for us or the selling stockholder, in the ordinary course of business.

If at the time of any offering made under this prospectus a member of FINRA participating in the offering has a "conflict of interest" as defined in FINRA Rule 5121, or Rule 5121, that offering will be conducted in accordance with the relevant provisions of Rule 5121.

We will make copies of this prospectus available to the selling stockholders and have informed them of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

The selling stockholder may indemnify any agent, broker-dealer or underwriter that participates in transactions involving the sale of the securities against certain liabilities, including liabilities arising under the Securities Act.

Under applicable rules and regulations under the Securities Exchange Act, any person engaged in the distribution of the resale shares may not simultaneously engage in market making activities with respect to the common stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the selling stockholders will be subject to applicable provisions of the Securities Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of shares of the common stock by the selling stockholders or any other person. We have advised the selling stockholders that the anti-manipulative provisions of Regulation M under the Securities Exchange Act may apply to their sales of the shares offered hereby.

We paid all expenses incident to the registration of the foregoing shares (including registration pursuant to the securities laws of certain states) other than commissions, expenses, reimbursements and discounts of underwriters, dealers or agents, if any.

LEGAL MATTERS

The validity of the issuance of the securities offered hereby will be passed upon for us by Somertons, PLLC, Washington, D.C.

EXPERTS

Our consolidated financial statements for the years ended December 31, 2025, and 2024, included in our Annual Report on Form 10-K for the year ended December 31, 2025, and incorporated by reference in this prospectus, have been so incorporated in reliance on the report of Wolf & Company, P.C., independent registered public accountants, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-3 under the Securities Act with respect to the securities offered hereby. This prospectus, which is a part of the registration statement, does not contain all the information included in the registration statement and the exhibits and schedules thereto. The registration statement, including the exhibits to it, contains additional relevant information about us. The rules and regulations of the SEC allow us to omit some information included in the registration statement from this prospectus. For further information with respect to us and the securities offered hereby, reference is made to the registration statement and the exhibits and schedules filed therewith.

You may read and copy the registration statement, as well as our reports, proxy statements, and other information, at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the Public Reference Room. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. The SEC's Internet site can be found at <http://www.sec.gov>. You can also obtain copies of materials we file with the SEC from our website found at www.tecogen.com. Information on our website does not constitute a part of, nor is it incorporated in any way, into this prospectus and should not be relied upon in connection with making an investment decision.

INCORPORATION OF DOCUMENTS BY REFERENCE

This prospectus is part of the registration statement, but the registration statement includes and incorporates by reference additional information and exhibits. The SEC permits us to “incorporate by reference” into this prospectus information we file with the SEC in other documents. This means we can disclose important information to you by referring you to other documents which contain that information. The information we incorporate by reference is part of this prospectus. Information contained in this prospectus and information we file with the SEC in the future and that we incorporate by reference in this prospectus automatically updates and supersedes previously filed information.

We incorporate by reference the documents listed below and any future filings we make after the date of the initial filing of the registration statement of which this prospectus and any prospectus supplement is a part with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act until the offering of the securities covered by this prospectus is completed or terminated:

- Our Annual Report on Form 10-K for the year ended December 31, 2025, filed with the SEC on March 19, 2026
- Our Quarterly Report on Form 10-Q for the quarter ended March 31, 2026, filed with the SEC on May 13, 2026
- Our Quarterly Report on Form 10-Q for the quarter ended June 30, 2026, filed with the SEC on August 13, 2026
- Our Current Report on Form 8-K filed with the SEC on April 8, 2026
- Our Current Report on Form 8-K filed with the SEC on June 5, 2026
- Our Current Report on Form 8-K filed with the SEC on July 1, 2026
- Our Current Report on Form 8-K filed with the SEC on August 31, 2026
- Our definitive Proxy Statement on Schedule 14A for our 2026 Annual Meeting of Stockholders, filed with the SEC on April 21, 2026
- Description of our securities incorporated herein by reference to Exhibit 4.4 to our Annual Report on Form 10-K for the year ended December 31, 2019, filed with the SEC on March 12, 2020.

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

You may request a copy of these documents, at no cost, by writing to or telephoning: Secretary, Tecogen Inc., 76 Treble Cove Road, Building 1, North Billerica, Massachusetts 01862, or by telephone at: 781.466.6400.

DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION

Our certificate of incorporation provides that we will indemnify our officers and directors in accordance with Delaware General Corporation Law. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers and controlling persons pursuant to the foregoing provision, or otherwise, we have been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is unenforceable. In the event that a claim for indemnification against such liabilities is asserted by one of our directors, officers or controlling person in connection with the securities being registered herein, we will, unless, in the opinion of our legal counsel, the matter has been settled by controlling precedent, submit the

question of whether such indemnification is against public policy to a court of appropriate jurisdiction. We will then be governed by the court's decision.

You may rely only on the information contained in this prospectus. We have not authorized anyone to provide information different from that contained in this prospectus. Neither the delivery of this prospectus nor the sale of common stock means that information contained in this prospectus is correct after the date of this prospectus. This prospectus is not an offer to buy these shares of common stock in any circumstances under which the offer or solicitation would be unlawful.



TECOGEN INC.

Up to 4,507,603 shares by the selling stockholders

PROSPECTUS

September 3, 2026
