

PROSPECTUS

Filed Pursuant to Rule 424(b)(4)
Registration No. 333-288740



TECOGEN INC.

3,500,000 shares of our common stock

We are offering 3,500,000 shares of our common stock, \$.001 par value per share (*"common stock"*), at a public offering price of \$5.00 per share.

The offering is being underwritten on a firm commitment basis. We have granted the underwriters an option for up to 45 days from the date of this prospectus to purchase an additional 485,000 shares of our common stock at the public offering price less the underwriting discounts and commissions.

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 July 17, 2025, was \$5.78 per share.

You should read this entire prospectus, together with additional information described under *"Additional Information,"* carefully before you invest in any of our securities.

We are a smaller reporting company under Rule 405 of Regulation S-K under the Securities Act of 1933, as amended (*"Securities Act"*), and, as such, have elected to comply with certain scaled or reduced public company disclosure requirements for this prospectus and the documents incorporated herein by reference.

	Per Share		Total
Public offering price	\$	5.00	\$ 17,500,000
Underwriting Discounts and Commissions (1)	\$	0.35	\$ 1,225,000
Proceeds, before expenses, to us	\$	4.65	\$ 16,275,000

(1) In addition, we have agreed to reimburse the underwriters for certain expenses. See *"Underwriting"* for a description of the compensation payable to the underwriters.

Investing in our shares of common stock involves a high degree of risk. See *"Risk Factors"* contained herein for more information on these risks. You should review that section of this prospectus for a discussion of matters that investors in our shares should carefully consider before purchasing our shares.

Neither the Securities and Exchange Commission (*"SEC"*) nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The underwriters expect to deliver the shares of common stock against payment in New York, New York, on or about July 21, 2025.

Roth Capital Partners

The date of this prospectus is July 18, 2025.

TABLE OF CONTENTS

Cautionary Note Regarding Forward-Looking Statements	4
Industry and Market Data	5
Prospectus Summary	6
The Offering	15
Risk Factors	17
Use of Proceeds	21
Dividend Policy	21
Capitalization	22
Dilution	23
Executive Officer and Director Compensation	24
Certain Relationships and Related Transactions	35
Description of Securities We Are Offering	37
Description of Our Capital Stock	38
Underwriting	41
Certain United States Federal Income Tax Considerations	48
Legal Matters	51
Experts	52
Additional Information	52
Incorporation of Documents by Reference	52
Disclosure of Commission Position on Indemnification for Securities Act Liabilities	53

This prospectus is a part of a Registration Statement on Form S-1 that we filed with the SEC under the Securities Act which includes exhibits that provide more information regarding the matters discussed in this prospectus. This prospectus provides you with a general description of us and the shares we are offering. Also, we incorporate by reference into this prospectus certain documents and other information we have filed with the SEC. You should carefully read this prospectus, as well as additional information described under “*Additional Information*” and “*Incorporation by Documents by Reference*,” before deciding to invest in our securities.

We have not authorized anyone to provide you with any information or to make any representations other than as contained in this prospectus. We neither take any responsibility for, nor can provide any assurance about, the reliability of, any information that others may give you. You should not assume that the information contained in this prospectus is accurate as of any date other than the date on the cover of this prospectus. Our business, financial condition, results of operations, future growth prospects and other information in this prospectus may have changed since that date.

This prospectus is not an offer to sell, and it is not a solicitation of an offer to buy, securities in any jurisdiction in which the offer or sale is not permitted. The distribution of this prospectus and the offer or sale of the securities offered hereby in certain jurisdictions is restricted by law. This prospectus may not be used for, or in connection with, and does not constitute, any offer to, or solicitation by, anyone in any jurisdiction or under any circumstance in which such an offer or solicitation is not authorized or is unlawful. Recipients must not distribute this prospectus into jurisdictions where such distribution would be unlawful.

For investors outside the United States, we are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where offers and sales are permitted. 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 yourself about, and observe any restrictions relating to, this offering and the distribution of this prospectus outside the United States.

In this prospectus, unless the context otherwise requires, references to “*Tecogen*,” “*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 contains forward-looking statements within the meaning of Section 27A of the Securities Act, Section 21E of the Securities Exchange Act of 1934, as amended (*"Securities Exchange Act"*), and the Private Securities Litigation Reform Act of 1995 and other federal securities laws that involve a number of risks and uncertainties. Forward-looking statements generally can be identified by the use of forward-looking terminology such as *"believe," "expect," "anticipate," "intend," "plan," "estimate," "project," "target," "potential," "will," "should," "seek," "could," "likely," "may," "pro forma," "anticipate," "continue,"* or other variations thereof (including their use in the negative), or by discussions of strategies, plans or intentions. All statements, other than statements of historical fact included in, or incorporated by reference into, this prospectus regarding our strategy, future operations, future financial position, future revenues, projected costs, prospects and plans and objectives of management are forward-looking statements.

In addition, such forward-looking statements are necessarily dependent upon assumptions and estimates that may prove to be incorrect. Although we believe that the assumptions and estimates reflected in such forward-looking statements are reasonable, we cannot guarantee that our plans, intentions or expectations will be achieved. The information contained in this prospectus, including the discussions of important risk factors that could cause such differences, including risks relating to this offering and ownership of our securities described in *"Risk Factors"* below, and the risk factors more fully described in our Annual Report on Form 10-K for the year ended December 31, 2024 and in our Quarterly Report on Form 10-Q for the quarter ended March 31, 2025, including the following:

- our operating history is characterized by losses;
- we may need to raise additional financing if we experience a period of significant growth or if cash generated from our operations is insufficient to fund our continued operations;
- our products involve a lengthy sales cycle and we may not appropriately anticipate sales levels, impairing our operations;
- 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;
- 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; 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.

The cautionary statements made in this prospectus are intended to be applicable to all related forward-looking statements wherever they appear in this prospectus or in any document incorporated herein by reference. Except as required by law, we assume no obligations to update such forward-looking statements or to update the reasons why actual results could differ materially from those anticipated in such forward-looking statements.

INDUSTRY AND MARKET DATA

This prospectus and the documents incorporated herein 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 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 judgments 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. Because market behavior, preferences and trends are subject to change, prospective investors should be aware that market and industry information in this prospectus or incorporated herein 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 to the contrary, we are responsible for all disclosures in this prospectus.

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 including all documents incorporated herein by reference, carefully, especially the "Risk Factors" contained in or incorporated by reference into this prospectus and under similar headings in the other documents that are incorporated by reference into this prospectus, including our Annual Report on Form 10-K for the year ended December 31, 2024, our Quarterly Report on Form 10-Q for the quarter ended March 31, 2025, and our other SEC filings, as well as our consolidated financial statements and related notes and other information incorporated by reference into this prospectus 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 design, manufacture, market, and maintain high efficiency, ultra-clean cogeneration products including natural gas engine driven combined heat and power, air conditioning systems, and water heaters for residential, commercial, recreational and industrial use. 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.

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
- Refrigeration 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. At the end of 2024, 6,350MW of new data center capacity was in construction. See *CBRE North America Data Center Trends H2 2024*. 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 Blackwell architecture is 1.2KW versus 0.7KW for the H100 Tensor core architecture.

We believe 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 between 18 and 22 Tecogen DTx chillers. An electric chiller plant of a similar size would require approximately 6MW of power allocation (electric chiller full load 0.6kW/Refrigeration ton). This could represent up to \$10 million in lost revenue to a data center based on current rental rates for data centers (national average of \$184.06/KW/month based upon the CBRE North American Data Center Trends H2 2024). 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.

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.

On February 28, 2025, to effectively begin the marketing of our product solutions to co-location data centers, we signed a global partnership agreement with Vertiv Corporation ("*Vertiv*") for the sale and distribution of our products for data center cooling applications in the U.S. and abroad. See "*Recent Developments – Vertiv Sales and Marketing Agreement*," below. 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, including through our partnership with Vertiv, it may represent a significant revenue growth opportunity for us. Management estimates that a single AI co-location data center may use 20 or more of our DTx chillers and that a single project could be equal to our average historical annual product volume.

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 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 commercial product lines include:

- 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 - gas engine-driven chillers that provide air conditioning and hot water
- Tecofrost® gas engine-driven refrigeration compressors that circulate refrigerant and provide hot water as a byproduct, and
- Ultera® emissions control technology

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 greenhouse gas (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 U.S. gas pipeline infrastructure.

Our natural gas-powered cogeneration systems 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.

All of our products are standardized, modular, CHP products that reduce energy costs, carbon emissions, and dependence on the electric grid. Our products allow customers to produce power on-site in parallel with the electric grid or stand alone when no utility grid is available via inverter-based "black-start" capability. Because our CHP systems also produce clean, usable heat energy, they provide economic advantages to customers who can benefit from the use of hot water, chilled water, air conditioning and heating.

Our products are designed as compact modular units that are intended to be installed in multiples when utilized in larger CHP plants. The majority of our CHP modules are installed in multi-unit sites with applications ranging up to 12 units. This approach has significant advantages over utilizing single larger units, allowing building placement in constrained urban settings and redundancy to mitigate service outages. Redundancy is particularly relevant in regions where the electric utility has formulated tariff structures that include high "peak demand" charges. Such tariffs are common in many areas of the country. Because these tariffs are assessed based on customers' peak monthly demand charge over a very short interval, typically only 15 minutes, a brief service outage for a system comprised of a single unit can create a high demand charge and therefore may be highly detrimental to the monthly savings of the system. Multiple unit sites reduce the likelihood of a full system outage that would result in high demand charges.

Our CHP technology uses low-cost mass-produced engines which we modify to run on natural gas. In 2009, in response to the changing regulatory requirements for stationary engines, our research team developed an economically feasible process for removing air pollutants from the engine exhaust. This technology's U.S. and

foreign patents were granted beginning in October 2013. Additional domestic and foreign patents have been granted. Branded Ultera®, the ultra-clean emissions technology repositions our engine driven products in the marketplace, making them comparable environmentally with other technologies such as fuel cells, but at a much lower cost and greater efficiency. Because of this breakthrough design for emission control, multiple Tecogen CHP modules fitted with the patented Ultera control technology have been permitted to the current regulatory limits in the Los Angeles area. In 2018, a group of natural gas engine-generators upfitted with the Ultera system were successfully permitted in the same Los Angeles region to unrestricted operation, the first natural gas engines to do so without operating time limits or other exemption. These engines were permitted to levels matching the California Air Resources Board ("CARB") 2007 emissions requirements, the same emissions standard used to certify fuel cells, and the same emissions levels as a state-of-the-art central power plant. We now offer our Ultera emissions control technology as an option for all of our products or as a stand-alone application for the retrofitting of other rich-burn spark-ignited reciprocating internal combustion engines such as the engine-generators described above.

Our CHP products are sold directly to customers by our in-house marketing team, and by established sales agents and representatives. Although we may from time to time have one or more customers who represent more than 10% of our product revenue for a given year, we are not dependent on the recurrence of revenue from those customers. Our product revenue is such that customers may make a large purchase once and may not ever make a purchase again because our equipment may remain in operation for 30 or more years. Therefore, our product revenue model is not dependent on recurring sales transactions from the same customer. Our service revenue, on the other hand, does lend itself to recurring revenue from particular customers. Currently, we do not have any service revenue customers who makes up more than 10% of our total revenues on an annual basis.

Our cogeneration, heat pump, and chiller modules are built to order and revenue is recognized upon shipment. The lead time to build and deliver a unit depends on its customized configuration and is approximately 12 to 14 weeks for a chiller and 6 to 8 weeks for a cogeneration or heat pump from the execution of a purchase order.

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 that 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 CHPInsight. The CHPInsight 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 our CHP 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 revenue stream 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 our 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 by ensuring machinery consistently operates at peak performance and is available to deliver maximum potential value for customers. 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

Our wholly owned subsidiary, ADGE, distributes, owns and operates clean, on-site energy systems that produce electricity, hot water, heat, and cooling. ADGE owns the equipment that it installs at customers' facilities and sells the energy produced by these systems to customers on a long-term contractual basis. ADGE utilizes energy equipment supplied by Tecogen and other cogeneration manufacturers. Our cogeneration systems produce electricity from an internal combustion engine driving a generator, while the heat from the engine and exhaust is recovered and typically used to produce heat and hot water for use on-site. ADGE also distributes and operates 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 exceed \$0.12 per kW hour, or kWh, which is 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.

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 below, we recently entered into an agreement with Vertiv relating to the sale of our DTx chillers for data center cooling applications. We granted Vertiv an exclusive right to sell our DTx chillers outside the United States and a non-exclusive right to market and sell our DTx chillers within the United States. Also, we have agreed to grant Vertiv the exclusive right to sell our DTx chillers for data center cooling applications in the United States if Vertiv achieves and maintains agreed sales levels of DTx chillers. See *"Recent Developments - Vertiv Sales and Marketing Agreement - Data Center Cooling Market,"* below.

Markets and Customers

Cogeneration or CHP harnesses waste energy from power generation processes and puts it to work for other uses on-site. Buildings and facilities that need both electricity and hot water or air conditioning and dehumidification are prime candidates for our products. These large residential buildings, hospitals, nursing homes, industrial facilities, ice rinks, etc. using CHP boosts the energy conversion efficiency to nearly 90%, a better than two-fold improvement over the average efficiency of a fossil fuel plant because the waste heat is utilized.

Generating power at the point of consumption rather than through central power 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 CHP were applied on a large scale, global fuel usage would be significantly curtailed and the utility grid made more resilient.

Our CHP products address the inherent efficiency limitations of central power plants by siting generation close to the loads being served. This allows customers with energy-intensive buildings or processes to reduce energy costs and operate with a lower carbon footprint. Furthermore, with technology we have introduced, including our 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 U.S.

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 extra charges during times of peak usage, commonly called "demand" charges. In these cases, a 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. The national electric grids of many developed countries are already challenged to keep up with existing power demand. In addition, transmission and distribution networks operate near capacity in a majority of urban areas. Decentralizing power generation by installing equipment at customer sites 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.

Recent Developments

Vertiv Sales and Marketing Agreement - Data Center Cooling Market

On February 28, 2025, we entered into a Sales and Marketing Agreement with Vertiv relating to sales of Tecogen DTx chillers for data center cooling applications ("*Vertiv Agreement*"). The Vertiv Agreement has a term of two years and provides that Vertiv will establish a budget for marketing activities and use commercially reasonable efforts to sell our DTx chillers for cooling applications in data centers. The Vertiv Agreement also provides the basis for negotiating a definitive supply agreement between us and Vertiv. We have agreed to provide Vertiv with reasonable discounts for purchases of significant volumes of our chillers, and Vertiv has 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 Vertiv Agreement 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 DTx chillers 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 of DTx chillers.

Assumption of Aegis Energy Services Maintenance Agreements

On March 15, 2023, we entered into an agreement ("*Assumption Agreement*") with Aegis Energy Services, LLC ("*Aegis*") pursuant to which Aegis agreed to assign to us and we agreed to assume certain Aegis maintenance agreements, we agreed to purchase certain assets, and related matters ("*Acquisition*"). On April 1, 2023, the Acquisition closed. Under the Assumption Agreement, we agreed to acquire from Aegis and assume Aegis' rights and obligations arising on or after April 1, 2023, under maintenance agreements pursuant to which Aegis provided maintenance services for approximately 200 cogeneration systems, and acquired certain vehicles and inventory used by Aegis in connection with the performance of such maintenance services, and, following closing hired eight (8) Aegis employees to provide services with respect to such maintenance agreements. At closing, we acquired eight (8) Aegis vehicles for \$170,000 in cash. Also, we issued credits against outstanding accounts receivable due from Aegis in the amount of \$300,000 for the acquisition of inventory that Aegis maintained to provide maintenance services.

On February 1, 2024, Tecogen and Aegis amended the Assumption Agreement to add eighteen (18) additional maintenance service agreements ("*First Amendment*"). The First Amendment includes an undertaking by Aegis to use commercially reasonable efforts to support and assist our execution of maintenance service agreements for an additional thirty-six (36) cogeneration units sold to customers by Aegis.

On May 1, 2024, Tecogen and Aegis further amended the Assumption Agreement to add thirty-one (31) additional maintenance contracts ("*Second Amendment*"). The Second Amendment includes an undertaking by Aegis to use commercially reasonable efforts to support and assist our execution of maintenance service agreements for an additional forty-eight (48) cogeneration units sold to customers by Aegis.

Factory Facilities Relocation

In April 2024, we relocated our manufacturing operations and corporate offices from 45 First Avenue, Waltham, Massachusetts, to 76 Treble Cove Road, Building 1, North Billerica, Massachusetts. As a result of the relocation, product revenues were impacted during the second and third quarters of 2024. The factory relocation also necessitated construction activities to install equipment test cells and comply with local regulations. We resumed manufacturing operations during the latter-half of the third quarter of 2024.

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, 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 U.S. may have a material impact on anti-fossil fuel sentiment and the regulatory environment that we believe may be favorable to our business.

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, increasingly, customers are encountering power constraints. Tecogen believes that these power constrained customers, in particular data centers and industrial facilities, represent a significant growth opportunity. Customer needs are driven by their ability to expand an existing facility or open a new facility quickly while taking advantage of long-term utility expense savings. 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 shortfall in power from the utility.

Residual Impacts of Covid-19 Pandemic

Supply chains were adversely impacted during Covid, resulting in significant delays or lack of availability of critical components such as engines. This has continued to have long term impact on our product and service margins. The direct impact has resulted in certain costs increasing faster than inflation. The indirect impact is from increased engine related costs in the service segment as replacements were deferred or overhauled components were used due to lack of parts. We have instituted a service price increase and have also been making engineering improvements to increase service intervals aiming to increase gross margins.

Tecochill Hybrid-Drive Air-Cooled Chiller Development

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 roof top 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. 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. In March 2024, the US Patent and Trademark Office granted us patent 11,936,327: "Hybrid Power System With Electric Generator and Auxiliary Power Source."

Impact of Geopolitical Tensions

We have no operations or customers in Russia, the Ukraine, or in the Middle East. The higher energy prices for natural gas as a result of war and conflict 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 the 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 conflict in the Middle East 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.

Related Party Notes

On October 9, 2023, we entered into note subscription agreements with each of John N. Hatsopoulos and Earl R. Lewis, III, each a director and stockholder of Tecogen, pursuant to which Mr. Hatsopoulos agreed to provide financing to us of up to \$1,000,000, and Mr. Lewis agreed to provide financing to us of \$500,000, and potentially, an additional \$500,000 at his discretion.

On October 10, 2023, we borrowed \$500,000 from Mr. Hatsopoulos and issued to him a one-year promissory note with interest accruing at 5.12% per annum. On July 23, 2024, we borrowed an additional \$500,000 from Mr. Hatsopoulos, and issued to him a further one-year promissory note with interest accruing at 5.06% per annum. On March 21, 2024, Mr. Hatsopoulos amended the terms of the promissory note, dated October 10, 2023, extending the maturity date by one-year, making the maturity date October 10, 2025.

On September 18, 2024, we borrowed \$500,000 from Mr. Lewis and issued to him a one-year promissory note with interest accruing at 4.57% per annum (“*Lewis Note*”).

On January 14, 2025, we agreed to permit Mr. Lewis to either receive repayment of the *Lewis Note* in cash or, at his discretion, convert the balance of the promissory note into shares of our common stock. In the event of such a conversion, the number of shares we will be required to issue will be determined by dividing the balance due under the promissory note by the average closing price per share of our shares during the thirty-day period prior to the date of conversion.

On February 18, 2025, we amended Mr. Hatsopoulos’ promissory notes to extend the maturity dates for both promissory notes to July 31, 2026. We also agreed to permit Mr. Hatsopoulos to either receive repayment of his notes in cash, or at his discretion, convert the balance(s) due of one or both of the promissory notes into shares of our common stock. In the event of such a conversion, the number of shares we will be required to issue will be determined by dividing the balance(s) due under the promissory note(s) by the average closing price per share of our shares during the thirty-day period prior to the date of conversion.

On May 1, 2025, Mr. Lewis converted the balance due under the *Lewis Note* of \$514,148.22, including accrued interest, into shares of our common stock at a price of \$2.14 per share, the average closing price per share during the preceding thirty trading days and issued to Mr. Lewis an aggregate of 240,256 shares of our common stock whereupon the *Lewis Note* was cancelled.

Risks 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 together with all the other information contained in or incorporated by reference in this prospectus. 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, 2024, and Part II of our Quarterly Report on Form 10-Q for the quarter ended March 31, 2025.

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

Issuer	Tecogen Inc.
Common stock Offered	3,500,000 shares of our common stock (or 3,985,000 shares if the underwriters exercise in full their option to purchase additional shares of common stock)
Offering price per share	\$5.00 per share
Common stock outstanding before the offering	25,571,490 shares
Common stock outstanding after the offering	29,071,490 shares (or 29,556,490 shares if the underwriters exercise in full their overallotment option to purchase additional shares from us)
Option to purchase additional shares of our common stock	We have granted the underwriters an over-allotment option (“option” or “over-allotment option”) for a period of up to 45 days from the date of this prospectus to purchase up to 485,000 additional shares of our common stock
Market for our common stock; trading symbol	Our shares of common stock are listed in the NYSE American under the symbol “TGEN.” The closing sale price of our shares on July 17, 2025, was \$5.78.
Use of proceeds	We estimate that the net proceeds to us from the shares of common stock sold by us to the underwriters in this offering, after deducting underwriting discounts and commissions and estimated offering expenses payable by us, will be approximately \$15,905,500 or \$18,160,750 if the underwriter exercises its overallotment option in full. Our management will retain broad discretion regarding the allocation and use of the net proceeds. Currently, we intend to use a portion of the net proceeds of this offering for continued product development, increased sales and marketing activities, sales, marketing, additional human resources, capital expenditures, and other costs and expenses we may incur in connection with our anticipated expansion into the data center market, and for other general working capital and corporate purposes. See “Use of Proceeds.”
Risk factors	Investing in our shares of common stock involves a high degree of risk. See “Risk Factors,” for a discussion of the factors you should consider carefully before investing in our shares.
Dividend policy	We have no present plans to declare dividends and intend to retain our earnings to continue to fund our operations and grow our business.
Lock-up	We have agreed, subject to certain exceptions, for a period of 90 days after the date of this prospectus not to offer, issue, sell, or otherwise dispose of any of our shares without the underwriters’ prior written consent. Also, our directors and executive officers have agreed to enter into customary lock-up agreements with respect to our shares for a period of 90 days after the date of this prospectus.
Material US Federal Income Tax Considerations	For a discussion of material U.S. federal income tax consequences that may be relevant to holders of our common stock, see “Certain United States Federal Income Tax Considerations.”
Transfer agent	VStock Transfer, LLC

Except as otherwise indicated, all information in this prospectus related to the number of shares of our common stock to be outstanding immediately after this offering is based on 24,985,261 shares of our common stock outstanding as of March 31, 2025.

The number of shares outstanding as of March 31, 2025, excludes:

- 2,747,962 shares of common stock issuable upon exercise of stock options outstanding as of March 31, 2025, at a weighted average exercise price of \$1.16 per share
- 4,028,168 shares reserved for future issuance pursuant to our stock incentive plans as of March 31, 2025

Unless otherwise indicated, all information in this prospectus reflects or assumes the following:

- no exercise of outstanding stock options, described above; and
- no exercise by the underwriters of their over-allotment option to purchase up to an additional 485,000 shares in this offering

RISK FACTORS

Investing in our shares involves a high degree of risk and dilution. You should carefully consider the risks, uncertainties and other factors described in our Annual Report on Form 10-K for the year ended December 31, 2024, and our Quarterly Report on Form 10-Q for the quarter ended March 31, 2025, that we have filed with the SEC and all other information contained or incorporated by reference in this prospectus, including our consolidated financial statements and the related notes, before investing in our common stock. If any of these risks materialize, our business, financial condition or results of operations could be materially harmed. In that case, the trading price of our common stock could decline, and you may lose some or all your investment. The risks and uncertainties we describe are not the only ones facing us. Additional risks not presently known to us, or that we currently deem immaterial, may also impair our business operations. If any of these risks were to occur, our business, financial condition, or results of operations would likely suffer. In that event, the trading price of our common stock could decline, and you could lose all or part of your investment.

Risks Related to this Offering

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

We will have broad discretion in the application of the net proceeds from this offering, including for any of the purposes described under “Use of Proceeds” below, as well as existing cash and cash equivalents. Accordingly, our stockholders will not have the opportunity as part of their investment decision to assess whether the net proceeds are being used appropriately.

Currently, we intend to use the net proceeds from this offering for continued product development, increased sales and marketing activity, sales, marketing, additional human resources, capital expenditures, and other costs and expenses we may incur in connection with our anticipated expansion into the data center market, and for general corporate and working capital purposes. We may also use a portion of any net proceeds for acquisitions of, or strategic investments in, complementary businesses, products, services, or technologies, although we do not currently have any agreements or commitments to enter into any material acquisitions or investments. 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 currently intended uses. You will be relying on the judgment of our management with regard to the use of these net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the net proceeds are being used appropriately. The failure by our management to apply these funds effectively could compromise our ability to pursue our growth strategies and we may not be able to yield a significant return, if any, on our investment of these net proceeds which may result in financial losses that could have a material adverse effect on our business, and cause the price of our securities to decline. Pending the application of these funds, we may invest the net proceeds from this offering in a manner that does not produce income or that loses value.

If you purchase shares of our common stock in this offering, you will incur immediate and substantial dilution in the book value of your shares.

The public offering price per share of our common stock will be substantially higher than the net tangible book value per share of our common stock outstanding before this offering. Based upon the public offering price of \$5.00 per share, you will experience immediate dilution of \$4.27 per share, representing the difference between our as adjusted net tangible book value per share as of March 31, 2025, after giving effect to this offering, based on the sale by us of 3,500,000 shares in this offering at a public offering price of \$5.00 per share (assuming no exercise of the underwriters’ overallotment option). Further, the future exercise of any outstanding options to purchase shares of our common stock will cause you to experience additional dilution. See “Dilution.”

Resales of our common stock in the public market during this offering by our stockholders may cause the market price of our common stock to fall.

Sales of a substantial number of shares of our common stock could occur at any time. The issuance of new shares of our common stock could result in resales of our common stock by our current stockholders concerned about the

potential ownership dilution of their holdings. In turn, these resales could have the effect of depressing the trading price for our common stock.

In addition, the shares of our common stock reserved for future issuance pursuant to our 2006 Stock Incentive Plan, as amended and restated (“2006 Plan”), and our 2022 Stock Incentive Plan (“2022 Plan”) will become eligible for sale in the public market once those shares are issued, subject to vesting and the expiration of lock-up periods that may be applicable. An aggregate of 1,078,168 shares of our common stock are reserved for future issuance under our 2006 Plan and 2,950,000 shares of our common stock are reserved for future issuance under our 2022 Plan.

Future issuances or sales, or the potential for future issuances or sales, of our common stock may cause the trading price of our securities to decline and could impair our ability to raise capital through subsequent equity offerings.

We reserve the right to make future offers and sales, either public or private, of our securities including shares of common stock or preferred stock, or securities convertible into, or exercisable for, our common stock at prices differing from the offering price per share of our common stock offered hereby. There can be no assurance that we will be able to successfully complete any such future offerings; however, in the event that any such future sales of securities are effected, your pro rata ownership interest may be reduced to the extent of any such issuances and, to the extent any such sales are effected at consideration which is less than that paid by you, you may experience dilution. Moreover, to the extent we issue shares of restricted stock, options or warrants to purchase our common stock in the future and those shares of restricted stock, options or warrants vest and are exercised, our stockholders may experience further dilution. Holders of shares of our common stock have no preemptive rights that entitle such holders to purchase their pro rata share of any offering of shares of any class or series and, therefore, such sales or offerings could result in increased dilution to our stockholders.

Shares to be issued in future equity offerings could cause the trading price of our common stock to decline and could have an adverse effect on our earnings per share. In addition, future sales of our common stock or other securities in the public markets, or the perception that these sales may occur, could cause the trading price of our common stock to decline, and could materially impair our ability to raise capital through the sale of additional securities.

The trading price of our common stock could decline due to sales, or the announcements of proposed sales, of a large number of shares of common stock in the market, including sales of common stock by our large stockholders, or the perception that these sales could occur. These sales or the perception that these sales could occur could also depress the market price of our common stock and impair our ability to raise capital through the sale of additional equity or equity related securities or make it more difficult or impossible for us to sell equity or equity related securities in the future at a time and price that we deem appropriate. We cannot predict the effect that future sales of common stock or other equity-related securities would have on the market price of our common stock.

Based on the sale of 3,500,000 shares of our common stock in this offering (assuming no exercise of the underwriters’ over-allotment option), we will be selling a number of shares of common stock which represents approximately 13.69% of the number of shares of common stock that we currently have outstanding. Resales of substantial amounts of the shares of our common stock issued in this offering, together with shares of our common stock issuable upon conversion or exercise of currently outstanding derivative securities, could have a negative effect on our stock price.

This offering may cause the trading price of our common stock to decrease.

The price per share, together with the number of shares of common stock we propose to issue and ultimately will issue if this offering is completed, may result in an immediate decrease in the market price of our common stock. This decrease may continue after the completion of this offering.

A possible “short squeeze” due to a sudden increase in demand for our common stock that largely exceeds supply may lead to further price volatility in our common stock.

Investors may purchase our common stock to hedge existing exposure in our common stock or to speculate on the price of our common stock. Speculation on the price of our common stock may involve long and short exposures. To the extent aggregate short exposure exceeds the number of shares of our common stock available for purchase in the open market, investors with short exposure may have to pay a premium to purchase our common stock for delivery to lenders of our common stock. Those purchases may, in turn, dramatically increase the price of our common stock until investors with short exposure are able to purchase additional shares of common stock to cover their short position. This is often referred to as a “short squeeze.” A short squeeze could lead to volatile price movements in our common stock that are not directly correlated to the performance or prospects of our company and once investors purchase the shares of common stock necessary to cover their short position the price of our common stock may decline.

Risks Related to Ownership of Our Securities

As of the end of the period covered by our Quarterly Report on Form 10-Q for the quarter ended March 31, 2025, our principal executive officer and our principal financial officer concluded there is a material weakness in our disclosure controls and procedures and our internal control over financial reporting. If we are unable to remediate these material weaknesses, if management identifies additional material weaknesses in the future or if we otherwise fail to maintain effective internal controls over financial reporting, we may not be able to accurately or timely report our financial position or results of operations, which may adversely affect our business and stock price or cause our access to the capital markets to be impaired.

Our disclosure controls and procedures are designed to provide reasonable assurance that the control system’s objectives will be met. Our management, including our Chief Executive Officer and Chief Financial Officer, after evaluating the effectiveness of our disclosure controls and procedures, has concluded that our disclosure controls and procedures were not effective due to a material weakness with respect to a small number of individuals dealing with general controls over information technology.

We are committed to remediating the material weakness identified in internal controls over financial reporting and have begun the process to remediate this material weakness. Our efforts will focus on instituting mitigating controls to address segregation of duties; hiring of additional staff; implementing additional controls to address system access deficiencies; implementing additional controls over business operations; establishing independent review and verification procedures for our vendor and customer master files; enhancing the documentation to support review occurrences and approval procedures; and, commencing regular periodic reviews of our internal controls over financial reporting with our Board of Directors and Audit Committee to address the inadequate risk oversight function and institute procedures to evaluate and report on risks to financial reporting, including the documentation and completion of a comprehensive risk assessment to identify all potential risk areas and evaluate the adequacy of our controls to mitigate these risks.

In addition, on March 11, 2025, we filed a Current Report on Form 8-K to report, among other things, certain changes in the level of compensation for Mr. Panora, our President and COO, and the resignation of Mr. Gehret, our Vice President of Operations. Although Mr. Gehret remained with us as an employee until February 28, 2025, and then as a consultant until his duties were transferred to Mr. Panora, we subsequently determined we did not report Mr. Gehret’s resignation timely in accordance with the requirements of Form 8-K.

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.

If we identify further deficiencies in our internal control over financial reporting in the future or if we are unable to comply with the demands that will be placed upon us as a public company, including the requirements of Section 404 of the Sarbanes-Oxley Act, in a timely manner, we may be unable to accurately report our financial results, or report them within the timeframes required by the SEC. We also could become subject to sanctions or investigations by the SEC or other regulatory authorities. In addition, if we are unable to assert that our internal control over financial reporting is effective, investors may lose confidence in the accuracy and completeness of our financial reports, we may face restricted access to the capital markets, and our stock price may be adversely affected.

Our current controls and any new controls that we develop may also become inadequate because of changes in our business, and weaknesses in our disclosure controls and internal control over financial reporting may be discovered in the future. Any failure to develop or maintain effective controls or any difficulties encountered in their implementation or improvement could cause us to fail to meet our reporting obligations, result in a restatement of our financial statements for prior periods, undermine investor confidence in us, and adversely affect the trading price of our common stock.

USE OF PROCEEDS

We estimate that the net proceeds from the sale of 3,500,000 shares of our common stock in this offering will be approximately \$15,905,000 (or \$18,160,750 if the underwriters exercise their overallotment option to purchase 485,000 additional shares in full), after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

As of March 31, 2025, we had cash and cash equivalents of approximately \$4.1 million. We expect to use the net proceeds from this offering for continued product development, increased sales and marketing activities, sales, marketing, additional human resources, capital expenditures, and other costs and expenses we may incur in connection with our anticipated expansion into the data center market, and for general working capital and corporate purposes.

The amounts we have set forth above are estimates developed by our management of the allocation of proceeds of the offering based upon our current plans and prevailing economic and industry conditions. Although we do not currently contemplate material changes in the proposed uses of proceeds set forth above, to the extent that our management finds that adjustment thereto is required, the amounts shown may be adjusted among the uses indicated above. Our proposed uses of net proceeds are subject to changes in general, economic and competitive conditions, timing and management discretion, each of which may change the amount of proceeds expended for the purposes intended. The proposed application of proceeds is also subject to changes in market conditions and our financial condition in general. Changes in general, economic, competitive and market conditions and our financial condition would include, without limitation, the occurrence of a national economic slowdown or recession, a significant change in the demand for our products and/or services, changes in the competitive environment in which we operate, and changes in general market or industry conditions. Accordingly, our management team will have broad discretion in using the remaining net proceeds from this offering.

We may require additional financing in the future to operate and/or further expand our business and to repay outstanding indebtedness. We are not able at this time to predict the amount or potential source of such additional funds and we have no current commitment to obtain such funds, other than as set forth herein. There can be no assurance that additional financing on acceptable terms will be available to us when needed, if at all. Pending use of the net proceeds from the offering, we may make temporary investments in short-term, high-grade, interest-bearing instruments.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock. We intend to retain future earnings, if any, to finance the operation and expansion of our businesses and do not anticipate paying any cash dividends in the foreseeable future. Investors should not purchase our common stock with the expectation of receiving cash dividends. Any future determination related to our dividend policy will be made at the discretion of our board of directors after considering our financial condition, results of operations, capital requirements, business prospects and other factors our board of directors deems relevant, and subject to the restrictions contained in any future financing instruments or under Delaware corporations' law.

CAPITALIZATION

The following table sets forth our capitalization as of March 31, 2025, on an actual basis and on a *pro forma as adjusted basis* after giving effect to the completion of this offering and offer and sale of the shares therein at a public offering price of \$5.00 per share (assuming no exercise of the underwriters' over-allotment option to purchase 485,000 additional shares) and to reflect the application of the proceeds of the offering after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

You should read this table in conjunction with our unaudited consolidated financial statements and related notes for the quarter ended March 31, 2025, and 2024, included in our Quarterly Report on Form 10-Q for the quarter ended March 31, 2025, and the information included under "Use of Proceeds" and "Description of Our Capital Stock" in this prospectus.

	As of March 31, 2025	
	Actual	Pro Forma as Adjusted ⁽¹⁾
Assets:		
Current Assets	\$ 20,614,340	\$ 36,519,840
Other Assets	\$ 9,111,488	\$ 9,111,488
Total Assets	<u>\$ 29,725,828</u>	<u>\$ 45,631,328</u>
Liabilities:		
Current Liabilities	\$ 14,946,791	\$ 14,946,791
Other Liabilities	\$ 5,267,544	5,267,544
Total Liabilities	<u>\$ 20,214,335</u>	<u>\$ 20,214,335</u>
Shareholders' Equity		
Common Stock, \$.001 par value per share, 24,985,261 shares issued and outstanding	\$ 24,985	\$ 28,485
Additional paid-in capital	\$ 57,924,587	\$ 73,826,587
Accumulated Deficit	\$ (48,299,816)	\$ (48,299,816)
Noncontrolling interest	\$ (138,263)	\$ (138,263)
Total Shareholders' Equity	<u>\$ 9,511,493</u>	<u>\$ 25,416,993</u>
Total Liabilities and Shareholders' Equity	<u>\$ 29,725,828</u>	<u>\$ 45,631,328</u>

- (1) Reflects sale of common stock in this offering (but excluding shares that may be sold upon exercise of the underwriters' over-allotment option), at a public offering price of \$5.00 per share and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Additional paid in capital reflects receipt of the net proceeds we expect to receive in the offering, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us. We estimate such proceeds will be approximately \$15,905,500.

DILUTION

If you purchase our shares of common stock in this offering, your interest will be diluted to the extent of the difference between the assumed public offering price per share of our common stock in this offering and the pro forma as adjusted net tangible book value per share of our common stock immediately after this offering.

The net tangible book value of our common stock as of March 31, 2025, was approximately \$4,743,572, or approximately \$0.19 per share of common stock based upon 24,985,261 shares outstanding. Net tangible book value per share is equal to our total tangible assets, less our total liabilities, divided by the total number of shares of common stock outstanding as of March 31, 2025.

After giving effect to the sale of 3,500,000 shares of common stock in this offering at a public offering price of \$5.00 per share and after deducting underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of March 31, 2025, would have been approximately \$20,649,072, or approximately \$0.73 per share of common stock. This represents an immediate increase in as adjusted net tangible book value of \$0.54 per share to our existing stockholders and an immediate dilution in net tangible book value of \$4.27 per share to investors participating in this offering.

Dilution per share to new investors is determined by subtracting pro forma as adjusted net tangible book value per share after this offering from the assumed public offering price per share paid by new investors. The following table illustrates this per share dilution to new investors:

Offering price per share	\$	5.00
Net tangible book value per share as of March 31, 2025	\$	0.19
Increase in net tangible book value per share attributable to this offering	\$	0.54
As adjusted net tangible book value per share after giving effect to this offering	\$	0.73
Dilution in net tangible book value per share to investors in this offering	\$	4.27

The foregoing table and discussion above are based on 24,985,761 shares of our common stock outstanding as March 31, 2025, and excludes:

- 2,747,962 shares of our common stock issuable upon exercise of stock options outstanding as of March 31, 2025
- 4,028,168 shares reserved for future issuance pursuant to our equity incentive plans

To the extent that any options are exercised, new options are granted under our 2006 Stock Incentive Plan or our 2022 Stock Incentive Plan or we otherwise issue additional shares of common stock or securities convertible into or exercisable for our shares of common stock in the future (including shares issued in connection with one or more acquisitions we may make), there may be further dilution to new investors. To the extent we raise additional capital through sales of our shares of common stock or convertible securities, there may be further dilution.

In addition, we may choose to raise additional capital due to market conditions or strategic considerations, even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity, warrants to purchase our shares, or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

EXECUTIVE OFFICER AND DIRECTOR COMPENSATION

The following information amends and supersedes the information contained in our proxy statement for our 2025 annual meeting of stockholders.

Summary Compensation Table

The following Table sets forth the compensation earned or awarded to our Chief Executive Officer (“CEO”) and Chief Financial Officer, President and Chief Operating Officer, and other named executive officers (“named executive officers”) during each of the two fiscal years ended December 31, 2024:

Name and principal position	Year	Salary (\$)	Bonus (\$)	Stock awards (\$)	Option awards (\$) ⁽¹⁾	All other compensation (\$) ^{(2) (10)}	Total (\$)
<i><u>Named Executive Officers</u></i>							
Abinand Rangesh	2024	201,010	—	—	—	2,484	203,494
Chief Executive and Financial Officer (Principal Executive and Financial Officer) and Treasurer ⁽³⁾	2023	167,500	—	—	56,700	2,001	226,201
Robert A. Panora	2024	164,800	—	—	—	2,471	167,271
Chief Operating Officer and President ⁽⁴⁾	2023	161,477	—	—	—	1,959	163,436
John K. Whiting, IV	2024	171,685	—	—	—	2,301	173,986
General Counsel and Secretary ⁽⁵⁾	2023	163,800	—	—	15,188	1,981	180,969
Stephen Lafaille	2024	173,607	—	—	—	2,322	175,929
Vice President of Business Development ⁽⁶⁾	2023	171,672	—	—	—	1,722	173,394
Roger P. Deschenes	2024	151,886	—	—	—	1,346	153,232
Chief Accounting Officer ⁽⁷⁾	2023	142,425	—	—	15,188	1,363	158,976
Joseph E. Gehret	2024	167,885	—	—	—	2,363	169,248
Vice President of Operations ⁽⁸⁾	2023	160,500	—	—	30,375	1,959	192,834
<i><u>Former Principal Executive Officer</u></i>							
Benjamin M. Locke	2024	—	—	—	—	11,667	11,667
Former Chief Executive Officer (Former Principal Executive Officer) ⁽⁹⁾	2023	48,181	—	—	—	119,163	157,344

⁽¹⁾ The amounts in the “Option Awards” column reflect the aggregate grant date fair value of the awards computed in accordance with FASB ASC Topic 718. The assumptions used by us with respect to the valuation of stock and option awards are set forth in “Note 14 - Stockholders' Equity” to our Consolidated Financial Statements.

⁽²⁾ Premiums paid by us for disability, group term life insurance and 401k Match for the years ended December 31, 2024, and 2023 were as follows:

Named Executive Officer	Year Ended December 31, 2024			Year Ended December 31, 2023		
	Insurance Premiums (\$)	401k Match (\$)	Total (\$)	Insurance Premiums (\$)	401k Match (\$)	Total (\$)
Abinand Rangesh	1,484	1,000	2,484	1,501	500	2,001
Robert A. Panora	1,471	1,000	2,471	1,459	500	1,959
John K. Whiting, IV	1,301	1,000	2,301	1,481	500	1,981
Stephen Lafaille	1,322	1,000	2,322	1,222	500	1,722
Roger P. Deschenes	1,346	—	1,346	1,363	—	1,363
Joseph E. Gehret	1,363	1,000	2,363	1,459	500	1,959

⁽³⁾ On January 30, 2023 Dr. Rangesh was appointed Chief Executive Officer. Dr. Rangesh was appointed Chief Financial Officer and Treasurer on June 16, 2021.

⁽⁴⁾ Mr. Panora transitioned to a part-time role on January 11, 2020. Effective March 6, 2025, Mr. Panora transitioned to full-time.

⁽⁵⁾ Mr. Whiting has provided services on a part-time basis since he joined us in 2018 and provided approximately 30 hours of service per week in both 2023 and 2024.

⁽⁶⁾ Mr. Lafaille was promoted to Vice President of Business Development in 2022. Includes base salary and sales commissions.

⁽⁷⁾ Mr. Deschenes has provided services on a part-time basis since he joined us in 2021 and provided approximately 30 hours of service per week in both 2023 and 2024.

⁽⁸⁾ Mr. Gehret resigned as our Vice President of Operations on February 14, 2025.

⁽⁹⁾ Mr. Locke resigned as our Chief Executive Officer on January 30, 2023.

⁽¹⁰⁾ Mr. Locke was paid \$11,667 and \$119,163 in 2004 and 2003, respectively, under a Consulting Agreement dated January 27, 2023, which agreement expired on January 31, 2024.

See "Employment Contracts and Termination of Employment and Change in Control Arrangements" below for the terms of certain agreements and change-in-control provisions.

Outstanding Equity Awards at December 31, 2024

The following table provides information regarding outstanding equity awards held by each of our named executive officers as of December 31, 2024.

Name		Option Awards				Stock Awards	
		Number of securities underlying unexercised options (#) exercisable	Equity incentive awards; number of securities underlying unexercised options (#) unexercisable	Option exercise price (\$)	Option expiration date	Number of shares of stock that have not vested (#)	Market value of shares of stock that have not vested (\$)
Abinand Rangesh	(1)	10,000	—	3.91	12/12/2026	—	—
	(2)	25,000	25,000	0.71	7/9/2030	—	—
	(3)	70,000	—	1.10	1/21/2032	—	—
	(4)	70,000	70,000	0.88	9/20/2033	—	—
Robert A. Panora	(5)	12,723	—	0.71	4/29/2026	—	—
	(6)	100,000	100,000	0.71	7/9/2030	—	—
	(7)	52,500	—	1.10	1/21/2032	—	—
John K. Whiting, IV	(8)	10,000	—	2.50	1/16/2028	—	—
	(9)	50,000	—	3.80	12/11/2028	—	—
	(10)	50,000	—	3.76	6/11/2029	—	—
	(11)	100,000	100,000	0.71	7/9/2030	—	—
	(12)	52,500	—	1.10	1/21/2032	—	—
	(13)	18,750	18,750	0.88	9/20/2033	—	—
Stephen Lafaille	(14)	6,362	—	3.90	4/29/2026	—	—
	(15)	25,000	25,000	0.70	7/9/2030	—	—
	(16)	52,500	—	1.10	1/21/2032	—	—
Roger P. Deschenes	(17)	25,000	25,000	0.71	9/21/2030	—	—
	(18)	52,500	—	1.10	1/21/2032	—	—
	(19)	18,750	18,750	0.88	9/20/2033	—	—
Joseph E. Gehret	(20)	25,000	25,000	0.71	7/9/2030	—	—
	(21)	52,500	—	1.10	1/21/2032	—	—
	(22)	37,500	37,500	0.88	9/20/2033	—	—

⁽¹⁾ Includes stock option award granted December 12, 2016, in connection with Dr. Rangesh's service with us, with 25% of the options vesting on December 12, 2017, and then an additional 25% of the options vesting on each of the subsequent three anniversaries, subject to Dr. Rangesh's continued employment and subject to acceleration of vesting upon a change in control.

⁽²⁾ Includes stock option award granted on July 9, 2020 in connection with Dr. Rangesh's service with us, that provides that 50% of the options vest once we achieve Adjusted EBITDA of not less than 2% of revenue for two consecutive quarters and the remaining 50% of the options vest once we have achieved Adjusted EBITDA of 3% for four consecutive quarters, subject to Dr. Rangesh's continued employment and subject to acceleration of vesting upon a change in control. The initial performance target was achieved and 50% of the options vested on June 30, 2022.

⁽³⁾ Includes stock option award granted on January 21, 2022, in connection with Dr. Rangesh's service with us, with 50% of the options vesting on January 21, 2023, and then 50% vesting on January 21, 2024, subject to Dr. Rangesh's continued employment and subject to acceleration of vesting upon a change in control.

- ⁽⁴⁾ Includes stock option award granted on September 20, 2023, in connection with Dr. Rangesh's service with us, with 50% of the options vesting on September 20, 2024 and then 50% vesting on September 20, 2025, subject to Dr. Rangesh's continued employment and subject to acceleration of vesting upon a change in control.
- ⁽⁵⁾ Includes stock option award granted on May 12, 2016, to Mr. Panora in connection with the Ilios Merger. Upon completion of the Ilios Merger all option holders of Ilios Inc. received fully vested options of Tecogen according to an exchange ratio, where every 7.86 options of Ilios Inc., were exchanged for 1 fully vested option of Tecogen.
- ⁽⁶⁾ Includes stock option award granted on July 9, 2020 in connection with Mr. Panora's service with us, that provides that 50% of the options vest once we achieve Adjusted EBITDA of not less than 2% of revenue for two consecutive quarters and the remaining 50% of the options vest once we have achieved Adjusted EBITDA of 3% for four consecutive quarters, subject to Mr. Panora's continued employment and subject to acceleration of vesting upon a change in control. The initial performance target was achieved and 50% of the options vested on June 30, 2022.
- ⁽⁷⁾ Includes stock option award granted on January 21, 2022, in connection with Mr. Panora's service with us, with 50% of the options vesting on January 21, 2023, and then 50% vesting on January 21, 2024, subject to Mr. Panora's continued employment and subject to acceleration of vesting upon a change in control.
- ⁽⁸⁾ Includes stock option award granted January 16, 2018, in connection with Mr. Whiting's service with us, with 25% of the options vesting on January 16, 2019, and then an additional 25% of the options vesting on each of the subsequent three anniversaries, subject to Mr. Whiting's continued employment and subject to acceleration of vesting upon a change in control.
- ⁽⁹⁾ Includes stock option award granted December 11, 2018, in connection with Mr. Whiting's service with us, with 25% of the options vesting on December 11, 2019, and then an additional 25% of the options vesting on each of the subsequent three anniversaries, subject to Mr. Whiting's continued employment and subject to acceleration of vesting upon a change in control.
- ⁽¹⁰⁾ Includes stock option award granted June 11, 2019, in connection with Mr. Whiting's service with us, with 25% of the options vesting on June 11, 2020, and then an additional 25% of the options vesting on each of the subsequent three anniversaries, subject to Mr. Whiting's continued employment and subject to acceleration of vesting upon a change in control.
- ⁽¹¹⁾ Includes stock option award granted on July 9, 2020 in connection to Mr. Whiting's service with us, that provides that 50% of the options vest once we achieve Adjusted EBITDA of not less than 2% of revenue for two consecutive quarters and the remaining 50% of the options vest once we have achieved Adjusted EBITDA of 3% for four consecutive quarters, subject to Mr. Whiting's continued employment and subject to acceleration of vesting upon a change in control. The initial performance target was achieved and 50% of the options vested on June 30, 2022.
- ⁽¹²⁾ Includes stock option award granted on January 21, 2022, in connection with Mr. Whiting's service with us, with 50% of the options vesting on January 21, 2023, and then 50% vesting on January 21, 2024, subject to Mr. Whiting's continued employment and subject to acceleration of vesting upon a change in control.
- ⁽¹³⁾ Includes stock option award granted on September 20, 2023, in connection with Mr. Whiting's service with us, with 50% of the options vesting on September 20, 2024, and then 50% vesting on September 20, 2025, subject to Mr. Whiting's continued employment and subject to acceleration of vesting upon a change in control.
- ⁽¹⁴⁾ Includes stock option awarded on April 29, 2016, in connection with Mr. Lafaille's service with us, options vesting in four equal annual installments commencing on April 29, 2017.
- ⁽¹⁵⁾ Includes stock option award granted on July 9, 2020, in connection with Mr. Lafaille's service with us, that provides that 50% of the options vest once we achieve Adjusted EBITDA of not less than 2% of revenue for two consecutive quarters and the remaining 50% of the options vest once we have achieved Adjusted EBITDA of 3% for four consecutive quarters, subject to Mr. Lafaille's continued employment and subject to acceleration of vesting upon a change in control. The initial performance target was achieved and 50% of the options vested on June 30, 2022.
- ⁽¹⁶⁾ Includes stock option award granted on January 21, 2022, in connection with Mr. Lafaille's service with us, with 50% of the options vesting on January 21, 2023, and then 50% vesting on January 21, 2024, subject to Mr. Lafaille's continued employment and subject to acceleration of vesting upon a change in control.
- ⁽¹⁷⁾ Includes stock option award granted on September 20, 2020 in connection with Mr. Deschenes' service with us, that provides that 50% of the options vest once we achieve Adjusted EBITDA of not less than 2% of revenue for two consecutive quarters and the remaining 50% of the options vest once we have achieved Adjusted EBITDA of 3% for four consecutive quarters, subject to Mr. Deschenes' continued employment and subject to acceleration of vesting upon a change in control. The initial performance target was achieved and 50% of the options vested on June 30, 2022.
- ⁽¹⁸⁾ Includes stock option award granted on January 21, 2022, in connection with Mr. Deschenes' service with us, with 50% of the options vesting on January 21, 2023 and then 50% vesting on January 21, 2024, subject to Mr. Deschenes' continued employment and subject to acceleration of vesting upon a change in control.
- ⁽¹⁹⁾ Includes stock option award granted on September 20, 2023 in connection with Mr. Deschenes' service with us, with 50% of the options vesting on September 20, 2024 and then 50% vesting on September 20, 2025, subject to Mr. Deschenes' continued employment and subject to acceleration of vesting upon a change in control.
- ⁽²⁰⁾ Includes stock option award granted on July 9, 2020 in connection with Mr. Gehret's service with us that provides that 50% of the options vest once we have achieved Adjusted EBITDA of not less than 2% of revenue for two consecutive quarters and the remaining 50% of the options vest once we have achieved Adjusted EBITDA of 3% for four consecutive quarters, subject to Mr. Gehret's continued employment and subject to acceleration of vesting upon a change of control. The initial performance target was achieved and 50% of the options vested on June 30, 2022.
- ⁽²¹⁾ Includes stock option award granted on January 21, 2022 in connection with Mr. Gehret's service with us, with 50% of the options vesting on January 21, 2023, and then 50% vesting on January 21, 2024, subject to Mr. Gehret's continued employment and subject to acceleration of vesting upon a change of control.

⁽²²⁾ Includes stock option award granted on September 20, 2023 in connection with Mr. Gehret's service with us, with 50% of the options vesting on September 20, 2024 and then 50% vesting on September 20, 2025, subject to Mr. Gehret's continued employment and subject to acceleration of vesting upon a change of control.

Executive Officer Target Bonus Plan

On March 1, 2024, our Compensation Committee adopted a performance bonus plan for our CEO and certain members of senior management consisting of a one-time payment contingent on our achieving two consecutive quarters of positive Adjusted EBITDA exceeding 2%, inclusive of all bonus accruals. The bonus amounts would be \$50,000 for our CEO, and \$35,000 for each of our Chief Operating Officer, Chief Accounting Officer, Vice President of Operations, and General Counsel.

Director Compensation

In March 2022, our board adopted a policy for compensation of our non-employee directors pursuant to which each director is awarded options to purchase shares of our common stock consisting of options to purchase 100,000 shares awarded in connection with such director's initial appointment as a member of our board, and options to purchase 25,000 shares of our common stock upon the director's reelection or reappointment to serve an additional term as a director. Such options vest in equal installments on the first, second, third, and fourth anniversaries of the date of grant. We reimburse all of our directors for reasonable travel and other expenses incurred in attending Board and committee meetings. Any director who is also one of our employees receives no additional compensation for serving as a director.

The following table provides information for the year ended December 31, 2024, regarding all compensation awarded to, earned by, or paid to each person who served as a director for some portion or all of 2024, other than Dr. Ranges, who is not included in the table below as he is an employee and receives no compensation for his services as a director. The compensation received by Mr. Hatsopoulos is described below under the heading "Advisory Agreement," and the compensation received by Dr. Ranges is shown in the "Summary Compensation Table," above.

Name	Fees earned or paid in cash (\$)	Stock Awards (\$)	Options Awards (\$)	Non-equity incentive compensation earnings (\$)	Nonqualified deferred compensation earnings (\$)	All other compensation (\$)	Total (\$)
Angelina M. Galiteva	—	—	8,950	—	—	—	8,950
John N. Hatsopoulos	1	—	—	—	—	—	1
John M. Albertine	—	—	8,950	—	—	—	8,950
Ahmed F. Ghoniem	—	—	8,950	—	—	—	8,950
Susan F. Hirsch	—	—	8,950	—	—	—	8,950
Earl R. Lewis, III	—	—	8,950	—	—	—	8,950

Compensation Committee Interlocks and Insider Participation

During fiscal year 2024, none of our executive officers served as a member of the board or compensation committee, or other committee serving an equivalent function, of any other entity that has one or more of its executive officers serving as a member of our board or Compensation Committee. None of the current members of the Compensation Committee of our board has ever been our employee.

Employment Contracts and Termination of Employment and Change-in-Control Arrangements

Employment Agreements

We have not entered into an employment agreement with any of our Named Executive Officers, however, stock option awards granted under our 2006 Plan and 2022 Plan contain certain change of control provisions that accelerate vesting in the event of certain transactions resulting in a change of control. We have also entered into Change of Control Severance Agreements with Messrs. Panora and Whiting that provide for the payment of one year of salary and other benefits in the event of their termination by us without good cause, or by the employee for good reason, following a change of control.

The stock and option awards that would vest for each Named Executive Officer if a change-in-control were to occur are disclosed under our *Outstanding Equity Awards at Fiscal Year-End Table*. Descriptions of the change-in-control provisions in our stock option awards are set forth below:

Stock Awards: Change-in-Control Definition

For the purposes of our stock awards, change-in-control means (a) the acquisition in a transaction or series of transactions by a person (such term to include anyone deemed a person under Section 13(d)(3) of the Securities Exchange Act), other than our or any of our subsidiaries, or any employee benefit plan or related trust of ours or any of our subsidiaries, of beneficial ownership (within the meaning of Rule 13d-3 promulgated under the Securities Exchange Act) of 50% or more of the combined voting power of our then outstanding voting securities entitled to vote generally in the election of directors or (b) the sale or other disposition of all or substantially all of our assets in one transaction or series of related transactions.

Option Awards Change-in-Control Definition

See “*Stock Incentive Plans - 2006 Stock Incentive Plan, as amended and restated (“2006 Plan”) - Acquisitions and Changes in Control*” and “*-- 2022 Stock Incentive Plan (“2022 Plan”) - Change of Control*,” below.

Advisory Agreement with John Hatsopoulos

On January 3, 2018, we entered into an advisory agreement (“*Advisory Agreement*”) with John N. Hatsopoulos, a member of our board. The Advisory Agreement provides that Mr. Hatsopoulos will resign as a member of the board at our 2018 Annual Meeting of Stockholders or June 30, 2018, whichever comes first. Pursuant to the Advisory Agreement, Mr. Hatsopoulos will remain an advisor to our board and an employee in our Investors Relations Department. He will be paid a salary of \$1.00 annually and receive the same benefits as other similarly situated employees as well as administrative support for the duration of the agreement. Mr. Hatsopoulos was not nominated for election as a director at the June 6, 2018, annual meeting of stockholders, but on February 1, 2019, was reappointed by our board to serve as a director. On July 22, 2019, the Advisory Agreement with Mr. Hatsopoulos was modified to provide that we would continue to provide the employee benefits contemplated by the Advisory Agreement. On July 19, 2023, the Advisory Agreement was extended until March 28, 2026, provided Mr. Hatsopoulos continues to provide the advisory services contemplated by the agreement.

Consulting Agreement with Benjamin Locke

On January 27, 2023, we entered into a consulting agreement with Benjamin Locke, our former Chief Executive Officer who resigned on January 30, 2023. Pursuant to the terms of the agreement, which was effective January 30, 2023, Mr. Locke will continue to support and provide services to us during the transitional period following his resignation for a period of one year from the effective date. Mr. Locke will be compensated for consulting services for the initial three (3) months of the agreement at the rate of \$17,500 per month and will be compensated over the remaining nine (9) months of the term of the agreement at a monthly rate of \$5,833. For a period of up to nine (9) months from the effective date, Mr. Locke will also be reimbursed \$2,870 per month for healthcare insurance benefits until such time that Mr. Locke is no longer a participant in our healthcare insurance benefits. The aggregate payment to Mr. Locke for the duration of the consulting agreement, which expired on January 31, 2024, including

our benefit plan reimbursement, was approximately \$131,000. Mr. Locke is not entitled to any other compensation or benefits under the consulting agreement.

Stock Incentive Plans

2006 Stock Incentive Plan, as amended and restated ("2006 Plan")

Overview. Our board originally adopted our 2006 Stock Incentive Plan on December 22, 2005. The plan was amended and restated by our board on November 1, 2016, and approved by our stockholders on June 29, 2017 (the 2006 Stock Incentive Plan, as so amended and restated, "*2006 Plan*"). The 2006 Plan authorizes the grant or award and issuance of incentive stock options to our officers and directors, and non-qualified stock options, stock awards, and restricted stock to our employees, officers, directors and consultants. As of December 31, 2024, we have granted awards under our 2006 Plan covering 2,730,582 of the 3,838,750 shares authorized for issuance under the 2006 Plan.

Term of Plan. The 2006 Plan expires on January 1, 2026, and no award may be made after that date, however, awards made before that date may extend beyond that date.

Eligible Participants. Eligible participants include our employees, officers, directors and consultants and those of any of our subsidiaries or affiliates.

Shares Reserved for Issuance. We have reserved 3,838,750 shares of our common stock for issuance pursuant to awards under the 2006 Plan. If an award under the 2006 Plan is expires or is cancelled, forfeited, settled in cash or otherwise terminates without being exercised in full, the shares of common stock not acquired pursuant to the award will again become available for issuance under the 2006 Plan.

Adjustments for Stock Splits and Similar Events. The Compensation Committee will make appropriate adjustments in outstanding awards and the number of shares available for issuance under the 2006 Plan, including the individual limitations on awards, to reflect a stock split, reorganization, recapitalization and other similar events.

Administration. Our board has delegated its authority to administer the 2006 Plan to our Compensation Committee. Subject to the provisions of the 2006 Plan, the Compensation Committee has the power to take all actions that it determines to be necessary or appropriate in connection with the administration of the 2006 Plan, including, without limitation:

- determine the directors, officers, employees and others that are eligible to participate in the plan, to which of such participants, if any, awards shall be granted, and the timing of any such awards
- determine the exercise prices of options or purchase prices of stock awards terms and conditions, including the number of shares subject to awards
- determine whether an option should be an incentive stock option or non-qualified stock option
- determine the time or times when or what conditions must be satisfied before each option shall become exercisable and the duration of the exercise period
- determine whether restrictions such as transfer restrictions, repurchase options, and "*drag along*" rights and rights of first refusal are to be imposed on shares subject to options, and
- interpret and the 2006 Plan and prescribe and rescind rules and regulations related to the plan

The Compensation Committee may delegate, in its discretion, to a single officer who is a member of our board all or part of the Compensation Committee's authority and duties with respect to the granting of stock rights to individuals who are not subject to the reporting requirements under Section 16(a) of the Securities Exchange Act.

Acquisitions and Changes in Control

Acquisitions. In the event we are subject to or engage in a merger, consolidation, or other similar event in which outstanding shares are exchanged for cash, securities, or other property of another entity, or the sale or lease of all or substantially all of our assets to another person (an “*Acquisition*”), the Compensation Committee shall provide that the surviving entity of the Acquisition shall assume options granted pursuant to the 2006 Plan or substitute options of the surviving entity on an equitable basis, provide that options become exercisable in full or, if holders of our shares are to receive cash, securities, or other property in the Acquisitions, provide that all outstanding options shall terminate upon consummation of the Acquisition and that each optionee shall receive, in exchange for vested shares under such option, a payment in cash or kind having a market value reasonably determined by the Compensation Committee of the surviving entity.

Change in Control. In the event a change of control that either is not an Acquisition or constitutes an Acquisition but the surviving entity in the Acquisition assumes the company’s outstanding options or substitutes options of the surviving entity equitably, and an employee’s employment is terminated prior to the six month anniversary of the date of the change in control, subject to certain exceptions, then all options that are assumed or substituted options will vest and become exercisable immediately.

For purposes of the 2006 Plan, a “change in control” occurs on the occurrence of:

- an Acquisition after which holders of common stock before the Acquisition do not beneficially own, directly or indirectly, at least 50% of the combined voting power of the then outstanding securities of the surviving entity, or
- a single transaction or series of transactions occur pursuant to which a person, excluding any employee benefit plan sponsored by us prior to such transaction, acquires beneficial ownership, directly or indirectly, of at least 50% of the combined voting power of the then outstanding securities of us or the surviving entity.

2022 Stock Incentive Plan (“2022 Plan”)

Overview. The 2022 Plan authorizes the grant or award and issuance of incentive stock options, non-qualified stock options, restricted stock awards, and common stock to our employees, officers, directors and consultants. The purpose of the 2022 Plan is to promote our interests and our stockholders by providing our employees, directors, officers and consultants with appropriate incentives and rewards to encourage them to enter into and continue in their employment or service with us, to acquire a proprietary interest in our long-term success, and to reward an individual’s performance in fulfilling corporate objectives. The 2022 Plan provides us flexibility going forward by permitting us to compensate and award employees, officers, directors and consultants through the issuance of certain options, restricted stock, and stock awards. As of December 31, 2024, we have granted awards under our 2022 Plan covering 850,000 of the 3,800,000 shares authorized for issuance under the 2022 Plan.

Term of Plan. The 2022 Plan became effective on March 8, 2022, and was approved by our stockholders on June 9, 2022. The 2022 Plan is for a term of ten years and will terminate March 8, 2032, and no award may be made after that date, however, awards made before that date may extend beyond that date.

Eligible Participants. Eligible participants include our employees, officers, directors and consultants and those of any of our subsidiaries or affiliates.

Shares Reserved for Issuance. We have reserved 3,800,000 shares of our common stock for issuance pursuant to awards under the 2022 Plan. If an award under the 2022 Plan is cancelled, expires, forfeited, settled in cash or otherwise terminates without being exercised in full, the shares of common stock not acquired pursuant to the award will again become available for issuance under the 2022 Plan.

Certain Award Limits. The 2022 Plan provides that the maximum aggregate amount of awards that may be granted to a non-employee director in a calendar year shall not exceed \$100,000. The maximum aggregate number of shares for which options may be granted in any calendar year to an individual participant is not to exceed 1.5% of our issued and outstanding shares on December 31 of the calendar year immediately preceding the grant of an award.

Further, the maximum aggregate number of shares for which restricted stock awards and stock awards may be granted in any calendar year to an individual participant is not to exceed 1.5% of our issued and outstanding shares on December 31 of the calendar year immediately preceding the grant of an award.

Adjustments for Stock Splits and Similar Events. The Compensation Committee will make appropriate adjustments in outstanding awards and the number of shares available for issuance under the 2022 Plan, including the individual limitations on awards, to reflect a stock split, reorganization, recapitalization and other similar events.

Administration. Our board has delegated its authority to administer the 2022 Plan to our Compensation Committee. Subject to the provisions of the 2022 Plan, the Compensation Committee has the power to take all actions that it determines to be necessary or appropriate in connection with the administration of this Plan, including, without limitation:

- prescribe, amend, and rescind rules and regulations relating to the 2022 Plan and to define terms not otherwise defined
- determine which persons are eligible to participate, to which of such participants, if any, awards shall be granted, and the timing of any such awards
- grant awards to participants and determine their terms and conditions, including the number of shares subject to awards and the exercise or purchase price of such shares and the circumstances under which awards become exercisable or vested or are forfeited or expire
- establish any performance goals or other conditions applicable to the grant, issuance, exercisability, vesting and/or ability to retain any award
- prescribe and amend the terms of the agreements or other communications evidencing awards made under the 2022 Plan (which need not be identical) and the terms or form of any document or notice required to be delivered to us by participants under the 2022 Plan
- determine the appropriate adjustment, if any, required as a result of any reorganization, reclassification, combination of shares, stock split, reverse stock split, spin-off or dividend, or other changes in the number or kind of outstanding shares or any stock or other securities into which such shares shall have been exchanged
- interpret and construe the 2022 Plan, any rules and regulations under the 2022 Plan and the terms and conditions of any award granted thereunder, and to make exceptions to any such provisions in good faith and for the benefit of the Company, and
- make all other determinations deemed necessary or advisable for the administration of the 2022 Plan

Change of Control. Unless the board expressly provides otherwise prior to a change of control or in an award agreement, in the event of a change of control of our company, all outstanding options under the 2022 Plan vest and become exercisable on the date immediately before the change of control and all restrictions under restricted stock awards and restricted stock rights shall lapse or be deemed satisfied on the date immediately prior to, the change of control.

A change of control is deemed to have occurred upon the occurrence of one of the following events:

- any person or group of persons becomes the beneficial owner of shares of our company to which 50% or more of the total number of votes for the election of directors may be cast;
- as a result of a cash tender offer, exchange offer, merger or other business combination, sale of assets or contested election, persons who were directors immediately prior to the event cease to constitute a majority of the board;

- stockholders approve an agreement providing either that we will cease to be an independent publicly owned corporation or for sale or other disposition of all or substantially all the assets of the Company; or
- a tender offer or exchange offer is made for shares of our common stock (other than one made by us) and shares of common stock are acquired.

Award Types. The 2022 Plan authorizes the grant or award and issuance of incentive stock options, non-qualified stock options, restricted stock, and stock awards.

Stock Option Awards. Incentive stock options and non-qualified stock options may be granted pursuant the 2022 Plan. The Compensation Committee determines whether a stock option award is an incentive stock option or a non-qualified stock option and the terms of each stock option granted under the 2022 Plan, including the number of shares covered by an option, exercise price and means of payment, the vesting and exercisability of the option, and restrictions on transfer and the term. The stock options expire on the earliest of ten years after the date of grant, 60 days after the death or disability of the recipient, immediately upon termination of employment or service other than by death or disability, or on such date as the Compensation Committee determines. The Compensation Committee, in its sole discretion, may change by agreement the post-termination rights of a recipient, including accelerating the date or dates on which the option becomes vested and is exercisable following termination of employment or service, or extending the exercise period. Options granted under the plan may be exercised by delivering cash, a cashless exercise, or by delivering to us the proceeds of shares of our common stock issuable under an option.

Incentive Stock Options. An incentive stock option is an award in the form of a stock option to purchase shares that is intended to comply with the requirements of Section 422 of the Internal Revenue Code of 1986, as amended and the rules and regulations thereunder ("*Code*"). The exercise price of each incentive stock option will not be less than the fair market value of our shares on the date on which the stock option is granted. Notwithstanding the foregoing, if a participant owns stock possessing more than ten percent of the combined voting power of all classes of our stock, the exercise price of such option must be at least 110% of the fair market value of a share of our common stock on the date of grant and the option must expire within a period of not more than five years from the date of grant.

Non-Qualified Stock Option. A non-qualified stock option is an award in the form of a stock option to purchase shares. Non-qualified stock options do not qualify for the special tax treatment accorded to incentive stock options under Section 422 of the Code. The exercise price of each non-qualified stock option will not be less than the fair market value of a share of our common stock on the date on which the stock option is granted.

Restricted Stock and Stock Awards. An award of restricted stock consists of a specified number of shares of our common stock that are subject to restrictions on transfer, conditions of forfeiture, and any other terms and conditions for periods determined by the Compensation Committee. Prior to the termination of the restrictions, a participant may be able to vote and receive dividends on the restricted stock unless the Compensation Committee determines otherwise but may not sell or otherwise transfer the shares.

The Compensation Committee may also make stock awards of common stock without restrictions, except that if the award is in lieu of salary, service fee, cash bonus or other cash compensation, the number of shares covered by an award shall be based on the fair market value of such shares on the date of grant.

The Compensation Committee has discretion to determine the terms of any award of restricted stock, including the number of shares subject to the award, the minimum period over which the award may vest, and the acceleration of any vesting in the event of death, disability or change of control, as discussed above with regard to options.

Award Agreements. Each award under the 2022 Plan that is share based is evidenced by an award agreement setting forth the number of shares subject to the award, the purchase or exercise price, if any, the term of the award, the vesting period, and any performance criteria. The award agreement also sets forth such other material terms and conditions as the Compensation Committee may deem appropriate to the award consistent with the terms of the 2022 Plan.

Transferability. Awards are not transferable or assignable unless provided otherwise by the Compensation Committee with respect to certain specified family-related transfers.

Amendment and Termination. Our board may amend, terminate, or modify the 2022 Plan at any time, without stockholder approval, unless required by the Code, pursuant to Section 16 under the Securities Exchange Act, or by any national securities exchange or system on which our common stock is then listed or reported, or by any regulatory body.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

Except as described below, since the beginning of the last completed fiscal year, we have not been a party to any transaction and there is no currently proposed transaction in which we were or are to be a participant and the amount involved exceeded or will exceed the lesser of \$120,000 or one percent (1%) of the average of our total assets as at the year-end for the last two completed fiscal years and in which any of our directors or director nominees, executive officers or beneficial holders of more than 5% of our capital stock, or any immediate family member of, or person sharing the household with, any of these individuals, had or will have a direct or indirect material interest.

Director Loans

On October 9, 2023, we entered into an agreement with each of Mr. John N. Hatsopoulos, a director and principal stockholder, and Earl R. Lewis, III, a director and stockholder, pursuant to which Mr. Hatsopoulos agreed to provide financing to us of up to \$1 million and Mr. Lewis agreed to provide financing to us of \$500,000, and potentially an additional \$500,000 at his discretion. Under the terms of the agreements, we may determine the amount of the loans at the time of draw down, subject to the conditions in our agreements with each of Mr. Hatsopoulos and Mr. Lewis discussed below. The loans and terms of the loan agreements were unanimously approved by the members of our board.

Hatsopoulos' Loan. Mr. Hatsopoulos has agreed to provide to us loans of up to \$1 million in two separate tranches of \$500,000. Each loan is to be made within ten days of Mr. Hatsopoulos' receipt of notice from us setting out the amount of each such drawdown.

On October 10, 2023, we borrowed \$500,000 from Mr. Hatsopoulos and issued a promissory note with respect thereto. The note, as amended on March 21, 2024, is due and payable two years from the date of issuance and bears interest at the rate of 5.12% per annum on the outstanding principal payable at maturity. Repayment of the note may be made in cash or in shares of our common stock. The principal and interest under the note is required to be repaid in the event of a change of control of the company or upon the occurrence of an event of default under the note, including upon a failure to pay the principal and interest when due, or the commencement of voluntary or involuntary bankruptcy or insolvency proceedings.

On July 23, 2024, we borrowed a further \$500,000 from Mr. John N. Hatsopoulos and issued a promissory note with respect thereto. The note is due and payable one year from the date of issuance and bears interest at the rate of 5.06% per annum on the outstanding principal payable in full at maturity and on the terms and conditions set forth therein and a Note Subscription Agreement dated October 9, 2023, as amended.

On February 18, 2025, we entered into an agreement with Mr. Hatsopoulos to further extend the maturity dates for both promissory notes to July 31, 2026. Also, we agreed to permit Mr. Hatsopoulos to either receive repayment of his notes in cash, or, at his discretion, convert the balances of one or both of the promissory notes into shares of our common stock. In the event of such a conversion, the number of shares we will be required to issue will be determined by dividing the balance(s) due under the promissory note(s) by the average closing price per share of our shares during the thirty-day period prior to the date of conversion.

Lewis' Loan. Mr. Lewis has agreed to provide to us a loan of \$500,000 provided we have previously drawn down and have outstanding loans from Mr. Hatsopoulos of \$1 million dollars. The loan by Mr. Lewis is to be made within ten days of his receipt of notice from us. An additional loan of \$500,000, or \$1 million in the aggregate, may be made available to us on the same terms by Mr. Lewis at his discretion.

On September 18, 2024, we borrowed \$500,000 from Mr. Lewis and issued a promissory note with respect thereto ("*Lewis Note*"). The *Lewis Note* is due and payable one year from the date of issuance and bears interest at the rate of 4.57% per annum due at maturity and on the terms and conditions set forth therein and the Note Subscription Agreement dated October 9, 2023, as amended.

On January 14, 2025, we agreed to permit Mr. Lewis to either receive repayment of his note in cash or, at his discretion, convert the balance of the promissory note into shares of our common stock. In the event of such a conversion, the number of shares we will be required to issue will be determined by dividing the balance due under

the promissory note by the average closing price per share of our shares during the thirty-day period prior to the date of conversion.

On May 1, 2025, Mr. Lewis converted the balance due under the Lewis Note of \$514,148.22, including accrued interest, into shares of our common stock at a price of \$2.14 per share, the average closing price per share during the preceding thirty trading days and issued to Mr. Lewis an aggregate of 240,256 shares of our common stock whereupon the Lewis Note was cancelled.

Certain Loan Provisions. Under the terms of our agreement with each of Messrs. Hatsopoulos and Lewis, each loan draw down is to bear interest on the outstanding principal at the Internal Revenue Service's Applicable Federal Rate to be determined at the time we issue a promissory note in connection with a loan drawdown. The principal amount and accrued interest of each loan is repayable one year from the date of issuance of the applicable promissory note. A note may be prepaid by us at any time. The principal amount of each loan and accrued interest is subject to mandatory prepayment in the event of a change of control of Tecogen. The promissory notes are subject to customary events of default, including upon a failure to pay when due the principal and interest when due, or the commencement of voluntary or involuntary bankruptcy or insolvency proceeding, and are transferable provided the conditions to transfer set forth in the promissory notes are satisfied by the noteholder.

The foregoing summary of the terms of such loans is qualified in its entirety by reference to the Note Subscription and promissory notes filed or incorporated herein by reference as exhibits hereto.

Policy Regarding Related Party Transactions

We have adopted a written policy covering related party transactions. Under the policy, information about transactions involving related persons is required to be reported to and assessed initially by our chief financial officer. Related persons include our directors and executive officers, as well as immediate family members of directors and officers, and beneficial owners of more than five percent (5%) of our common stock. If a determination is made that a related person has a material interest in any transaction involving us, our Audit Committee consisting of independent directors will review, approve or ratify it, and the transaction is required to be disclosed in accordance with SEC rules. If the related person at issue is a director, or a family member of a director, then that director may not participate in those discussions. Under our policy, the following transactions with related persons, among others, are not deemed to create a material direct or indirect interest for a related person: a transaction where the rates or charges are determined by competitive bidding or other similar arm's length processes; the transaction involves services as a bank depository of funds, transfer agent, registrar, trustee under a trust indenture, or similar service; the interest of the related person in the transaction arises solely from the ownership of a class of our equity securities and all holders of that class of equity securities received the same benefit on a pro rata basis; an employment relationship with an executive officer and the related compensation where the compensation is disclosed under SEC rules; and compensation payable to a director that is required to be reported under SEC rules.

DESCRIPTION OF SECURITIES WE ARE OFFERING

We are offering under this prospectus 3,500,000 shares of our common stock, \$.001 par value per share (“*common stock*”), at a public offering price of \$5.00 per share (assuming no exercise of the underwriters’ over-allotment option). The following is a brief description of our shares of common stock.

Common Stock

General. We are authorized to issue up to 100,000,000 shares of our common stock. As of July 14, 2025, 25,571,490 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.

You should refer to our amended and restated certificate of incorporation (“*certificate of incorporation*”) and our amended and restated bylaws (“*bylaws*”) for more information about our shares of common stock.

DESCRIPTION OF OUR CAPITAL STOCK

This following 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 corporation law ("DGCL"). You should read our certificate of incorporation and 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 and 10,000,000 shares of preferred stock, \$.001 par value per share ("preferred stock").

Common Stock

Please see description above under "*Description of Securities We Are Offering.*"

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 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

New issuances of shares of preferred stock with voting rights can affect the voting rights of the holders of outstanding shares of our preferred stock, if any, and common stock by increasing the number of our 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 our certificate of incorporation and can also, in some circumstances, have the effect of delaying or preventing a change in control of Tecogen or otherwise adversely affect 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 our common stock (and other series of preferred stock) with respect to dividends and liquidation rights.

Stock Options

As of the date of this prospectus, we had 2,400,589 options to purchase our common stock outstanding under our stock incentive plans at a weighted average exercise price of \$1.17 per share.

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 ten million (10,000,000) shares of "*blank check*" preferred stock in one or more series possessing such specific terms, including dividend rates, 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

The authorized but unissued shares of common stock and preferred stock are available for future issuance without stockholder approval, subject to any limitations imposed by regulatory authorities, including any national securities exchange or over the counter market on which our shares are then listed or quoted. These additional shares may be used for a variety of corporate finance transactions, acquisitions, and employee benefit plans. The existence of authorized but unissued and unreserved common stock and preferred stock could make it more difficult or discourage an attempt to obtain control of us 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

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

Stock Exchange Listing

On April 30, 2025, our common stock became listed on the NYSE American under the symbol “TGEN.” Prior thereto and since June 19, 2020, our common stock has been quoted on the OTC Markets’ OTCQX Best Market.

UNDERWRITING

We have entered into an underwriting agreement with Roth Capital Partners, LLC (“*Roth*” or “*underwriter*”), as sole manager and underwriter for this offering. Subject to the terms and conditions set forth in the underwriting agreement between us and the underwriter, the underwriter has agreed to purchase, and we have agreed to sell to the underwriter, the number of shares of common stock at the public offering price, less the underwriting discounts and commissions, as set forth on the cover page of this prospectus and below.

<u>Underwriters</u>	<u>Number of Shares of Common Stock</u>
Roth Capital Partners	3,500,000
Total	3,500,000

The underwriter is committed to purchasing all of the shares offered by us other than those covered by the over-allotment option described below, if it purchases any shares. The obligations of the underwriter may be terminated upon the occurrence of certain events specified in the underwriting agreement. Furthermore, pursuant to the underwriting agreement, the underwriter’s obligations are subject to customary conditions, representations and warranties contained in the underwriting agreement, such as receipt by the underwriter of officers’ certificates and legal opinions.

The shares should be ready for delivery on or about July 21, 2025, against payment in immediately available funds.

The underwriter is offering the shares subject to various conditions and may reject all or part of any order. The underwriter has advised us that the underwriter proposes to offer the shares directly to the public at the public offering price that appears on the cover page of this prospectus. In addition, the underwriter may offer some of the shares to other securities dealers at such a price less a concession of \$0.175 per share. The underwriter may also allow, and such dealers may reallow, a concession not in excess of \$0.00 per share to other dealers. After the shares are released for sale to the public, the underwriter may change the offering price and other selling terms at various time.

Over-Allotment Option

We have granted the underwriters an over-allotment option. The over-allotment option, which is exercisable for up to 45 days after the date of this prospectus, permits the underwriters to purchase a maximum of 485,000 additional shares from us to cover over-allotments. If the underwriter exercise all or part of this option, it will purchase shares covered by the option at the public offering price that appears on the cover page of this prospectus, less the underwriting discount. If this option is exercised in full, the total proceeds to us will be \$18,530,000, after deduction of underwriting discounts and expenses and commissions but before deduction of estimated offering expenses. To the extent the option is exercised and the conditions of the underwriting agreement are satisfied, we will be obligated to sell to the underwriter, and the underwriter will be obligated to purchase, these additional securities.

Discounts and Commissions

The following table shows the public offering price, underwriting discounts and proceeds, before expenses, to us. The information assumes either no exercise or full exercise by the underwriters of their over-allotment option.

	Per share	Total Without Overallotment Option	Total With Overallotment Option
Public offering price	\$ 5.00	\$ 17,500,000	\$ 19,925,000
Underwriting discount (7%)	\$ (0.35)	\$ 1,225,000	\$ 1,394,750
Proceeds, before expenses, to us	\$ 4.65	\$ 16,275,000	\$ 18,530,250

Upon the closing of this offering, we will pay the representative a cash transaction fee equal to 7% of the aggregate cash proceeds to us from the sale of the shares. We estimate that the expenses payable by us in connection with this offering, other than the underwriting discounts and commission referred to above, will be approximately \$219,500.

Also, we have agreed to reimburse the underwriters for certain reasonable out-of-pocket documented expenses, including the reasonable documented expenses of its legal counsel not to exceed \$150,000.

Rights Granted Under Roth Engagement Letter

Pursuant to the terms of an engagement letter we entered into with Roth, dated January 15, 2025, for a period of 12 months, we have agreed that Roth will serve as the exclusive underwriter for us with respect to any offering of our equity or equity-linked securities.

Lock-Up Agreements

Subject to certain limited exceptions, we have agreed for a period of 90 days after the closing of this offering not to (i) offer, issue, sell, contract to sell, encumber, grant any option for the sale of or otherwise dispose of any of our securities without Roth's prior written consent; and (ii) each of our directors, officers, and affiliates who are holders of our shares as of the date the underwriting agreement is executed (and all holders of securities exercisable for or convertible into shares of our common stock) has agreed, for a period of 90 days after the closing of this offering, subject to certain exceptions, not to offer, issue, sell, contract to sell, encumber, grant any option for the sale of or otherwise dispose of any of our securities, including shares of common stock issuable upon exercise of currently outstanding options granted to any such person; provided that our employees who are issued shares pursuant to our employee incentive plans that have vested or vest in the future are not subject to such restriction.

The underwriter may in its sole discretion and at any time without notice release some or all of the shares subject to lock-up agreements prior to the expiration of the lock-up period. When determining whether or not to release shares from the lock-up agreements, the underwriter will consider, among other factors, the security holder's reasons for requesting release, the number of shares for which the release is being requested and market conditions at the time.

Our Relationship with the Underwriter

The underwriter and its affiliates are full-service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. The underwriter may in the future engage in investment banking and other commercial dealings in the ordinary course of business with us or our affiliates. The underwriter may in the future receive customary fees and commissions for these transactions.

In the ordinary course of their various business activities, the underwriter and its affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own accounts and for the accounts of their customers, and such investment and securities activities may involve securities and/or instruments of the issuer. The underwriter and its affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Trading Symbol

Our common stock is listed on the NYSE American LLC ("NYSE American") under the symbol "TGEN."

Indemnification

We have agreed to indemnify the underwriters against liabilities relating to the offering arising under federal or state securities laws or otherwise.

Price Stabilization, Short Positions, and Penalty Bids

Certain SEC rules may limit the ability of the underwriter to bid for or purchase shares before the distribution of the shares is completed. However, the underwriter may engage in the following activities in accordance with the rules:

- *Stabilizing transactions.* The underwriter may make bids or purchases for the purpose of pegging, fixing or maintaining the price of the shares, so long as stabilizing bids do not exceed a specified maximum.
- *Over-allotments and covering transactions.* The underwriters may sell more shares of common stock in connection with this offering than the number of shares that they have committed to purchase. This over-allotment creates a short position for the underwriters. This short sales position may involve either "covered" short sales or "naked" short sales. Covered short sales are short sales made in an amount not greater than the underwriters' over-allotment option to purchase additional shares in this offering described above. The underwriters may close out any covered short position either by exercising their over-allotment option or by purchasing shares in the open market. To determine how they will close the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market, as compared to the price at which they may purchase shares through the over-allotment option. Naked short sales are short sales in excess of the over-allotment option. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriter is concerned that, in the open market after pricing, there may be downward pressure on the price of the shares that could adversely affect investors who purchase shares in this offering.
- *Penalty bids.* If the underwriters purchase the shares in the open market in a stabilizing transaction or syndicate covering transactions, it may reclaim a selling concession from the underwriters and selling group members who sold those shares as part of this offering.
- *Passive market making.* Market makers in the shares who are underwriters or prospective underwriters may make bids for or purchase the shares, subject to limitations, until the time, if ever, at which a stabilizing bid is made.

Similar to other purchase transactions, the underwriters' purchases to cover the syndicate short sales or to stabilize the market price of our common stock may have the effect of raising or maintaining the market price of our common stock or preventing or mitigating a decline in the market price of our common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. The imposition of a penalty bid might also have an effect on the price of our common stock if it discourages resale of our shares.

Neither we nor the underwriters make any representation or prediction as to the effect that the transactions described above may have on the price of our common stock. These transactions may occur on the NYSE American or otherwise. If such transactions are commenced, they may be discontinued without notice at any time.

Electronic Distribution

This prospectus in electronic format may be made available on a website maintained by the underwriter or selected dealers. In connection with this offering, the underwriter or selected dealers may distribute this prospectus electronically. No forms of electronic prospectus other than this electronic prospectus that are printable as Adobe® PDF will be used in connection with this offering.

Other than this prospectus in electronic format, the information on the underwriter's (or any selected dealer's) website and any information contained in any other website maintained by the underwriter is not part of the prospectus or the registration statement of which this prospectus forms a part, and has not been approved and/or endorsed by us or the underwriter in its capacity as underwriter and should not be relied upon by investors.

European Economic Area

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive, each a "Relevant Member State", with effect from and including the date on which the Prospectus Directive is implemented in that Relevant Member State, or the "Relevant Implementation Date", our securities will not be offered to the public in that Relevant Member State prior to the publication of a prospectus in relation to our securities that has been approved by the competent authority in that Relevant Member State or, where appropriate, approved in another Relevant Member State and notified to the competent authority in that Relevant Member State, all in accordance with the Prospectus Directive, except that, with effect from and including the Relevant Implementation Date, an offer of our securities may be made to the public in that Relevant Member State at any time:

- to any legal entity that is a qualified investor as defined in the Prospectus Directive;

- to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150 natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the manager for any such offer; or
- in any other circumstances which do not require the publication by the issuer of a prospectus pursuant to Article 3(2) of the Prospectus Directive, provided that no such offer of the securities shall require the issuer or any underwriter to publish a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an “offer of securities to the public” in relation to any securities in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and securities to be offered so as to enable an investor to decide to purchase or subscribe securities, as the same may be varied in that Relevant Member State by any measure implementing the Prospectus Directive in that Relevant Member State and the expression “Prospectus Directive” means Directive 2003/71/EC (and amendments thereto, including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member State), and includes any relevant implementing measure in each Relevant Member State and the expression “2010 PD Amending Directive” means Directive 2010/73/EU.

United Kingdom

In the United Kingdom, this document is being distributed only to, and is directed only at, and any offer subsequently made may only be directed at persons who are “qualified investors” (as defined in the Prospectus Directive) (i) who have professional experience in matters relating to investments falling within Article 19 (5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the Order), and/or (ii) who are high net worth companies (or persons to whom it may otherwise be lawfully communicated) falling within Article 49(2)(a) to (d) of the Order (all such persons together, the relevant persons). This document must not be acted on or relied on in the United Kingdom by persons who are not relevant persons. In the United Kingdom, any investment or investment activity to which this document relates is only available to, and will be engaged in with, relevant persons.

Canada

The offering of our common stock in Canada is being made on a private placement basis in reliance on exemptions from the prospectus requirements under the securities laws of each applicable Canadian province and territory where our Securities may be offered and sold, and therein may only be made with investors that are purchasing, or deemed to be purchasing, as principal and that qualify as both an “accredited investor” as such term is defined in National Instrument 45-106 *Prospectus Exemptions* or subsection 73.3(1) of the *Securities Act* (Ontario) and as a “permitted client” as such term is defined in National Instrument 31-103 *Registration Requirements*,

Exemptions and Ongoing Registrant Obligations. Any offer and sale of our common stock in any province or territory of Canada may only be made through a dealer that is properly registered under the securities legislation of the applicable province or territory wherein our common stock is offered and/or sold or, alternatively, where such registration is not required.

Any resale of our common stock by an investor resident in Canada must be made in accordance with applicable Canadian securities laws, which require resales to be made in accordance with an exemption from, or in a transaction not subject to, prospectus requirements under applicable Canadian securities laws. These resale restrictions may under certain circumstances apply to resales of the common stock outside of Canada.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser’s province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser’s province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 (or, in the case of securities issued or guaranteed by the government of a non-Canadian jurisdiction, section 3A.4) of National Instrument 33-105 *Underwriting Conflicts* ("NI 33-105"), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Upon receipt of this prospectus, each Québec investor hereby confirms that it has expressly requested that all documents evidencing or relating in any way to the sale of the securities described herein (including for greater certainty any purchase confirmation or any notice) be drawn up in the English language only. *Par la réception de ce document, chaque investisseur québécois confirme par les présentes qu'il a expressément exigé que tous les documents faisant foi ou se rapportant de quelque manière que ce soit à la vente des valeurs mobilières décrites aux présentes (incluant, pour plus de certitude, toute confirmation d'achat ou tout avis) soient rédigés en anglais seulement.*

Japan

The securities have not been and will not be registered under Article 4, paragraph 1 of the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948), as amended (the "FIEL") pursuant to an exemption from the registration requirements applicable to a private placement of securities to Qualified Institutional Investors (as defined in and in accordance with Article 2, paragraph 3 of the FIEL and the regulations promulgated thereunder). Accordingly, the securities may not be offered or sold, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan other than Qualified Institutional Investors. Any Qualified Institutional Investor who acquires securities may not resell them to any person in Japan that is not a Qualified Institutional Investor, and acquisition by any such person of securities is conditional upon the execution of an agreement to that effect.

Israel

This document does not constitute a prospectus under the Israeli Securities Law, 5728-1968, or the Securities Law, and has not been filed with or approved by the Israel Securities Authority. In the State of Israel, this document is being distributed only to, and is directed only at, and any offer of the shares is directed only at, investors listed in the first addendum, or the Addendum, to the Israeli Securities Law, consisting primarily of joint investment in trust funds, provident funds, insurance companies, banks, portfolio managers, investment advisors, members of the Tel Aviv Stock Exchange, underwriters, venture capital funds, entities with equity in excess of NIS 50 million and "qualified individuals", each as defined in the Addendum (as it may be amended from time to time), collectively referred to as qualified investors (in each case purchasing for their own account or, where permitted under the Addendum, for the accounts of their clients who are investors listed in the Addendum). Qualified investors will be required to submit written confirmation that they fall within the scope of the Addendum, are aware of the meaning of same and agree to it.

Switzerland

The securities may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange (the SIX) or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the securities or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, or the securities have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of securities will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA, and the offer of securities has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes (CISA). Accordingly, no public distribution, offering or advertising, as defined in CISA, its implementing ordinances and notices, and no distribution to any non-qualified investor, as defined in CISA, its implementing ordinances and notices, shall be undertaken in or from Switzerland, and the investor

protection afforded to acquirers of interests in collective investment schemes under CISA does not extend to acquirers of securities

Australia

No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission (ASIC), in relation to the offering.

This prospectus does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001 (the Corporations Act) and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act. Any offer in Australia of the securities may only be made to persons (the Exempt Investors) who are “sophisticated investors” (within the meaning of section 708(8) of the Corporations Act), “professional investors” (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the securities without disclosure to investors under Chapter 6D of the Corporations Act. The securities applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document which complies with Chapter 6D of the Corporations Act. Any person acquiring securities must observe such Australian on-sale restrictions.

Taiwan

The securities have not been and will not be registered with the Financial Supervisory Commission of Taiwan pursuant to relevant securities laws and regulations and may not be sold, issued or offered within Taiwan through a public offering or in circumstances which constitutes an offer within the meaning of the Securities and Exchange Act of Taiwan that requires a registration or approval of the Financial Supervisory Commission of Taiwan. No person or entity in Taiwan has been authorized to offer, sell, give advice regarding or otherwise intermediate the offering and sale of the securities in Taiwan.

Notice to Prospective Investors in Hong Kong

The contents of this prospectus have not been reviewed by any regulatory authority in Hong Kong. You are advised to exercise caution in relation to the offer. If you are in any doubt about any of the contents of this prospectus, you should obtain independent professional advice. Please note that (i) our shares may not be offered or sold in Hong Kong, by means of this prospectus or any document other than to “professional investors” within the meaning of Part I of Schedule 1 of the Securities and Futures Ordinance (Cap.571, Laws of Hong Kong) (SFO) and any rules made thereunder, or in other circumstances which do not result in the document being a “prospectus” within the meaning of the Companies Ordinance (Cap.32, Laws of Hong Kong) (CO) or which do not constitute an offer or invitation to the public for the purpose of the CO or the SFO, and (ii) no advertisement, invitation or document relating to our shares may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere) which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to the shares which are or are intended to be disposed of only to persons outside Hong Kong or only to “professional investors” within the meaning of the SFO and any rules made thereunder.

Notice to Prospective Investors in the People’s Republic of China

This prospectus may not be circulated or distributed in the PRC and the shares may not be offered or sold and will not offer or sell to any person for re-offering or resale directly or indirectly to any resident of the PRC except pursuant to applicable laws, rules and regulations of the PRC. For the purpose of this paragraph only, the PRC does not include Taiwan and the special administrative regions of Hong Kong and Macau.

CERTAIN UNITED STATES FEDERAL INCOME TAX CONSIDERATIONS

Subject to the limitations, assumptions and qualifications described herein, the following is a summary of certain United States (“U.S.”) federal income tax considerations of the purchase, ownership and disposition of our shares of common stock issued pursuant to this offering (“shares”). All prospective holders of the shares should consult their tax advisors with respect to the U.S. federal, state, local and non-U.S. tax consequences of the purchase, ownership and disposition of the shares.

This discussion is based on current provisions of the U.S. Internal Revenue Code of 1986, as amended (“Code”), existing U.S. Treasury regulations promulgated thereunder, published administrative pronouncements and rulings of the U.S. Internal Revenue Service (“IRS”), and judicial decisions, all as in effect as of the date of this prospectus. These authorities are subject to change and to differing interpretation, possibly with retroactive effect. Any change or differing interpretation could alter the tax consequences to holders described in this discussion. There can be no assurance that a court or the IRS will not challenge one or more of the tax consequences described herein, and we have not obtained, nor do we intend to obtain, a ruling with respect to the U.S. federal income tax consequences to a holder of the purchase, ownership or disposition of the shares.

This discussion addresses only shares that are held as capital assets within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion does not address all the U.S. federal income tax consequences that may be relevant to particular holders in light of their individual circumstances, nor does it address any alternative minimum, Medicare contribution, estate or gift tax consequences, or any aspects of U.S. state, local or non-U.S. taxes). It does not address holders that are subject to special rules, such as:

- banks, insurance companies or other financial institutions;
- tax-exempt organizations, pension funds, individual retirement accounts or governmental organizations;
- brokers or dealers in securities;
- traders in securities that elect to use a mark-to-market method of accounting for their securities holdings;
- persons who hold any of the shares as a position in a hedging transaction, “straddle,” “conversion transaction,” or other risk reduction transaction;
- persons deemed to sell any of the shares under the constructive sale provisions of the Code;
- entities or arrangements classified as partnerships for U.S. federal income tax purposes or other pass-through entities such as subchapter S corporations (or investors in such entities or arrangements);
- regulated investment companies or real estate investment trusts;
- controlled foreign corporations, passive foreign investment companies or corporations that accumulate earnings to avoid U.S. federal income tax;
- U.S. Holders (as defined below) whose functional currency is not the U.S. dollar;
- “qualified foreign pension funds” as defined in Section 897(l)(2) of the Code and entities all of the interests of which are held by qualified foreign pension funds;
- U.S. expatriates and former citizens or former long-term residents of the United States;
- holders that acquire the shares through the exercise of an employee stock option or otherwise as compensation or through a tax-qualified retirement plan; or
- holders subject to special tax accounting rules as a result of any item of gross income with respect to the shares being taken into account in an “applicable financial statement” as defined in Section 451(b) of the Code.

If a holder is a partnership or other pass-through entity (including an entity or arrangement treated as a partnership or other type of pass-through entity for U.S. federal income tax purposes), the U.S. federal income tax treatment of a partner or beneficial owner will generally depend on the status of such partner or beneficial owner and the entity’s activities. Partnerships, partners and beneficial owners in partnerships or other pass-through entities that own the

shares should consult their tax advisors as to the particular U.S. federal income tax considerations applicable to the acquisition, ownership and disposition of the shares.

For purposes of this discussion, a “U.S. Holder” is a beneficial owner of the shares, that, for U.S. federal income tax purposes, is:

- an individual that is a citizen or resident of the United States;
- a corporation, or other business entity that is treated as a corporation for U.S. federal tax purposes under U.S. Treasury Department regulations governing entity classifications, created or organized in or under the laws of the United States, any state thereof or the District of Columbia;
- a trust (1)(A) that is subject to the primary supervision of a court within the United States and (B) all substantial decisions of which are controlled by one or more “United States persons” (within the meaning of Section 7701(a)(30) of the Code) or (2) that has a valid election in effect under applicable Treasury Regulations to be treated as a United States person; or
- an estate that is subject to U.S. federal income tax on its income regardless of its source.

As used herein, the term “*Non-U.S. Holder*” means a beneficial owner, other than an entity treated as a partnership for U.S. federal income tax purposes, of the shares that is not a U.S. Holder.

PROSPECTIVE INVESTORS ARE URGED TO CONSULT THEIR TAX ADVISORS REGARDING THE PARTICULAR FEDERAL, STATE, LOCAL AND NON-U.S. TAX CONSEQUENCES TO THEM OF THE PURCHASE, OWNERSHIP AND DISPOSITION OF THE SHARES.

Tax Considerations Applicable to U.S. Holders

Distributions on Shares

Tecogen does not anticipate declaring or paying any cash dividends to holders of Tecogen’s common stock. If Tecogen makes distributions of cash or other property (other than certain distributions of Tecogen’s or its subsidiaries’ stock) on the shares, such distributions will constitute dividends to the extent paid out of Tecogen’s current or accumulated earnings and profits, as determined for U.S. federal income tax purposes. For this purpose, in the event that Tecogen distributes property in a taxable distribution, the amount by which the value of such property exceeds Tecogen’s adjusted basis in it would be included in Tecogen’s current year earnings and profits. Dividends received by a corporate U.S. Holder may be eligible for a dividends received deduction, which would generally reduce such U.S. Holder’s effective rate of U.S. federal income tax on such dividends, subject to applicable limitations. Dividends received by certain non-corporate U.S. Holders, including individuals, are generally taxed at the lower applicable capital gains rate provided certain holding period and other requirements are satisfied. Distributions in excess of Tecogen’s current and accumulated earnings and profits will constitute a generally non-taxable return of capital and first be applied against and reduce a U.S. Holder’s adjusted tax basis in its shares, but not below zero. To the extent that any distribution is in excess of the sum of (i) the U.S. Holder’s share of Tecogen’s current and accumulated earnings and profits and (ii) the U.S. Holder’s adjusted basis in its shares, such excess will be treated as capital gain and will be treated as described below under “*Sale or Other Taxable Disposition of the Shares.*”

Sale or Other Taxable Disposition of the Shares

Upon the sale, exchange or other taxable disposition of the shares, a U.S. Holder will generally recognize capital gain or loss equal to the difference between the amount of cash and the fair market value of any property received upon the sale, exchange or other taxable disposition and such U.S. Holder’s adjusted tax basis in the shares. This capital gain or loss will be long-term capital gain or loss if the U.S. Holder’s holding period in such shares is more than one year at the time of the sale, exchange or other taxable disposition. Long-term capital gains recognized by certain non-corporate U.S. Holders, including individuals, generally will be subject to reduced rates of U.S. federal income tax. The deductibility of capital losses is subject to certain limitations.

Backup Withholding and Information Reporting

In general, backup withholding and information reporting requirements may apply to payments on the shares and to the receipt of proceeds on the sale, exchange or other taxable disposition of the shares. Backup withholding (currently at a rate of 24%) may apply if a U.S. Holder fails to furnish its taxpayer identification number, a U.S. Holder fails to certify under penalties of perjury that such taxpayer identification number is correct and that such U.S. Holder is not subject to backup withholding (generally on a properly completed and duly executed IRS Form W-9), the IRS notifies the applicable withholding agent that the taxpayer identification number provided for such Holder is incorrect, the applicable withholding agent is notified by the IRS that the holder previously failed to properly report payments of interest or dividends, or such U.S. Holder otherwise fails to comply with the applicable requirements of the backup withholding rules.

Certain U.S. Holders generally are not subject to backup withholding and information reporting requirements, provided that their exemptions from backup withholding and information reporting are properly established. Backup withholding is not an additional tax. Any amounts withheld from a payment to a U.S. Holder under the backup withholding rules generally will be allowed as a credit against such U.S. Holder's U.S. federal income tax liability and may entitle such U.S. Holder to a refund, provided the required information is furnished to the IRS in a timely manner. U.S. Holders should consult their tax advisors regarding the application of backup withholding, the availability of an exemption from backup withholding, and the procedure for obtaining such an exemption, if available.

Tax Considerations Applicable to Non-U.S. Holders

Distributions on Shares

As mentioned above in the discussion of "*Tax Considerations for U.S. Holders*," Tecogen does not anticipate declaring or paying any cash dividends to holders of Tecogen's common stock. However, distributions of cash or other property (other than certain distributions of Tecogen's or its subsidiaries' stock) on the shares will constitute dividends to the extent paid out of Tecogen's current or accumulated earnings and profits, as determined for U.S. federal income tax purposes. For this purpose, the amount by which the value of property that is distributed exceeds Tecogen's adjusted basis in it will be included in Tecogen's current year earnings and profits. Distributions in excess of Tecogen's current and accumulated earnings and profits will constitute a return of capital and first be applied against and reduce a Non-U.S. Holder's adjusted tax basis in its common stock, but not below zero. To the extent that any distribution is in excess of the sum of (i) the Non-U.S. Holder's share of Tecogen's current and accumulated earnings and profits and (ii) the Non-U.S. Holder's adjusted basis in its shares, such excess will be subject to the treatment as described below under "*Gain on Sale or Other Taxable Disposition of the Shares*."

Dividends paid to a Non-U.S. Holder that are not effectively connected with the Non-U.S. Holder's conduct of a trade or business in the United States generally will be subject to withholding tax at a 30% rate or a reduced rate specified by an applicable income tax treaty. In order to obtain a reduced rate of withholding under such a treaty, the Non-U.S. Holder will be required to provide Tecogen or the applicable withholding agent with a properly executed applicable IRS Form W-8BEN or IRS Form W-8BEN-E (or appropriate successor form), as applicable, certifying under penalties of perjury that the Non-U.S. Holder is not a United States person and is eligible for the benefits under the applicable tax treaty. These forms may need to be periodically updated. If a Non-U.S. Holder holds the shares through a financial institution or other intermediary, the Non-U.S. Holder generally will be required to provide the appropriate documentation to the financial institution or other intermediary. A Non-U.S. Holder eligible for a reduced rate of U.S. withholding tax pursuant to an income tax treaty who fails to timely provide an IRS Form W-8BEN or IRS Form W-8BEN-E, as applicable, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim with the IRS.

If dividends paid to a Non-U.S. Holder are effectively connected with the Non-U.S. Holder's conduct of a trade or business in the United States (and, if required by an applicable income tax treaty, are attributable to a permanent establishment or fixed base maintained by the Non-U.S. Holder in the United States), the Non-U.S. Holder will generally be taxed on the dividends in the same manner as a U.S. Holder. In this case, the Non-U.S. Holder will be exempt from the withholding tax discussed in the preceding paragraph, although the Non-U.S. Holder will be required to provide a properly executed IRS Form W-8ECI (or appropriate successor form) in order to claim an exemption from withholding. Such effectively connected dividends, although not subject to U.S. federal withholding

tax, are subject to U.S. federal income tax on a net income basis at the regular U.S. federal income tax rates generally applicable to a United States person. Dividends received by a corporate Non-U.S. Holder that are effectively connected with such Non-U.S. Holder's conduct of a trade or business in the United States (and, if required by an applicable income tax treaty, attributable to a permanent establishment or fixed base maintained by the Non-U.S. Holder in the United States) may be subject to an additional branch profits tax at a 30% rate (or such lower rate as may be specified by an applicable income tax treaty). Non-U.S. Holders should consult their tax advisors with respect to other U.S. tax consequences of the acquisition, ownership and disposition of the shares, including the possible imposition of the branch profits tax.

Gain on Sale or Other Taxable Disposition of the Shares

Subject to the discussions below under “—*Information reporting and backup withholding*” and “—*FATCA*,” a Non-U.S. Holder generally will not be subject to U.S. federal income or withholding tax on gain realized on a sale, exchange or other taxable disposition of the shares unless:

- the gain is effectively connected with the Non-U.S. Holder's conduct of a trade or business in the United States (and, if required by an applicable income tax treaty, is attributable to a permanent establishment or fixed base maintained by the Non-U.S. Holder in the United States);
- the Non-U.S. Holder is a nonresident alien individual present in the United States for a period or periods aggregating 183 days or more during the taxable year of the disposition and certain other requirements are met; or
- Tecogen is or has been a “United States real property holding corporation,” as defined in the Code, at any time within the lesser of (i) five-year period ending on the date of disposition or (ii) the Non-U.S. Holder's holding period in the shares.

Tecogen believes that it is not, and does not anticipate becoming, a United States real property holding corporation. Even if Tecogen is or has been a United States real property holding corporation during the specified testing period, as long as Tecogen's common stock is regularly traded on an established securities market (such as the NYSE American) at any time during the calendar year in which the disposition occurs, a Non-U.S. Holder will not be subject to U.S. federal income tax on the disposition of shares if the Non-U.S. Holder does not (actually or, by reason of holding certain rights to acquire Tecogen's common stock or due to the ownership of Tecogen's common stock by certain related persons, constructively) own and has not, at any time within the five years prior to the disposition during which such Holder held Tecogen's common stock, owned more than 5% of Tecogen's common stock. Non-U.S. Holders are urged to consult their tax advisors regarding the effect of holding any warrants to purchase our common stock on the calculation of such 5% threshold. Non-U.S. Holders should consult their tax advisors regarding the application of this regularly traded exception.

If a Non-U.S. Holder recognizes gain on a sale, exchange or other disposition of the shares that is effectively connected with the Non-U.S. Holder's conduct of a trade or business in the United States (and if required by an applicable income tax treaty, is attributable to a permanent establishment or fixed base maintained by the Non-U.S. Holder in the United States), the Non-U.S. Holder will generally be subject to U.S. federal income tax at the regular U.S. federal income tax rates generally applicable to a United States person. If the Non-U.S. Holder is a corporation, the Non-U.S. Holder may also be subject to the branch profits tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. Non-U.S. Holders should consult their tax advisors with respect to other U.S. tax consequences of the acquisition, ownership and disposition of the shares, including the possible imposition of the branch profits tax.

Information Reporting and Backup Withholding

Information returns will be filed with the IRS in connection with payments of dividends on the shares. Copies of the information returns reporting those dividends and withholding may also be made available to the tax authorities in the country in which a Non-U.S. Holder is a resident under the provisions of an applicable income tax treaty or information exchange agreement. Unless a Non-U.S. Holder complies with certification procedures to establish that the Non-U.S. Holder is not a United States person, information returns may also be filed with the IRS in connection

with the payment of proceeds from a sale, exchange or other disposition of the shares to or through the U.S. office (and, in certain cases, the foreign office) of a broker acting on behalf of such Non-U.S. Holder.

A Non-U.S. Holder may be subject to backup withholding (currently at a rate of 24%) on dividends paid on the shares or on the proceeds from a sale, exchange or other disposition of the shares unless the Non-U.S. Holder complies with certification procedures to establish that the Non-U.S. Holder is not a United States person or otherwise establishes an exemption. Compliance with the certification procedures required to claim a reduced rate of withholding under a treaty (including properly certifying non-U.S. status on an IRS Form W-8BEN, IRS Form W-8BEN-E or other appropriate version of IRS Form W-8 (or appropriate successor form)) generally will satisfy the certification requirements necessary to avoid backup withholding as well. Notwithstanding the foregoing, U.S. federal backup withholding may apply if the payor has actual knowledge, or reason to know, that a holder is a United States person.

Backup withholding is not an additional tax. Any amounts withheld from a payment to a Non-U.S. Holder under the backup withholding rules generally will be allowed as a credit against such Non-U.S. Holder's U.S. federal income tax liability and may entitle such Non-U.S. Holder to a refund, provided the required information is furnished to the IRS in a timely manner. Non-U.S. Holders are urged to consult their tax advisors regarding the application of backup withholding and the availability of and procedure for obtaining an exemption from backup withholding in their particular circumstances.

FATCA

Provisions of the Code commonly referred to as "FATCA" require withholding of 30% on payments of dividends on the shares, as well as payments of gross proceeds of dispositions of the shares, to a "foreign financial institution" (which is broadly defined for this purpose to include not only depository and custodial institutions, such as banks, brokerage firms and financial service entities, but also most private investment vehicles managed in whole or in part by third-party financial advisors or service providers) and certain other non-U.S. entities with substantial U.S. owners or account holders unless various U.S. information reporting and due diligence requirements (generally relating to ownership by United States persons of interests in or accounts with those entities) have been satisfied or an exemption applies. However, the U.S. Treasury Department and IRS have issued proposed regulations that would eliminate FATCA withholding on payments of gross proceeds (but not on payments of dividends). Although these proposed Treasury regulations have not been finalized, pursuant to the preamble to the proposed regulations, any applicable withholding agent may (but is not required to) rely on this proposed change to FATCA withholding until final regulations are issued or the proposed Treasury regulations are withdrawn. An intergovernmental agreement between the United States and the foreign country in which a Non-U.S. Holder is resident or located may modify these requirements as to such Holder. If FATCA withholding is imposed on a payment described above, a payee or beneficial owner of such payment that is not a foreign financial institution or other non-U.S. entity subject to FATCA withholding on that payment generally may obtain a refund of any amounts withheld by filing a U.S. federal income tax return (which may entail significant administrative burden). Non-U.S. Holders should consult their tax advisors regarding the effects of FATCA on their investments in the shares.

Tecogen will not pay any additional amounts to Non-U.S. Holders with respect to any amounts withheld, including pursuant to FATCA.

THE PRECEDING DISCUSSION OF U.S. FEDERAL TAX CONSIDERATIONS IS FOR GENERAL INFORMATION ONLY. IT IS NOT TAX ADVICE. PROSPECTIVE INVESTORS SHOULD CONSULT THEIR TAX ADVISORS REGARDING THE PARTICULAR U.S. FEDERAL, STATE AND LOCAL AND NON-U.S. TAX CONSEQUENCES OF PURCHASING, HOLDING AND DISPOSING OF THE SHARES, INCLUDING THE CONSEQUENCES OF ANY PROPOSED CHANGE IN APPLICABLE LAWS.

LEGAL MATTERS

The validity of the issuance of the securities offered hereby will be passed upon for us by Somertons, PLLC, Washington, D.C. Certain other legal matters in connection with this offering will be passed upon for the underwriters by Pryor Cashman LLP, New York, NY.

EXPERTS

Our consolidated financial statements for the years ended December 31, 2024, and 2023, included in our Annual Report on Form 10-K for the year ended December 31, 2024, 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.

ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-1, including exhibits and schedules, under the Securities Act with respect to the shares of common stock 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.

Statements contained in this prospectus as to the contents of any contract, agreement or other document referred to are not necessarily complete. With respect to each contract, agreement or other document filed as an exhibit to the registration statement, reference is made to the exhibit for a more complete description of the matter involved, and each such statement shall be deemed qualified by such reference. For further information with respect to us and the common stock offered hereby, reference is made to the registration statement and the exhibits and schedules filed therewith.

A copy of the registration statement may be inspected without charge at the public reference facilities of the SEC located at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You can request copies of those documents upon payment of a duplicating fee to the SEC. Please call the SEC at 1-800-SEC-0330 for further information regarding the operation of the public reference room.

You can also read the registration statement at the SEC's internet web site at <http://www.sec.gov>.

We file or have filed annual, quarterly and special reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's web site at <http://www.sec.gov>. You may also read and copy any documents we file at the SEC's public reference rooms as indicated above.

INCORPORATION OF DOCUMENTS BY REFERENCE

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 that contain that information. The information we incorporate by reference is considered to be part of this prospectus. We incorporate by reference herein the documents listed below:

- Our Annual Report on Form 10-K for the year ended December 31, 2024, filed with the SEC on March 18, 2025
- Our Quarterly Report on Form 10-Q for the quarter ended March 31, 2025, filed with the SEC on May 13, 2025
- Our Current Report on Form 8-K filed with the SEC on May 2, 2025
- Our Current Report on Form 8-K filed with the SEC on June 10, 2025
- Our definitive Proxy Statement on Schedule 14A for our 2025 Annual Meeting of Stockholders, filed with the SEC on April 29, 2025
- 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 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.

We also incorporate by reference into this prospectus all documents (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items) that are filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus but prior to the termination of the offering. These documents include periodic reports, such as Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K, as well as proxy statements.

You may request a copy of these documents, which will be provided to you at no cost, by writing to or telephoning:

**Secretary
Tecogen Inc.
76 Treble Cove Road
Building 1
North Billerica, Massachusetts 01862
781.466.6400**

You may also request and we will provide, free of charge, a copy of any document incorporated by reference in this prospectus (excluding exhibits to such document unless an exhibit is specifically incorporated by reference in the document) by visiting our internet website at www.Tecogen.com. All website addresses in this prospectus are intended to be inactive textual references only.

DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers, and controlling persons of the registrant pursuant to provisions of our certificate of incorporation and our bylaws, or otherwise, the registrant has been informed that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

SHARES OF COMMON STOCK



TECOGEN INC.

PROSPECTUS

Roth Capital Partners

July 18, 2025
