2025 ANNUAL REPORT

aspen aerogels®

CREATING VALUE THROUGH TECHNOLOGY, INNOVATION, AND EXECUTION

Dear Stakeholders,

In 2025, we remained focused on our core objective of building a strong, profitable, and capital-efficient business. During the year, we streamlined the organization, optimized our cost structure, and reduced structural expenses while strengthening operational discipline. These actions bolstered the foundation of the business while preserving the capabilities needed to support sustainable, long-term growth and value creation.

Our Energy Industrial business continued to provide important diversification, supported by long-standing customer relationships across global energy infrastructure markets. While 2025 was weighted toward maintenance activity and reflected fewer large subsea projects than in prior years, the fundamentals of the business remain strong. As 2026 begins, visibility has improved and three structural drivers are supporting growth: a rebound in subsea project activity, expanding LNG and natural gas infrastructure investment, and steady maintenance demand from refinery and petrochemical operators. We have already secured subsea and LNG project awards for 2026, and our pipeline is strong. We believe our Energy Industrial segment can continue to grow as a high-margin business without significant incremental costs or capital investment.

Within our Thermal Barrier business, EV production decreased in North America during the year as OEMs adjusted volumes in response to evolving regulatory frameworks and market demand. We expect the market to establish a new baseline in 2026, from which EV penetration can resume growth at a steadier pace. In Europe, structural drivers create a more visible multi-year adoption trajectory for OEMs. We are actively engaged with several European OEMs as they advance to their next-generation EV platforms, and we anticipate securing additional awards. This foundation positions us well for growth beginning in 2027 and provides greater geographic and customer diversification over time.

We are also pursuing the extension of the Aerogel Technology Platform® into adjacent markets where our thermal management and fire protection capabilities address critical needs. Battery energy storage systems represent one such opportunity, as stationary storage installations increase in scale and energy density. Our thermal protection capabilities and U.S.-based manufacturing footprint position us well in this evolving market. We continue to evaluate additional applications that leverage our manufacturing scale and technical expertise.

Throughout 2025, we strengthened our balance sheet and managed cash with discipline. We ended the year with approximately $159 million in cash and cash equivalents and expect to receive nearly $38 million from General Motors in Q1 2026 related to a commercial settlement. We removed approximately $75 million of structural fixed costs on an annualized basis and materially lowered our adjusted EBITDA breakeven level. Expected Plant II asset sales in 2026 will further reduce debt and strengthen our balance sheet. These actions enhance liquidity and financial flexibility while increasing operating leverage as revenue grows.

As we look ahead, our focus remains clear: execute consistently, allocate capital thoughtfully, and build a stronger company positioned to deliver sustainable, long-term value.

2025 Highlights and Recent Business Developments

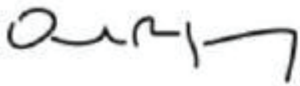
- Awarded North Sea pipe-in-pipe subsea project with expected delivery in Q3 2026
- Supported several LNG projects as part of an expanding gas infrastructure portfolio
- Awarded PyroThin® Thermal Barrier contract from Volvo Cars with expected start of production in 2027
- Awarded PyroThin contract from a leading American OEM for a vehicle platform with expected start of production in 2028

- Removed approximately $75 million of structural fixed costs, materially lowering EBITDA breakeven
- Ended 2025 with approximately $159 million in cash; expect nearly $38 million GM payment in Q1 2026
- Pursuing sale of Plant II assets to further strengthen the balance sheet

We believe Aspen Aerogels is well positioned for the years ahead. Demand for high-performance thermal and energy-efficiency solutions continues to be supported by long-term trends in electrification, energy infrastructure, safety standards, and sustainability. With a differentiated technology platform, expanding customer relationships, and a more efficient cost structure, we remain focused on delivering profitable growth and building long-term shareholder value.

I would like to thank our employees for their dedication and professionalism, and our customers and partners for their continued trust. We also appreciate the support of our shareholders and look forward to updating you on our progress in the year ahead.

Sincerely,



Donald R. Young
President & Chief Executive Officer

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K/A
(Amendment no. 1)

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2025

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from __________ to

Commission file number: 001-36481

ASPEN AEROGELS, INC.
(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	04-3559972 (I.R.S. Employer Identification No.)
30 Forbes Road, Building B Northborough, Massachusetts (Address of principal executive offices)	01532 (Zip Code)

Registrant's telephone number, including area code (508) 691-1111

Securities registered pursuant to Section 12(b) of the Exchange Act:

Title of each class	Trading Symbol	Name of exchange on which registered
Common Stock, par value $0.00001 per share	ASPN	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Exchange Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer", "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☒
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicated by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☒

The aggregate market value of the registrant's common stock held by non-affiliates of the registrant (without admitting that any person whose shares are not included in such calculation is an affiliate) computed by reference to the price at which the common stock was last sold as of the last business day of the registrant's most recently completed second fiscal quarter was approximately $480.0 million.

As of March 10, 2026, the registrant had 82,825,603 shares of common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement for its Annual Meeting of Stockholders to be held on May 13, 2026 are incorporated by reference into Part III of this Annual Report on Form 10-K to the extent stated herein.

Auditor Firm Id:	185	Auditor Name:	KPMG LLP	Auditor Location:	Boston, MA, United States of America

EXPLANATORY NOTE

Aspen Aerogels, Inc. (the "Company") is filing this Amendment No. 1 on Form 10-K/A (this "Amendment No. 1") to amend the Company's Annual Report on Form 10-K for the year ended December 31, 2025 (the "Original Form 10-K"), which was initially filed with the U.S. Securities and Exchange Commission (the "SEC") on March 13, 2026. The purpose of this Amendment No. 1 is solely to correct a scrivener's error in the attestation reports on the Company's financial statements and internal control over financial reporting of KPMG LLP (the "Audit Report"). Specifically, in the Audit Report in the Original Form 10-K an inventories balance of $47.6 million as of December 31, 2025 was reported under the section "*Critical Audit Matters – Net realizable value of certain inventories*", which was the inventories balance as of December 31, 2024, instead of an inventories balance of $38.2 million, as reflected in the Audit Report in this Amendment No. 1. No other changes were made to the Original Form 10-K.

In addition, as required by Rule 12b-15 under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), currently dated certifications from the Company's principal executive officer and principal financial officer are filed herewith as exhibits to this Amendment No. 1 pursuant to Rule 13a-14(a) or 15d-14(a) of the Exchange Act and pursuant to Section 906 of the Sarbanes-Oxley Act.

Except as described above, this Amendment No. 1 does not amend, modify, or otherwise update any other information in the Original Form 10-K and does not reflect events occurring after the filing of the Original Form 10-K. Accordingly, this Amendment No. 1 should be read in conjunction with the Original Form 10-K and the Company's other filings with the SEC.

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PART I

Item 1. BUSINESS

When used in this report, the terms "we," "us," "our" and "the Company" refer to Aspen Aerogels, Inc. and its subsidiaries. Additionally, we do not use the ® or ™ symbol in each instance in which one of our trademarks appears in this report, but this should not be construed as any indication that we will not assert our rights thereto to the fullest extent under applicable law.

Aspen Aerogels, Inc. is an aerogel technology company that designs, develops and manufactures innovative, high-performance aerogel materials used primarily in the energy industrial, sustainable insulation materials, and electric vehicle (EV) markets. We have provided high-performance aerogel insulation to the energy industrial and sustainable insulation markets for nearly two decades. We have developed and commercialized our proprietary line of PyroThin® aerogel thermal barriers for use in battery packs in EVs. Our core businesses are organized into two reportable segments: Thermal Barrier and Energy Industrial. The following describes our key product offerings and new product innovations by reportable segment.

Thermal Barrier

We have developed a number of promising aerogel products and technologies for the EV market, including our proprietary line of PyroThin aerogel thermal barriers for use in battery packs in EVs. Our PyroThin product is an ultra-thin, lightweight and flexible thermal barrier designed with other functional layers to impede the propagation of thermal runaway across multiple lithium-ion battery system architectures. Our thermal barrier technology is designed to offer a unique combination of thermal management, mechanical performance and fire protection properties. These properties enable EV manufacturers to achieve critical battery performance and safety goals by impeding the propagation of thermal runaway in lithium-ion battery systems at the battery cell, module, and pack levels across multiple lithium-ion battery system architectures. Our ultra-thin, lightweight, and flexible thermal barriers are designed to allow battery manufacturers to achieve critical safety goals without sacrificing energy density.

We have entered into multi-year production contracts with a number of automotive EV original equipment manufacturer (OEM) customers to supply fabricated, multi-part thermal barriers for use in the battery systems of their EV models. These customers include General Motors LLC (GM), Toyota, Scania, Automotive Cells Company, which is a battery cell joint venture between Stellantis N.V., Saft-TotalEnergies and Mercedes-Benz (collectively, ACC), Audi, a luxury brand of the Volkswagen Group, Volvo Truck, and a large EU battery manufacturer to supply a next generation vehicle platform of a major EU luxury sports car brand. We are currently supplying thermal barrier production parts to GM, Toyota, and ACC, and thermal barrier prototype parts to a number of global manufacturers of EVs, grid storage and home battery systems. During 2025, 2024 and 2023, we sold $168.9 million, $306.8 million and $110.1 million, respectively, of our PyroThin thermal barriers, primarily to GM.

Our patented aerogel products and manufacturing technologies are significant assets. Silica aerogels are complex structures in which 97% of the volume consists of air trapped between intertwined clusters of amorphous silica solids. These extremely low-density solids provide superior thermal and acoustic insulating properties. Although silica aerogels are usually fragile materials, we have developed innovative and proprietary manufacturing processes that enable us to produce industrially robust aerogel insulation cost-effectively and at commercial scale.

Our aerogel thermal barrier products are designed to enable our customers to enhance the safety and performance of their lithium-ion battery systems. These barriers are designed to impede the propagation of thermal runaway in lithium-ion battery systems at the battery cell, module, and pack levels across multiple lithium-ion battery system architectures. Our ultra-thin, lightweight and flexible thermal barriers are designed to allow battery manufacturers to achieve critical safety goals without sacrificing energy density. We believe we offer the best technology currently available for the management of thermal runaway in the EV market.

Energy Industrial

We design, develop and manufacture innovative, high-performance aerogel insulation used primarily in the energy industrial market. We believe our aerogel blankets deliver the best thermal performance of any widely used insulation product available on the market today and provide a combination of performance attributes unmatched by traditional insulation materials. Our insulation products help end-users to improve resource efficiency, reduce energy consumption, and reduce the carbon footprint of their operations. These products enable compact system design, reduce installation time and costs, promote freight and logistics cost savings, reduce system weight, minimize required storage space and enhance job site safety. Our insulation products reduce the incidence of corrosion under insulation, which is a significant maintenance cost and safety issue in energy industrial facilities. Many of our insulation products also offer strong fire protection, which is a critical performance requirement in the markets we service. We believe our array of product attributes provides strong competitive advantages over traditional insulation. Although competing insulation materials may have one or more comparable attributes, we believe that no single insulation material currently available offers all of the properties of our aerogel insulation products.

Our end-user customers select our products where thermal performance is critical and to save money, improve resource efficiency, enhance sustainability, preserve operating assets and protect workers. Our insulation is used by oil producers and the owners and operators of refineries, petrochemical plants, liquefied natural gas (LNG) facilities, power generating assets, and other energy industrial sites. Our Pyrogel® and Cryogel® aerogel insulation product lines have undergone rigorous technical validation by industry leading end-users and achieved significant market adoption.

We also derive revenue from a number of other end markets. Customers in these markets have used our products for applications such as military aircrafts, trains, and buses. We believe we will have additional opportunities to address high-value applications in the global insulation market, as well as in adjacent market opportunities such as energy storage applications, including battery energy storage systems, electrification applications, and other potential adjacent applications subject to their commercial potential, the differentiation of our products, and the ability to leverage our existing manufacturing platform.

Our technologically advanced insulation products are targeted at the multi-billion dollar global market for energy industrial insulation materials. Our aerogel insulation has undergone rigorous technical validation and is used by many of the world's largest oil producers and the owners and operators of refineries, petrochemical plants, LNG facilities and power generating and distribution assets, such as ExxonMobil, Reliance Industries, PTT LNG, and Royal Dutch Shell. Our products replace traditional insulation in existing facilities during regular maintenance, upgrades, and capacity expansions. In addition, our aerogel products are also specified for use in new-build energy industrial facilities.

In 2008, we introduced Pyrogel® and Cryogel® aerogel insulation, our two key aerogel insulation product lines for the energy industrial market. Pyrogel and Cryogel aerogel insulation products have undergone rigorous technical validation by industry-leading end-users and achieved significant market adoption. Our insulation product revenue has grown from $17.2 million in 2008 to $102.2 million in 2025, representing a compound annual growth rate of 11%. During this period, we have sold over $1.6 billion of our insulation products globally, representing an installed base of more than 525 million square feet of insulation. We believe that our long-term record of success positions us for future growth and the opportunity to gain market share in the energy industrial and sustainable insulation markets.

We have grown our business by forming technical and commercial relationships with industry leaders that have allowed us to optimize our products to meet the particular demands of target market sectors. We have benefited from our technical and commercial relationships with ExxonMobil in the oil refinery and petrochemical sectors, and with TechnipFMC in the offshore oil sector. We will continue our strategy of working with innovative companies to target and penetrate additional opportunities in the energy industrial and sustainable insulation materials markets.

We market and sell our products primarily through a sales force based in North America, Europe and Asia. The efforts of our sales force are supported by a small number of sales consultants with extensive knowledge of a particular market or region. Our sales force is responsible for establishing and maintaining customer and partner relationships, delivering highly technical information and ensuring high-quality customer service.

Our salespeople work directly with end-user customers and engineering firms to promote the qualification, specification and acceptance of our aerogel and thermal barrier products. We also rely on an existing and well-established channel of qualified insulation distributors and contractors in more than 50 countries around the world to help provide rapid delivery of our aerogel products and strong end-user support.

Manufacturing Operations

We manufacture our products using our proprietary technology at our facility in East Providence, Rhode Island, which we have operated since 2008. We manage the capacity of our East Providence facility on an ongoing basis in order to meet expected demand for our aerogel products. We also utilize a flexible supply strategy, including, but not limited to, use of our external manufacturing capabilities in China, which currently support our Energy Industrial segment. Pursuant to our supply contract with this contract manufacturer, they are obligated to deliver products to us as we issue purchase orders on an as-needed basis through the term of the contract. The contract automatically renews year-to-year unless either party notifies the other of its intention not to renew the contract. While we have agreed to purchase our requirement for certain Energy Industrial products from the contract manufacturer, we have no obligation to purchase any minimum quantity under the contract, and we may terminate the contract at any time and for any or no reason. Additionally, we previously entered into a contract with Prodensa Servicios de Consultora (Prodensa) to establish OPE Manufacturer Mexico S de RL de CV, a maquiladora located in Mexico (OPE), which assembles thermal barrier PyroThin products and operates an automated fabrication facility for PyroThin. We subsequently purchased OPE for a nominal value in accordance with the terms of the agreement.

Financial Summary

Total revenue for the years ended December 31, 2025, 2024 and 2023 was $271.1 million, $452.7 million, and $238.7 million, respectively. For the years ended December 31, 2025, 2024 and 2023, based on shipment destination, our U.S. revenue was $172.1 million, $258.5 million, and $151.0 million, respectively, and our international revenue was $99.0 million, $194.2 million, and $87.7 million, respectively. Additional financial information about our product revenues, net income (loss) per share and our total assets are provided in our consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

Our Markets and Competition

Our principal markets are the EV market and the energy industrial insulation market. These markets are global, well-established and include large and well-capitalized end-users.

We have developed and commercialized a proprietary line of aerogel-based thermal barriers for use in battery packs of EVs and energy storage systems. The market for our thermal barrier products encompasses batteries used in mobile platforms, including automobiles, trucks, buses and light aircraft, and fixed platforms, including home storage, grid storage and other commercial applications. The multi-billion dollar global lithium-ion battery market continues to grow and evolve rapidly. Our thermal barrier technology offers a unique combination of thermal management, mechanical performance, and fire protection properties that enables EV manufacturers to achieve critical battery performance and safety goals. We believe that as the e-mobility and energy storage markets require increasingly powerful lithium-ion battery systems, the demand for our aerogel thermal barriers will grow as the market players seek to reduce the associated risk of thermal runaway.

We have entered into production contracts with GM to supply fabricated, multi-part thermal barriers (the Barriers) for use in the battery system of its current and next-generation EVs (the GM Contracts). Pursuant to the GM Contracts, we are obligated to supply the Barriers at fixed annual prices and at volumes specified by GM up to a daily maximum quantity through the respective terms of the agreements, which expire at various times from 2030 through 2034 and, in certain cases, may be extended by GM. While GM has agreed to purchase its requirements for the Barriers from us at locations designated from time to time by them, it has no obligation to purchase any minimum quantity of the Barriers under the GM Contracts. In addition, GM may unilaterally terminate the GM Contracts at any time and for any or no reason. All other terms of the GM Contracts are generally consistent with automotive OEMs' standard purchase terms, including quality and warranty provisions customary in the automotive industry. We have also entered into production contracts with Toyota, Scania, Audi, a luxury brand of the Volkswagen Group, ACC, Volvo Truck, and a large EU battery manufacturer to supply a next generation vehicle platform of a major EU luxury sports car brand.

We also sell our products for use in the sustainable insulation materials and other end markets, including for the fabrication of insulation parts by OEMs. These OEMs develop products incorporating our aerogel blankets for applications in a diverse set of markets, including military aircraft, trains, and buses. While these are not presently the core markets we service, we anticipate that we may allocate a portion of our manufacturing capacity to serve these markets in the long-term. We believe the key performance criteria for insulation in these markets and applications include thermal performance, compact design, durability, and fire resistance.

The energy industrial market includes companies operating refinery, petrochemical, oil production, and LNG production and storage facilities. The energy industrial market also includes firms operating gas, coal, nuclear, hydro, and solar thermal power generating plants and district energy systems. Insulation systems in the energy industrial market are designed to maintain hot and cold process equipment, piping and storage tanks at optimal temperatures, to protect plant and equipment from the elements and from the risk of fire, and to protect workers. This market is served by a well-organized, well-established worldwide network of distributors, contractors, and engineers.

Demand for insulation in the energy industrial market is composed of demand associated with new-build construction of facilities, capital expansions and related capital projects, as well as with routine, non-discretionary maintenance programs within existing facilities. Capital expansions and related capital projects in the energy industrial market are driven primarily by overall economic growth and projected growth in energy demand. Maintenance programs are essential to optimal operation of process equipment, to protect workers and to minimize the risk of a catastrophic loss. Accordingly, we believe that demand for insulation for maintenance purposes in comparison to capital projects is less affected by volatility associated with economic cycles, energy prices, and other macroeconomic factors.

The major end-user markets that drive demand for our products include oil refining, petrochemical, natural gas and LNG production and storage, onshore oil production, offshore oil production, and power generation. Global energy demand is expected to increase in the long-term and, to serve this growing demand, we believe our end-user customers will continue to invest in major energy industrial projects.

We operate in a highly competitive environment. Competition in the thermal barrier market is evolving. We believe our patented aerogel thermal barrier technology offers a unique combination of attributes to mitigate thermal runaway in lithium-ion battery systems. These attributes include industry-leading thermal performance, limited combustibility, tunable compressibility, and scalable density. We expect to face increasing competition within the thermal barrier market over the next several years as new entrants develop and market their own technologies and solutions.

In the energy industrial insulation market, we compete with traditional insulation materials based on product performance, price, availability, and proximity to the customer. Customers may choose among a variety of insulation materials that offer a range of characteristics, including thermal performance, durability, vapor permeability, moisture resistance, ease of installation, and upfront and lifecycle costs. Within each type of insulation material, there is also competition between the manufacturers of that material. Most types of traditional insulation materials are produced by a number of different manufacturers, and once customers have chosen the type of insulation material that they intend to use, they will choose a manufacturer of that material based primarily on each manufacturer's price and delivery schedule. Insulation manufacturers include a range of large, high-volume, multinational manufacturers offering branded products and strong technical support services to small, low-volume, local manufacturers offering low prices and limited customer support.

We believe the primary competitive factors in these markets are:

- product performance (along multiple criteria), quality, and fitness for purpose;
- product price, installed cost, and lifecycle cost;
- product availability; and
- proximity to customer and logistics.

Our products are priced at a premium to traditional insulation materials. While our competitors offer many traditional insulation products that are priced below our products on a per-unit basis, we believe our products have superior performance attributes and may have the lowest cost on a fully-installed basis or offer significant life-cycle cost savings.

We compete in the aerogel materials market with Armacell International S.A., JIOS Aerogel Pte. Ltd., Unifrax Holding Co. (Alkegen), IBIDEN Co., Ltd., Guangdong Alison Hi-Tech Co., Ltd., Nano Tech Co., Ltd., Beerenberg AS, IBIH Advanced Materials Co., Ltd., Nameite New Materials Technology Co., Ltd., Guizhou Aerospace Wujiang Electro-Mechanical Equipment Co., Ltd., Shenzhen Aerogel Technology Co., Ltd., and a growing number of other competitors that manufacture, sell, or resell aerogel-based insulation products. We expect to face increasing competition in the aerogel insulation market over the next several years as existing competitors and new entrants develop and market their own aerogel products. In addition to other aerogel insulation products, we also encounter competition from innovatively packaged traditional insulation materials that compete with our products based on one or more performance factors.

Within each of our target markets, we encounter one or more of these organizations or their resellers and a significant number of other aggressive national, regional, and local suppliers of traditional insulation products. Our competitors are seeking to enhance traditional insulation materials and to develop and introduce new and emerging insulation technologies. Competing technologies that outperform our insulation products in one or more performance attributes could be developed and successfully introduced. For more information, see "Risk Factors —The insulation markets we serve are highly competitive. If we are unable to compete successfully, we may not be able to increase or maintain our market share and revenues."

Many of our competitors have greater market presence, larger market share, longer operating histories, stronger name recognition, larger customer bases, and significantly greater financial, technical, sales and marketing, manufacturing, and other resources than we have and may be better able to withstand volatility within the industry and throughout the economy as a whole, while retaining greater operating and financial flexibility. If our competitors lower their prices, or develop new products with better performance, or if we are unable to compete effectively, our growth opportunities, share of the market, margins, and profitability may decline.

Our Competitive Strengths

Because insulation is used in a wide variety of demanding applications, insulation materials must satisfy a wide range of performance criteria on a cost-effective basis. We believe that our aerogel technology has allowed us to create superior insulation products and will allow us to continue to grow our share of the thermal barrier markets and energy industrial materials. We believe that the potential for significant technological innovation in traditional materials is limited and that new high-performance materials will be required to meet evolving market requirements for energy efficient insulation and thermal barrier systems. We believe our line of high-performance aerogel products is positioned to meet these requirements. Our solutions are driven by our innovative and proprietary technology that produces aerogels in a flexible and industrially robust blanket form. Our solutions also benefit from over

20 years of research and development dedicated to new aerogel compositions, form factors, and manufacturing technologies. We believe our aerogel blankets deliver a superior combination of performance attributes that enable energy industrial end-users to save money, improve resource efficiency, preserve operating assets, and protect workers across a wide range of applications in our target markets. We believe our patented aerogel thermal barriers offer an industry-leading combination of attributes to mitigate thermal runaway in lithium-ion battery systems.

We believe the following combination of capabilities distinguishes us from our competitors and positions us to grow our market share in the energy industrial, sustainable insulation materials, and EV markets:

- ***Disruptive Products with a Compelling Value Proposition.*** Our aerogel insulation provides two to five times the thermal performance of widely used traditional insulation in a thin, easy-to-use and durable blanket form. We believe our array of product attributes provides strong competitive advantages over traditional insulation and will enable us to gain a larger share of the energy industrial insulation market. In addition, our aerogel thermal barriers offer a combination of attributes that provide protection against thermal runaway in lithium-ion batteries. We believe our thermal barriers provide the market-leading technological solution to combat thermal runaway and will help us gain a larger share within the market for lithium-ion batteries used in the e-mobility and grid storage markets. Although competing materials may have one or more comparable attributes, we believe that no single insulation or thermal barrier material currently available offers all of the properties of our aerogel products.
- ***Important End Markets.*** Our aerogel insulation products are primarily used in large-scale energy industrial facilities. Our aerogel thermal barrier products are primarily used in the EV market. Given the projected long-term growth in e-mobility markets and global energy consumption, and the construction of new facilities to satisfy this demand, we believe that we serve well-capitalized and growing global end markets. In order to capture the opportunities in our end markets, we have a network of sales professionals and qualified distributors in more than 50 countries around the world.
- ***Strong Installed Base with Industry-leading Energy Customers.*** We have an installed base of more than 525 million square feet of insulation, representing more than $1.6 billion in cumulative product sales since 2008. Through our relationships with industry-leading energy industrial customers, our products have undergone rigorous testing and technical validation and are now in use at most of the world's largest oil producers, refiners, and petrochemical companies. These relationships have shortened the sales cycle with other customers and have helped to facilitate our market penetration. We also have strong relationships with a global network of energy-focused distributors, contractors, and engineering firms that understand the significant advantages our products provide to end-users.
- ***Thermal Barrier Adoption by Leading EV Customers.*** In 2020 and 2021, we entered into contracts with GM to supply fabricated, multi-part thermal barriers for use in the battery system of certain of its EVs. This relationship has helped to validate our thermal barrier technology with other companies providing products and solutions to the EV, lithium-ion battery and grid storage markets. We are currently supplying thermal barrier production parts to GM, Toyota, and ACC, among others. We are also supplying thermal barrier prototype parts to a number of other U.S., European and Asian manufacturers of EVs, grid storage, and home battery systems. We have also entered into thermal barrier production contracts with Toyota, Scania, ACC, and Audi, a luxury brand of the Volkswagen Group, Volvo Truck, and a large EU battery manufacturer to supply a next generation vehicle platform of a major EU luxury sports car brand. During 2025, 2024 and 2023, we sold $168.9 million, $306.8 million, and $110.1 million of our PyroThin thermal barriers, respectively, primarily to GM. We are engaged in system development and quoting activities with a wide range of additional prospective customers in the broader e-mobility and energy storage markets.
- ***Proven, Scalable Business Model.*** Our proprietary manufacturing technology is proven and has been successfully scaled to meet increasing demand. We have operated the East Providence, RI facility since 2008 and have increased our annual revenue capacity in phases. To meet expected demand for our aerogel products, we continue to make productivity improvements in our existing East Providence facility and utilize a flexible supply strategy, including, but not limited to, use of our external manufacturing capabilities in China, which currently support our Energy Industrial segment and are capable of delivering increased aerogel production capacity.
- ***Protected Technology Platform and Proprietary Manufacturing Capability.*** Our Aerogel Technology Platform® is the result of extensive research and development dedicated to new aerogel compositions, form factors, and manufacturing technologies. Our intellectual property portfolio is supported by 400 issued patents as of December 31, 2025, with an additional 438 pending in U.S. and foreign jurisdictions in areas related to product design, chemistry, process technology, and market applications. In addition, we have significant know-how and trade secrets related to product formulations and manufacturing techniques. We believe our portfolio of patents, trade secrets, and know-how protect our competitive advantage in the commercialization of aerogel products.
- ***Experienced Management Team with a Demonstrated Track Record.*** Our executive officers have an average of more than 20 years of experience in global industrial companies, specialty chemical companies, automotive, or related material science research. This management team is responsible for the continued development of our Aerogel Technology Platform, the commercial acceptance of our products, and the creation of a global distribution and marketing platform. As

of December 31, 2025, we had 854 full-time employees, including material scientists, engineers, manufacturing line operators, sales personnel, administrative staff, and management. We believe our dedicated and experienced team is an important competitive asset.

Our Growth Strategy

Our strategy is to create economic value by leveraging our technological and market leadership in aerogels to be the premier provider of high-performance aerogel products serving the global EV and energy industrial markets. We also plan to pursue high-value opportunities for our aerogel insulation products within the sustainable insulation materials market and a diverse set of new markets. In addition, we will leverage our Aerogel Technology Platform to develop innovative, aerogel-enhanced products for applications outside of the global insulation market.

Key elements of our strategy include:

- ***Leverage Aerogel Technology Platform in the EV Market.*** We plan to build upon the commercial success of our industry-leading PyroThin thermal barriers within the battery systems of EVs. We will continue to leverage our experienced automotive business development personnel and dedicated thermal barrier fabrication employees. We plan to capitalize on our flexible supply strategy to meet demand for our PyroThin thermal barriers. We will continue to seek to engage with additional leading EV manufacturers to realize the full potential of our Aerogel Technology Platform within the EV market.
- ***Strategically Increase Capacity to Meet Demand.*** Demand for our aerogel products has grown significantly since our inception. We continue to make productivity improvements in our existing East Providence facility and utilize a flexible supply strategy, including, but not limited to, use of our external manufacturing capabilities in China, which currently support our Energy Industrial segment and are capable of delivering increased aerogel production capacity. We expect that the current manufacturing capacity in our existing East Providence facility, as well as the supply from our external manufacturing facility, will permit us to achieve our target revenue capacity in 2026. Nonetheless, there can be no assurance that our contract manufacturing strategy of meeting the demand of our customers with supply from one or more external manufacturing facilities in China and our existing East Providence facility will provide us with adequate manufacturing capacity or supply to meet long-term demand.
- ***Capitalize on Innovation to Develop New Markets.*** Our team of materials scientists and engineers focus on advancing our Aerogel Technology Platform and developing next generation aerogel compositions, form factors and manufacturing processes. We believe that we are well-positioned to leverage over 20 years of research and development to develop and commercialize disruptive aerogel products for a wide array of new markets beyond the energy industrial, sustainable insulation materials, and EV markets. We will seek to exploit the unique characteristics of aerogels, including low thermal conductivity, high surface area, and porosity to develop aerogel-enhanced products and next generation technology addressing complex and unmet market needs. We will continue to seek potential partnerships with industry leaders that include a mix of commercial, technical, and financial elements to realize the full potential offered by our proprietary Aerogel Technology Platform in targeted markets.
- ***Broaden Energy Market Diversity and Grow Market Share.*** We plan to add resources to grow our share of the energy industrial insulation market, both through increased sales to our existing customers and through sales to new customers. We plan to continue to leverage our global sales and distribution network and seek to promote greater enterprise-wide adoption of our products by existing end-user customers. To date, the majority of our energy industrial insulation market revenue has been generated from applications in refineries and petrochemical facilities. We will continue to pursue greater adoption of our products for applications in the LNG and power markets. In addition, our product revenue will continue to be generated, in large part, by demand for insulation associated with scheduled plant shutdowns, or turnarounds, and other maintenance-related projects. With broad adoption of our products and our growing installed base, we expect that our products will be specified at increasing rates during the design phase in a growing number of new-build and capital expansion projects. We also expect that growth in global energy demand over time will result in increased new-build and large capacity expansion projects, thereby driving additional demand for our aerogel products.
- ***Enhance Our Profit Margins, Operational Cash Flow and Return on Invested Capital.*** We will seek to improve the efficiency of our manufacturing process, to optimize the formulation of our products, and to manage our supply chain to reduce costs. We believe we have additional opportunities to realize production efficiencies and to reduce per unit overhead costs that may enhance profit potential, increase operating cash flow capability, and offer attractive returns on incremental invested capital. In addition, we will focus our development efforts on new products and next generation technology with application in new, high value market segments.

Our Aerogel Products

Silica aerogels are highly porous structures in which 97% of the volume consists of air trapped between intertwined clusters of amorphous silica solids. Silica aerogels are low-density, extremely fragile materials. However, our proprietary manufacturing process produces silica aerogels in a flexible, resilient, durable and easy-to-use blanket form.

The core raw material in the production of our aerogel insulation products are alkyl silicate and silane precursors. Our manufacturing process initially creates a semi-solid alcogel in which the silica structure is filled with ethanol. We produce aerogel by means of a supercritical extraction process that removes ethanol from the gel and replaces it with air. Our process allows the ethanol to be extracted without causing the solid matrix in the gel to collapse from capillary forces.

Our material costs were 42%, 38%, and 36% of product revenue for the fiscal years ended December 31, 2025, 2024 and 2023, respectively. We seek to lower our manufacturing costs, while maintaining appropriate performance characteristics, and to improve the per square foot costs of our silica aerogel blankets by optimizing our formulations to reduce material costs, by enhancing manufacturing process controls to improve yields, by realizing price reductions from existing vendors, by qualifying new vendors, and by reducing shipping costs. Our objective is both to reduce costs to enhance our competitive position and to ensure we deliver high quality products to our customers.

The materials used in the production of our silica aerogel products consist primarily of several silica precursors, fiber batting, CO_2, and other additives. The markets for these materials are generally competitive and multiple sources of supply exist for all of our raw materials. However, from time-to-time, we have experienced a significant increase in the price of certain silica precursors due to supply imbalances in the silanes market. We are working to expand the geographic diversity of our supply base to reduce the risk of demand and supply imbalances in any one country or region.

We purchase silica precursors from several suppliers in the United States, Europe, and Asia, including China. Based on the current level of demand for our products, we believe that an adequate long-term supply of silica precursors is available. However, if demand for our products increases rapidly, we will need to work with suppliers to ensure that an adequate long-term supply of silica precursors will be available at competitive prices. Suppliers of silica precursors include industrial companies that produce the materials directly or that produce them as a byproduct of other industrial processes. We are working with a number of these suppliers to plan for our potential future needs and to develop our processes to reduce the long-term cost impact of these materials. For more information, see "Risk Factors — Shortages of the raw materials used in the production of our products, increases in the cost of such materials or disruptions in our supply chain could adversely impact our financial condition and results of operations."

Our aerogel blankets are reinforced with fiber batting. We manufacture and sell our blankets primarily in 60-inch-wide, three-foot diameter rolls with a standard range of thickness of one millimeter to ten millimeters. Our base products are all flexible, hydrophobic, vapor permeable, compression resistant and able to be cut and fabricated using conventional tools. We have specifically developed our line of aerogel blankets to meet the requirements of a broad set of applications within our target markets. The composition and attributes of our standard aerogel blankets are described below:

EV & Energy Storage Market

- ***PyroThin.*** PyroThin thermal barriers are ultra-thin flexible aerogel products engineered to satisfy the needs of the EV and energy storage industries to address thermal runaway issues in lithium-ion batteries. PyroThin thermal barriers can be used to provide passive fire protection at the cell, module, or pack level within multiple lithium-ion battery system architectures. PyroThin thermal barriers can also be customized to offer a unique combination of thermal management, mechanical performance, and fire protection properties that enable an EV manufacturer to achieve targeted battery performance and safety goals.

Energy Industrial Markets

- ***Pyrogel XTE.*** Pyrogel XTE, our best-selling product, is reinforced with a glass-fiber batting and has an upper use temperature of 650° C. Pyrogel XTE was initially designed for use in refineries and petrochemical facilities, but has proven to have wide applicability throughout the energy industrial market. Pyrogel XTE is optimized for high temperature applications between 100° C and 400° C. Pyrogel XTE's hydrophobicity and vapor permeability reduce the risk of corrosion under insulation in energy industrial operating systems when compared to traditional insulation.
- ***Pyrogel HPS.*** Pyrogel HPS is optimized for applications within the power generation market with operating temperatures greater than 400° C. With an upper use temperature of 650° C, high durability, and extremely low thermal conductivity, Pyrogel HPS is ideal for installation in high performance turbine systems and in demanding thermal environments in

power plants and systems. Pyrogel HPS also provides strong value at high temperatures and in demanding thermal applications in refining and chemical processing systems.

- ***Pyrogel XTF.*** Pyrogel XTF provides thermal performance similar to Pyrogel XTE, but is reinforced with a glass- and silica-fiber batting. Pyrogel XTF is specially formulated to provide strong protection against fire.
- ***Cryogel Z.*** Cryogel Z is designed for sub-ambient and cryogenic applications in the energy industrial market. Cryogel Z is reinforced with a glass and polyester-fiber batting and is produced with an integral vapor barrier. Cryogel Z is also specially formulated to minimize the incidence of stress corrosion cracking in stainless steel systems. Cryogel Z's combination of properties allows for simplified system designs and reduced installation costs in cold applications throughout the energy industrial market when compared to traditional insulation.
- ***Spaceloft Subsea.*** Spaceloft Subsea is reinforced with glass- and polyester-fiber batting and is designed for use in pipe-in-pipe applications in offshore oil production. Spaceloft Subsea is typically fabricated and pre-packaged to permit faster installation. Spaceloft Subsea allows for small profile carrier pipelines and associated reductions in capital costs.

Other Markets

- ***Cryogel X201.*** Cryogel X201 is similar in composition to Cryogel Z, but is produced without the integral vapor barrier. Cryogel X201 is designed for use in cold system designs where space is at a premium. Cryogel X201 is targeted to OEMs that design, produce and sell refrigerated appliances, cold storage equipment, and aerospace systems.

R-Values by Material

Insulation is a material or combination of materials that slows the transfer of heat from one side of the material to the other. The composition of our aerogel products minimizes the three mechanisms of thermal transport:

- ***Conduction.*** Heat conduction through a material is correlated to the material's density. Aerogels are very low-density solids. As a result, thermal conductivity through the aerogel material itself is extremely low.
- ***Convection.*** Heat convection in gases is through movement of gas molecules. Due to the restricted movement of gases in the nanoporous aerogel structure, thermal convection is eliminated inside the aerogels.
- ***Radiation.*** Radiation requires no medium to transfer heat. Thermal radiation is partially absorbed by aerogels. Our aerogel products also contain infrared absorbing additives to reduce radiant heat transfer significantly.

We believe our aerogel products offer the lowest levels of thermal conductivity, or best insulating performance, of any widely used insulation or thermal barrier available on the market today.

The lower a material's thermal conductivity, the more slowly heat is transferred through the material. R-values are a commonly used measure of an insulating material's resistance to heat transfer. R-value is calculated as the thickness of an insulation material divided by the thermal conductivity of the insulation material. Materials with higher R-values have lower thermal conductivity and are better insulators. Traditional and specialty insulation materials provide a range of R-values. Aerogels have the highest R-value per unit of thickness in comparison to traditional insulation materials.

Qualification for Use

Our products have undergone rigorous testing and are qualified for global usage in both routine maintenance and in capital projects at many of the world's largest oil producers, refiners, and petrochemical companies, and within the next-generation lithium-ion battery systems of five of the largest global automotive manufacturers. These end-users of our products have well-defined practices, codes, specifications, and standards for materials and systems installed in their vehicles or used in their facilities. These specifications include system design standards, material qualification and selection processes, insulation application practices, and quality control requirements. As part of the material qualification process established by these companies, a new insulation or thermal barrier product must meet general industry standards, such as consensus standards developed by ASTM International, and, in many cases, company-specific internal standards to be considered and approved for use or designed into vehicle platforms. In addition, most of these companies require one or more field trials of tests to evaluate fitness for use in specific applications. These companies either run these qualification processes and field trials internally or through third parties engaged by them, and they generally do not publicly disclose the results of their testing. While the specific processes and timelines vary from company to company, in general, upon successful completion of the qualification process for an insulation or thermal barrier product, an end-user will typically deem the product to be qualified for use in its facilities on a local, regional, or global basis for one or more applications or vehicles. Because our end-user customers are typically businesses with very large operations in multiple sites, our insulation or thermal barrier sales likely represent only a small portion of the total product used by any one of these companies. Accordingly, once our products are qualified or designed into a platform at a specified company, we continue to seek to expand the use of our products by the end-use customer in additional applications, platforms, locations, or vehicles.

Our Sales Channel

We market and sell our products primarily through our global sales force. Our sales personnel are based in North America, Europe, and Asia and travel extensively to market and sell our products to new and existing customers. The efforts of our sales force are supported by a small number of sales consultants with extensive knowledge of a particular market or region. Our sales force establishes and maintains customer and partner relationships, delivers highly technical information and provides first-class customer service. We plan to strategically expand our sales force and business development resources globally to support anticipated growth in customers and demand for our products.

Our sales force calls on and maintains relationships with participants at all levels of the energy industrial supply chain. We have established a network of insulation distributors to ensure rapid delivery of our products in critical regions. Our sales personnel work to educate insulation contractors about the technical and operating cost advantages of aerogel blankets. Our sales force also works directly with end-users and engineering firms to promote qualification, specification, and wider acceptance of our products in existing and new applications. In the energy industrial market, we rely heavily on the existing and well-established channel of distributors and contractors to deliver products to our customers. In addition, our sales and business development personnel work directly with OEMs and strategic partners, including within the EV industry, to create new product designs and solutions to expand our market reach.

The sales cycle for a new insulation material or thermal barrier is typically lengthy. Our sales cycle from initial customer contact to widespread use can take from one to three years, although we typically realize increasing revenue at each stage in the cycle. We believe our relationships with technically sophisticated customers and strategic partners serve to validate our technology, products, and value proposition within a target market, to accelerate the sales cycle with other customers within specific markets, and to facilitate growth in market share. We have focused our marketing efforts on developing technical support materials, installation guides, case studies, and general awareness of the superior performance of our aerogel blankets and thermal barriers. We rely principally on our website, social media, printed technical materials, participation in industry conferences and tradeshows and presentation of technical papers to communicate our message to existing and potential customers. We also receive strong word-of-mouth support from the growing network of distributors, installation contractors, OEMs, strategic partners and end-users that understand the benefits of our products.

Our Customers and End-Users

Customers

EV and Energy Storage

Our customers in the evolving EV and energy storage markets include EV manufacturers, Tier 1 automotive suppliers, lithium-ion battery manufacturers, and e-mobility and energy storage companies. Our existing and prospective customers range from start-ups to the largest automotive manufacturers in the world.

We typically supply thermal barrier products to our automotive OEM customers through purchase orders, which are generally governed by general terms and conditions established by the OEM. The terms and conditions typically contemplate a relationship under which our customers place orders for their requirements of specific components supplied for particular vehicles but are not required to purchase any minimum quantity of products from us. We expect that these relationships will typically extend over the life of the related vehicle. Prices are negotiated with respect to each business award, which may be subject to adjustments under certain circumstances, such as commodity or foreign exchange escalation/de-escalation clauses or for cost reductions achieved by us. The terms and conditions typically provide that we are subject to a warranty on the products supplied; in most cases, the duration of such warranty is coterminous with the warranty offered by the OEM to the end-user of the vehicle. We may also be obligated to share in all or a part of recall costs if the OEM recalls its vehicles for defects attributable to our products.

Individual purchase orders from our automotive OEM customers are terminable for cause or non-performance and, in most cases, upon our insolvency and certain change of control events. In addition, our automotive OEM customers often have the option to terminate for convenience on certain programs, which permits our customers to impose pressure on pricing during the life of the vehicle program, and issue purchase contracts for less than the duration of the vehicle program, which potentially reduces our profit margins and increases the risk of our losing future sales under those purchase contracts.

Although customer programs typically extend to future periods, and although there is an expectation that we will supply certain levels of automotive OEM production during such future periods, customer agreements including applicable terms and conditions do not constitute firm orders. Firm orders are generally limited to specific and authorized customer purchase order releases. Firm orders are typically fulfilled as promptly as possible from the conversion of available raw materials, sub-components and work-in-process inventory for OEM orders. The dollar amount of such purchase order releases on hand and not processed at any point in time is not believed to be significant based upon the time frame involved.

Energy Industrial

Our primary customers in the energy industrial market are distributors, installation contractors, and fabricators that stock, install, and customize insulation products, components and systems for technically sophisticated end-users that require high-performance insulation.

- ***Distributors:*** We currently operate through a global network of insulation distributors. In general, insulation distributors stock, sell, and distribute aerogel materials to insulation contractors and end-users. The distribution of our product outside of the United States is at times conducted under agreements that provide for exclusivity by geography linked to annual purchase volume minimums. These insulation distributors typically market, promote, and advertise our aerogel materials across their market.
- ***Contractors:*** We currently sell directly to a number of insulation contractors under project specific contracts or general purchase orders. Insulation contractors generally perform insulation installation, inspection, maintenance, and project management for end-users. In addition, some insulation contractors provide end-users with project engineering and design services.
- ***Fabricators:*** We currently sell directly to a small network of fabricators that design, customize, and manufacture insulation components and systems for use in the energy industrial, sustainable insulation materials, transportation, appliance, and apparel markets.
- ***Direct Sales to End-Users:*** In certain instances, we sell directly to end-users in the energy industrial insulation market. In these instances, our end-users directly manage and control specification, logistic, installation, inspection, maintenance, and fabrication activities of our aerogel products.

Additional Customer Information

GM represented 59% of our total revenue in 2025 and was our only customer representing 10% or more of our revenue for that period. In 2024, GM represented 64% of our total revenue and was our only customer representing 10% or more of our revenue for that period. In 2023, GM and Distribution International, Inc. (Distribution) represented 41% and 14%, respectively, of our total revenue and were our only customers representing 10% or more of our revenue for that period.

Our product revenue is generated by sales to customers around the world. In 2025, 63% of our product revenue was generated in the United States, 18% in Latin America, 11% in Asia, 7% in Europe, and 1% in Canada, based on shipment destination.

A substantial portion of our sales are to shipment destinations located outside of the United States, including Mexico, China, United Arab Emirates, Thailand, Malaysia, Sweden, France, Singapore, South Korea, Canada, Japan, and Australia. Total revenue generated from outside of the United States amounted to $99.0 million or 37% of total revenue, $194.2 million or 43% of total revenue, and $87.7 million or 37% of total revenue, in the fiscal years ended December 31, 2025, 2024 and 2023, respectively. We may continue to expand our operations outside of the United States. As a result, we are subject to a number of risks. For more information, see "Risk Factors — A substantial portion of our revenue comes from sales in foreign countries, and we are planning to further expand our operations outside of the United States, which subjects us to increased economic, foreign exchange, operational, and political risks that could increase our costs and make it difficult for us to operate profitably."

End-Users

The end-users of our aerogel blankets and thermal barriers include some of the largest and most well-capitalized companies in the world. Our products are installed in more than 50 countries worldwide.

EV Market

Our thermal barrier products are in use today in EV battery systems of GM, Toyota and ACC, with a leading global platform. We believe our customer base may expand to include additional EV manufacturers, Tier 1 automotive suppliers, lithium-ion battery manufacturers, and e-mobility and energy storage companies.

Energy Industrial

- ***Oil Refining:*** We believe our products have been installed in more than 30% of the world's 640 refineries. In addition, we believe our aerogel blankets are used by 24 of the world's 25 largest refining companies, including ExxonMobil, Shell,

and Chevron, among others. Over time, these companies have used our products in an increasing range of applications and throughout an increasing number of their facilities.

- ***Petrochemical:*** We believe our aerogel blankets are used by all of the world's 20 largest petrochemical companies, including Reliance Industries, Formosa Petrochemical, and LyondellBasell Industries, among others.
- ***Natural Gas and LNG:*** Our products are in use at facilities operated by PTT LNG, ExxonMobil, and Dominion Energy, among others.
- ***Onshore:*** Our aerogel blankets are in use in several Canadian oil sands facilities owned and operated by Suncor Energy, ConocoPhillips, and Husky Energy, among others.
- ***Offshore:*** Our products are currently used in subsea projects off the coast of Brazil, in the Gulf of Mexico, in the North Sea, off the coast of Malaysia, and off the west coast of Africa. Our products are installed in offshore projects owned by Total, Marathon Oil, ConocoPhillips, and Shell, among others.
- ***Power Generation:*** We are targeting operators of gas, coal, nuclear, hydro, and solar power generating facilities. Our products are currently used at facilities owned and operated by NextEra Energy Resources, Southern Company, and Duke Energy, among others.
- ***District Energy:*** Our products are used in medium- to high-temperature steam distribution networks in universities and municipalities within the United States and Asia.

Manufacturing

We manufacture our products using our proprietary technology at our facility located in East Providence, Rhode Island. We have operated the East Providence facility since 2008 and have significantly increased manufacturing capacity and productivity since then. Our manufacturing process is proven and has been scaled over time to meet increasing demand.

Our manufacturing group is led by a skilled and seasoned team with management experience at global industrial and specialty chemical companies. We have well-defined operating processes and maintenance, environmental, health and safety programs to support our operations. We employ statistical processes and quality controls in our manufacturing systems. We routinely measure and monitor thermal conductivity, hydrophobicity and other key properties of the aerogel blankets produced in our manufacturing operations. We are ISO 9001:2015 and ISO 14001:2015 certified.

We have operated the East Providence facility since 2008 and have increased our capacity in phases since that time. To meet expected demand for our aerogel products, we continue to make productivity improvements in our existing East Providence facility and utilize a flexible supply strategy, including but not limited to use of our external manufacturing capabilities in China, which currently support our Energy Industrial segment and are capable of delivering increased aerogel production capacity. Pursuant to our supply contract with this contract manufacturer, they are obligated to deliver products to us as we issue purchase orders on an as-needed basis through the term of the contract. The contract automatically renews year-to-year unless either party notifies the other of its intention not to renew the contract. While we have agreed to purchase our requirement for certain Energy Industrial products from the contract manufacturer, we have no obligation to purchase any minimum quantity under the contract and we may terminate the contract at any time and for any or no reason. Additionally, we entered into a contract with Prodensa to establish OPE, which assembles thermal barrier PyroThin products and operates an automated fabrication facility for PyroThin. We subsequently completed the purchase of OPE for a nominal value in accordance with the terms of the agreement.

In 2023, we opened our 59,000-square-foot engineering and rapid prototyping facility in Marlborough, MA. Our Advanced Thermal Barrier Center (ATBC) is designed to be the engineering hub of PyroThin thermal barriers, which help manufacturers optimize the safety and performance of battery packs for EV and energy storage system (ESS) markets.

We closely monitor all stages in the manufacture of our aerogel blankets. Our direct ownership of manufacturing operations in East Providence allows us to maintain control of proprietary process technologies and to control product quality. We also closely monitor the manufacturing process and quality control of the aerogels supplied by our external manufacturing facilities in China. Our production of aerogel blankets consists of the following key steps:

- ***Sol Preparation.*** Mixing of silica precursors in ethanol, a catalyst and additives in set formulas to deliver the target properties of the resultant aerogel.
- ***Casting.*** Combination of the sol and fiber batting and initial formation of the gel structure.
- ***Aging.*** Bathing of the gel blankets in fluids to impart desired physical and thermal properties.
- ***Extraction.*** Supercritical extraction of the ethanol liquid from the gel blanket to produce a dried aerogel blanket.
- ***Heat Treatment.*** Drying to remove trace ethanol, salts and water from the aerogel blankets.

- ***Fabrication.*** Cutting, lamination, and production of components and multi-layer systems for custom applications in the EV and subsea markets.
- ***Quality Control.*** Utilizing statistical process and quality controls to measure thermal conductivity, hydrophobicity and other key properties of our aerogel products.

Our material costs were 42%, 38%, and 36% of product revenue for the fiscal years ended December 31, 2025, 2024 and 2023, respectively.

The materials used in the production of our products consist primarily of several silica precursors, fiber batting, CO_2, and other additives. The markets for these materials are generally competitive and multiple sources of supply exist for all of our raw materials. However, from time-to-time, we have experienced a significant increase in the price of certain silica precursors due to a supply imbalance in the silanes market. We are working to expand the geographic diversity of our supply base to reduce the risk of demand and supply imbalances in any one country or region.

We purchase silica precursors from several suppliers in the United States, Europe, and Asia, including China. Based on the current level of demand for our products, we believe that an adequate long-term supply of silica precursors is available. However, if demand for our products increases rapidly, we will need to work with suppliers to ensure that the long-term supply of silica precursors will be available at competitive prices. Suppliers of silica precursors include industrial companies that produce the materials directly or that produce them as a byproduct of other industrial processes. We are working with a number of suppliers to plan for our potential future needs and to develop our processes to reduce the long-term cost impact of these materials. For additional information, see "Risk Factors — Risks Related to Our Business and Strategy — Shortages of the raw materials used in the production of our products, increases in the cost of such materials or disruptions in our supply chain could adversely impact our financial condition and results of operations."

We seek to lower our manufacturing costs, while maintaining appropriate performance characteristics, and to improve the per square foot costs of our aerogel blankets by optimizing our formulations to reduce material costs by enhancing manufacturing process controls to improve yields, by realizing price reductions from existing vendors, by qualifying new vendors, and by reducing shipping costs. In addition, we believe additional opportunities to realize production efficiencies and to reduce per unit overhead costs will arise with growth in the scale of our manufacturing operations. Our objective is both to reduce costs to enhance our competitive advantage and to ensure we deliver high quality finished products to our customers.

Research and Development

The mission of our research and development team is to leverage our Aerogel Technology Platform in support of our commercial objectives. In our existing markets, research and development personnel design new and improved insulation and thermal barrier products to enhance our value to customers and to expand our revenue potential. Our materials scientists and engineers also seek to develop enhanced chemical and process technologies to improve yields, lower manufacturing costs, and improve product performance. In new markets, research and development personnel seek to exploit the unique characteristics of aerogels, including low thermal conductivity, high surface area, and tunable porosity, to develop aerogel-enhanced products and next generation technology addressing complex and unmet market needs.

Our research and development expenditures were $13.4 million, $18.1 million, and $16.4 million for the fiscal years ended December 31, 2025, 2024 and 2023, respectively.

Intellectual Property

Our success depends in part upon our ability to obtain, maintain and enforce intellectual property rights that cover our Aerogel Technology Platform, including, product forms, applications and/or manufacturing technologies and the technology or know-how that enables these product forms, applications, technologies and specifications, to avoid and defend against claims that we infringe the intellectual property rights of others, and to prevent the unauthorized use of our intellectual property. Since aerogels were developed more than 80 years ago, there has been a wide range of research, development and publications on aerogels and related technologies, which make it difficult to establish intellectual property rights to many key elements of aerogel technology and to obtain meaningful patent protection. Where appropriate, we seek to protect our rights by filing patent applications in the U.S. and other key foreign jurisdictions related to products, processes, technology and improvements that we consider patentable and important to our business and, in particular, our aerogel technology, product forms and their applications in promising markets and our manufacturing technologies. We also rely on trade secrets, trademarks, licensing agreements, confidentiality and nondisclosure agreements and continuing technological innovation to safeguard our intellectual property rights and develop and maintain our competitive edge.

As of December 31, 2025, we owned 90 issued U.S. patents, 85 pending U.S. patent applications, 310 issued foreign patents and 353 pending foreign patent applications. The scope of each of our patents varies in accordance with local law.

We have successfully enforced our patent rights against Chinese aerogel manufacturers in the United States at the International Trade Commission and in Europe at the District Court in Mannheim, Germany. In 2025, we successfully resolved our patent infringement action in Italy against AMA S.p.A. and AMA Composites S.r.l. Our patent infringement proceedings in Korea against Beerenberg Services AS, Beerenberg Korea Ltd., and Bronx (China) Co., Ltd., are ongoing. The patent infringement case at the Seoul District Court and our appeal of the Korea Trade Commission decision at the Seoul Administrative Court remain stayed pending the outcome of our appeals of the Korean Intellectual Property Trial and Appeal Board decisions to the Korean IP High Court. Further details of these actions are set forth herein, in our prior Annual Reports on Form 10-K, and in other filings. In addition to the foregoing, we have been and may be from time-to-time party to other legal proceedings that arise in the ordinary course of business and to other patent enforcement actions to assert our patent rights.

Due to their nature, it is difficult to predict the outcome or the costs involved in any litigation. Furthermore, our adversaries may have significant resources and interest to litigate and therefore, these litigation matters could be protracted and may ultimately involve significant legal expenses.

We believe that having distinctive names is an important factor in marketing our products, and therefore we use trademarks to brand some of our products, including Pyrogel, PyroThin and Cryogel. As of December 31, 2025, we had seven trademark registrations in the United States and 81 trademark registrations in foreign jurisdictions, including the European Union, United Kingdom, Japan, China, Canada, Mexico, India, South Korea, and Brazil. Additionally, we had four pending foreign trademark applications. Although we have a foreign trademark registration program for selected marks, our approach may not be comprehensive, and we may not be able to register or use such marks in each foreign country in which we seek registration.

Cross License Agreement with Cabot Corporation

We have a cross license agreement with Cabot Corporation under which each party grants to the other party certain intellectual property rights. The cross license agreement remains in effect until the expiration of the last to expire of the issued patents or patent applications and acquired patents licensed thereunder. Further details of this cross license are set forth in our prior Annual Reports on Form 10-K and in other filings.

Our Company

We are a corporation organized under the laws of Delaware. We own five wholly owned subsidiaries: Aspen Aerogels Rhode Island, LLC, Aspen Aerogels Germany, GmbH, Aspen Aerogels Georgia, LLC, Aspen Aerogels Mexico Holdings, LLC and OPE Manufacturer Mexico S de RL de CV. We maintain our corporate offices in Northborough, Massachusetts.

We are required to file annual, quarterly and current reports, proxy statements and other information required by the Securities Exchange Act of 1934, as amended (the Exchange Act), with the U.S. Securities and Exchange Commission (the SEC). SEC filings are available at the SEC's website at https://www.sec.gov.

We maintain a public website at https://www.aerogel.com and use our website as a means of disclosing material non-public information and for complying with our disclosure obligations under Regulation FD. Our website includes an Investors section through which we make available, free of charge, our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, Proxy Statements on Schedule 14A and Forms 3, 4 and 5 filed on behalf of directors and executive officers, as well as any amendments to those reports filed or furnished pursuant to the Exchange Act as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. The members of our Board of Directors are reflected on the signature page of this Annual Report on Form 10-K. We also make available on our website the charters for our Board of Directors', Audit Committee, Compensation and Leadership Development Committee, and Nominating, Governance and Risk Committee, as well as our Code of Business Conduct and Ethics, our Corporate Governance Guidelines and other related materials. We include our web site address in this report only as an inactive textual reference. The information on our website is not part of this Annual Report on Form 10-K or our other filings with the SEC.

Our Investor Relations Department can be contacted at Aspen Aerogels, Inc., 30 Forbes Road, Northborough, MA 01532, Attention: Investor Relations; telephone: 508-691-1111; e-mail: ir@aerogel.com.

Human Capital Resources

As of December 31, 2025, we had 854 full-time employees. Of our employees, 278 are located in the United States and 576 are located abroad. We consider our current relationship with our employees to be of good standing. The majority of our employees located in Mexico are represented by a labor union and subject to a collective bargaining agreement. In February 2026, our employees in Mexico voted to approve the collective bargaining agreement with the FASIM union. Outside of Mexico, none of our employees are represented by labor unions or have collective bargaining agreements.

At Aspen Aerogels, we view our employees as our most valuable asset and have taken great steps to offer a comprehensive suite of compensation and benefits to ensure the physical, emotional and financial well-being of our employees. Our goal is to attract and retain the best and brightest talent and remain competitive within our industry. Compensation consists of industry and market competitive base salaries as well as a combination of short-term and long-term incentive compensation programs. These short-term and long-term incentive programs, or pay-at-risk compensation, are designed to link outcomes directly to the achievement of individual and financial goals, strategic objectives, and stock price appreciation. Our benefits programs, which vary by location, generally include health and welfare benefits, paid time off, and other key programs to support the general well-being of our employees. A comprehensive paid parental leave program provides Aspen U.S. employees the financial security and flexibility to provide necessary care for themselves and their families; flexibility that improves productivity, job satisfaction and increases employee retention and engagement.

Employee Engagement and Workplace Culture

We respect and celebrate our employees by striving to create an inclusive environment in which people thrive. We need the best minds in the room to propel the next generation of sustainable solutions – key to which is promoting excellence, fairness, and opportunity across the organization. At Aspen, we are committed to building a culture and environment where every employee has the opportunity to achieve their ultimate potential. Fostering an environment centered on respect and dignity is core to our mission and is intended to ensure that every employee feels empowered and has the opportunity to contribute to improve our performance. An inclusive workplace culture and engaged, high-performing workforce is to our collective benefit as we all gain from tapping into a broader range of experiences, abilities, ideas, and perspectives. Our commitments include partnering with community organizations to cultivate a workforce that reflects and respects all expressions of individuality and supports the local regions in which we operate.

Community Engagement

Community and caring are at the heart of our culture, and we are proud to give back to the communities where we work and live. Aspen employees partner with community-based organizations to participate in local efforts to donate time, money, and goods.

Workforce Health & Safety

Aspen is committed to the health, safety and well-being of our employees and the communities in which we operate. Safety and health in our business must be part of every operation. We require a safety-first approach and cooperation in all safety matters, not only between supervisor and employee, but also among employees and contractors.

Business Ethics and Integrity

Our Code of Business Conduct and Ethics, as updated in November 2024, provides our employees with a clear understanding of the principles of business conduct and ethics that are expected of them and supports them with a framework for making ethical decisions in compliance with applicable law. It applies to the Company enterprise-wide and to all associates with whom Aspen conducts business.

Seasonality

Our energy industrial product offerings make us less susceptible to seasonal patterns as our operating results are generated in part by demand for insulation associated with new-build construction of facilities, capital expansions and related capital projects, and larger maintenance-related projects in the energy industrial market. Historically, our third and fourth quarter results have shown increased levels of revenue, which we believe is associated with our end-user customers' maintenance schedules and timing of capital projects. As we pursue and grow revenue opportunities in the EV market, we expect that a portion of our revenues may be subject to seasonal patterns typical of automotive suppliers.

Environmental Matters

We are subject to federal, state, local and foreign laws and regulations designed to protect the environment and to regulate the discharge of materials into the environment. We believe that our policies, practices, and procedures are properly designed to prevent unreasonable risk of environmental damage and associated financial liability. To date, environmental control regulations have not had a significant adverse effect on our overall operations. For additional information, see "Risk Factors — We may incur significant costs complying with environmental, health and safety laws and related claims, and failure to comply with these laws and regulations could expose us to significant liabilities, which could adversely affect our results of operations."

Item 1A. RISK FACTORS

Summary of Risk Factors

Our business is subject to numerous risks and uncertainties, including those highlighted in this section below, that represent challenges that we face in connection with the successful implementation of our strategy. The occurrence of one or more of the events or circumstances described in more detail in the risk factors below, alone or in combination with other events or circumstances, may have an adverse effect on our business, cash flows, financial condition and results of operations. Such risks include, but are not limited to:

- We previously incurred annual net losses, and we may incur net losses in the future and may never reach profitability.
- We will require additional capital to pursue our growth strategy, but we may not be able to obtain additional financing on acceptable terms or at all.
- Our efforts in developing, selling, and supplying products in EV market may subject us to increased financial, operational, and legal risks that could materially adversely impact our business, financial conditions, and results of operations and may also increase our costs and make it difficult for us to operate profitably.
- We have engaged third-party external manufacturing facilities in China to supplement our supply of our aerogel products. Our reliance on these external manufacturing facilities subjects us to operational, quality, regulatory, and geopolitical risks that could disrupt our supply chain, harm our reputation, and adversely affect our business operations.
- Our estimates regarding market opportunity for our products in the EV market and the assumptions on which our financial targets and our planned production capacity increases are based may prove to be inaccurate, which may cause our actual results to materially differ from such targets, which may adversely affect our future profitability, cash flows, and stock price.
- While we achieved positive operating cash flows for the fiscal years ended December 31, 2025 and 2024, our ability to continue generating positive cash flow is uncertain.
- Our working capital requirements involve estimates based on demand and production expectations and may decrease or increase beyond those currently anticipated, which could materially harm our results of operations and financial condition.
- Our relationships with automotive OEM customers involve multiple interconnected risks that could materially adversely impact our business, revenues, and profitability. These risks include but are not limited to being party to contracts without minimum commitments, pricing pressures, and cost reduction initiatives, selection of cell chemistries, battery pack system architectures, and customer market share and production declines.
- A substantial portion of our revenue comes from sales in foreign countries, and we are planning to further expand our operations outside of the United States, which subjects us to increased economic, trade, foreign exchange, operational, and political risks that could materially adversely impact our business, financial conditions and results of operations and also increase our costs and make it difficult for us to operate profitably.
- We rely on sales to a limited number of direct customers, including distributors, contractors, OEMs, partners and end-user customers for the substantial majority of our revenue, and the loss of one or more significant direct customers or several of our smaller direct customers could materially harm our business. In addition, we understand from our customers that a substantial majority of their sales of our products are to a small number of end-user customers and the loss of one or more significant end-user customers or several of our smaller end-user customers could materially harm our business.
- We are currently dependent on a single manufacturing facility located in East Providence, RI, as well as our third-party external manufacturing facilities in China. Any significant disruption to these facilities or the failure of any one of our three production lines in our East Providence, RI facility to operate

according to our expectation could have a material adverse effect on our business and results of operations.

- A sustained downturn in the energy industry, due to lower oil and gas prices or reduced energy demand, could decrease demand for some or all of our products and services, which could have a material adverse effect on our business, financial condition and results of operations.
- The insulation markets we serve are highly competitive. If we are unable to compete successfully, we may not be able to increase or maintain our market share and revenues.
- The qualification process for our products can be lengthy and unpredictable, potentially delaying adoption of our products and causing us to incur significant expense, potentially without recovery.
- Our revenue may fluctuate, which may result in a high degree of variability in our results of operations and make it difficult for us to plan based on our future outlook and to forecast our future performance, and the results of our operations could be materially adversely affected if our operating expenses incurred do not correspond with the timing of our revenues.
- We may face certain product liability or warranty claims on our products, including from improper installation of our products by third parties. Consequently, we could lose existing and future business and our ability to develop, market and sell our insulation could be harmed.
- We may incur significant costs complying with environmental, health and safety laws and related claims, and failure to comply with these laws and regulations could expose us to significant liabilities, which could materially adversely affect our results of operations.
- Breakdowns, security breaches, loss of data, and other disruptions of our information technology systems could compromise sensitive information related to our business, prevent us from accessing critical information, and expose us to liability, which would cause our business and reputation to suffer.
- Our ability to use our net operating loss carryforwards may be subject to limitation, which could result in a higher effective tax rate and adversely affect our financial condition and results of operations.
- We may be adversely affected by the effects of inflation.
- We or the third parties upon which we depend may be adversely affected by general political, unstable market and economic conditions, and other events beyond our control and our business continuity and disaster recovery plans may not adequately protect us from a serious disaster.
- Our inability to protect our intellectual property rights and trade secrets could negatively affect our business and results of operations.
- We have in the past initiated intellectual property litigation and any future intellectual property litigation may be costly, and could limit or invalidate our intellectual property rights, divert time and efforts away from business operations, require us to pay damages and/or costs and expenses and/or otherwise have a material adverse impact on our business, and we could become subject to additional such intellectual property litigation in the future.
- Because we are a public company, we are obligated to develop and maintain proper and effective internal control over financial reporting. If our internal controls over financial reporting are determined to be ineffective, or if our auditors are otherwise unable to attest to their effectiveness, investor confidence in our company, and our common stock price, may be adversely affected.
- Our stockholders may experience future dilution as a result of future equity offerings.

Risks Related to Our Business and Strategy

We previously incurred annual net losses, and we may incur net losses in the future and may never reach profitability.

We incurred net losses of $389.6 million, delivered net income of $13.4 million and incurred net losses of $45.8 million for the fiscal years ended December 31, 2025, 2024 and 2023, respectively. As of December 31, 2025, our accumulated deficit was $1,049.8 million. We may incur operating losses in the future as a result of expenses associated with the continued development and expansion of our business. Our expenses include research and development, sales and marketing, and general and administrative costs. Furthermore, these expenses are not the only factors that may contribute to our net losses. For example, interest expense that we incur on any future financing arrangements could contribute to our net losses. Any failure to increase revenue or manage our cost structure as we implement initiatives to grow our business could prevent us from achieving profitability, or sustaining profitability if we do achieve it. In addition, our ability to achieve profitability is subject to a number of risks and uncertainties discussed below, many of which are beyond our control. Failure to remain profitable may adversely affect the market price of our common stock and our ability to raise capital and continue operations.

We will require additional capital to pursue our growth strategy, but we may not be able to obtain additional financing on acceptable terms or at all.

The growth of our business will depend on additional capital for ongoing operating expenses and for continued development of our Aerogel Technology Platform. Our capital requirements will depend on many factors, including the rate of our revenue growth, our introduction of new products and technologies, our enhancements to existing products and technologies, and our expansion of sales and marketing and product development activities. We may raise capital through debt financings, equity financings, partner financings, and/or technology licensing agreements to fund these operating and capital expenditure requirements in 2026 and beyond. Any such investment in the development of our Aerogel Technology Platform or enhancements to existing products and technologies, as well as any future capital expenditures, will require us to raise substantial amounts of additional capital. There is no assurance that we will be able obtain any such type of financing on terms acceptable to us or at all and in a timely manner. The current economic landscape resulting in higher interest rates presents further challenges in obtaining financing on acceptable terms or at all.

In addition, we may consider strategic acquisitions of complementary businesses or technologies to grow our business, which would require significant capital and could increase our capital requirements related to future operation of the acquired business or technology.

We may not be able to obtain loans or raise additional capital on acceptable terms or at all. Any future credit facilities or debt instruments may contain restrictions, requirements and/or conditions that impact our ability to obtain needed capital. We may not be able to obtain bank credit arrangements or effect an equity or debt financing on terms acceptable to us or at all in order to fund our future capacity expansion plans. Any failure to obtain additional financing when needed could adversely affect our ability to maintain and grow our business.

While we achieved positive operating cash flows for the fiscal years ended December 31, 2025 and 2024, our ability to continue generating positive cash flow is uncertain.

To develop and expand our business, we have made significant up-front investments in our manufacturing capacity and have incurred, and will continue to incur, research and development, sales and marketing and general and administrative expenses. In addition, our growth has required a significant investment in working capital. While we experienced positive cash flows from operating activities of $32.9 million for the fiscal year ended December 31, 2025 and $45.5 million for the fiscal year ended December 31, 2024, we have historically experienced negative cash flows from operating activities, including $42.6 million for the fiscal year ended December 31, 2023. The negative cumulative cash flows from operating activities during 2023 were exacerbated by cash flows used in investing activities to maintain, enhance, and expand our manufacturing operations during the same time period.

While we expect our operating cash flow will be positive on an annual basis during 2026, we may not achieve sufficient revenue growth to generate positive cash flow in any future year. As a result, we may need to raise additional capital from investors to achieve our expected growth or to fund the working capital investment necessary to maintain operations. Any inability to generate positive future cash flow, to borrow funds or to raise additional capital on reasonable terms, if at all, may harm our short-term financial condition or threaten our long-term viability.

Our ability to use our net operating loss carryforwards may be subject to limitation, which could result in a higher effective tax rate and adversely affect our financial condition and results of operations.

During 2014 and in 2024, we performed analyses pursuant to Section 382 of the Internal Revenue Code of 1986, as amended (the Internal Revenue Code), as well as similar state provisions, to determine whether any limitations might exist on the utilization of net operating losses and other tax attributes. Generally, a change of more than 50% in the ownership of a company's stock, by value, over a three-year period constitutes an ownership change for U.S. federal income tax purposes. An ownership change may limit a company's ability to use its net operating loss carryforwards attributable to the period prior to such change. Based on our 2014 analyses, we determined that it is more likely than not that an ownership change occurred on June 18, 2014 upon the closing of our IPO, resulting in an annual limitation on the use of our net operating losses and other tax attributes as of such date. As a result, our prior net operating losses were limited to $155.2 million, including built-in gains of $42.0 million at the date of that ownership change. During the year ended December 31, 2024, we performed a Section 382 ownership analysis and determined that no ownership change had occurred (within the meaning of Section 382 of the Internal Revenue Code) as a result of our financings since our IPO. The use of our net operating loss carryforwards may be restricted in the future in the event of any changes in our ownership.

The terms of our Credit Agreement with MidCap require us to meet certain operating and financial covenants and/or place restrictions on our operating and financial flexibility. If we raise additional capital through debt financing, the terms of any new debt could further restrict our ability to operate our business.

On August 19, 2024, we and Aspen Aerogels Rhode Island, LLC, a Rhode Island limited liability company (Aspen RI and, together with the Company, each, a Borrower and collectively, the Borrowers) entered into a Credit, Security and Guaranty Agreement (the Credit Agreement and the facilities provided thereunder, collectively, the MidCap Loan Facility), by and among the Borrowers, MidCap Funding IV Trust, as agent (the Agent), MidCap Financial Trust, as term loan servicer, the financial institutions or other entities from time to time party thereto as lenders (the Lenders), and the other parties party thereto as additional guarantors and/or borrowers from time to time. On May 6, 2025, the Borrowers and Aspen Aerogels Georgia, LLC, a Georgia limited liability company (Aspen Georgia), entered into that certain Amendment No. 1 and Joinder to Credit, Security and Guaranty Agreement (Amendment No. 1), by and among the Borrowers, Aspen Georgia, the Agent and the Lenders party thereto, amending the MidCap Loan Facility, and on December 16, 2025, the Borrowers, Aspen Georgia, and Aspen Aerogels Mexico Holdings, LLC, a Delaware limited liability company (Aspen Mexico), entered into that certain Amendment No. 2 and Joinder to Credit, Security and Guaranty Agreement (Amendment No. 2), by and among the Borrowers, Aspen Georgia, Aspen Mexico, the Agent and the Lenders party thereto, further amending the MidCap Loan Facility (the MidCap Loan Facility, as amended by Amendment No. 1 and Amendment No. 2, the Amended MidCap Loan Facility). The proceeds of the Amended MidCap Loan Facility were used to repurchase our outstanding convertible note that was issued to Wood River Capital, LLC, an entity affiliated with Koch Disruptive Technologies, LLC, the payment of related fees and expenses and for working capital. Loans borrowed under the Amended MidCap Loan Facility mature on August 19, 2029.

The Amended MidCap Loan Facility is guaranteed by Aspen Mexico and Aspen Georgia (together with the Borrowers and any future subsidiaries that are required to become guarantors or borrowers pursuant to the terms of the Credit Agreement, collectively, the Loan Parties) and is secured by a lien on substantially all existing and after-acquired assets of the Loan Parties, including the equity interest in Aspen RI, Aspen Mexico and Aspen Georgia owned by us, in each case, subject to customary exceptions.

Pursuant to Amendment No. 1, the financial covenants under the MidCap Loan Facility were amended such that (a) the minimum Liquidity (as defined in the Amended MidCap Loan Facility) which must be maintained at all times has changed from $75 million to an amount equal to the greater of (i) $50 million and (ii) 85% of the then aggregate outstanding principal amount of the Term Loan Facility and (b) the minimum EBITDA level to be tested quarterly has changed to reflect a new range from $15 million to $50 million, with the next test set at $15 million with respect to the fiscal quarter ended June 30, 2025 and a $50 million level applicable commencing with the fiscal quarter ended December 31, 2027 and thereafter. The Liquidity amount trigger of a cash dominion event was also reduced from $100 million to an amount equal to the greater of (i) $50 million and (ii) 85% of the then aggregate outstanding principal amount of the Term Loan Facility.

Pursuant to Amendment No. 2, the financial covenants under the MidCap Loan Facility have been amended such that (a) the applicable minimum liquidity threshold (both for (i) the minimum liquidity financial covenant, which must be maintained by the Company at all times and (ii) the "Cash Dominion Event" definition for purposes of triggering cash dominion) has changed from (i) an amount equal to the greater of (x) $50 million and (y) 85% of the then aggregate outstanding principal amount of the Term Loan (as defined in the Amended MidCap Loan Facility) to (ii) an amount equal to the greater of (x) $50 million and (y) 100% of the then aggregate outstanding principal amount of the Term Loan and (b) the minimum EBITDA (as defined in the Amended MidCap Loan Facility) financial maintenance covenant has been removed entirely. In addition, the Amended MidCap Loan Facility includes representations and warranties, affirmative covenants (including reporting obligations), negative covenants and events of default that are usual and customary for facilities of this type, in each case, subject to certain permitted exceptions as set forth therein.

We are currently in compliance with the financial covenants set forth in the Amended MidCap Loan Facility and as described above. However, given the decline in our revenues in 2025 as compared to the prior year, there can be no assurance that we will comply with one or more of these financial covenants throughout 2026. If we default under the terms of the Amended MidCap Loan Facility beyond the applicable grace period, if any, the Lenders may declare all amounts outstanding under the Amended MidCap Loan Facility to be immediately due and payable and terminate all unused commitments to extend further credit under the Amended MidCap Loan Facility. If we are unable to repay the amounts due under the Amended MidCap Loan Facility upon such Lenders' declaration, the Lenders could proceed against the collateral granted to it to secure the obligations under the Amended MidCap Loan Facility (including, but not limited to, taking control of our pledged assets and foreclosing on other collateral). In the event of a default under the terms of the Amended MidCap Loan Facility, the Lenders could also require us to renegotiate the Amended MidCap Loan Facility on terms less favorable to us. Either the enforcement by the Lenders upon its declaration to accelerate the obligations under the Amended MidCap Loan Facility or the renegotiation of the Amended MidCap Loan Facility's terms, each as mentioned above, could adversely affect our operations. Further, if we are liquidated, the Lenders' right to repayment, as well as the right to repayment of other lenders under any additional debt financing, would be senior to the rights of the holders of our common stock. The Lenders' interests as lenders may not always be aligned with our interests. If our interests come into conflict with those of the Lenders, including in the event of a default or an Event of Default (as defined in the Amended MidCap Loan Facility) under the Amended MidCap Loan Facility, the Lenders may choose to act in its self-interest, which could adversely affect the success of our current and future collaborative efforts with the Lenders.

Our efforts in developing, selling, and supplying products in the EV market may subject us to increased financial, operational, and legal risks that could materially adversely impact our business, financial conditions, and results of operations and may also increase our costs and make it difficult for us to operate profitably.

We have a focus on developing and selling products in the automotive industry, specifically for EV applications. In 2020 and 2021, we entered into contracts with GM to supply our thermal barrier products for use in the battery system of its EVs, and in 2023, we entered into thermal barrier production contracts with Toyota, Scania, ACC, Audi, a luxury brand of the Volkswagen Group, Volvo Truck, and a large EU battery manufacturer to supply a next generation vehicle platform of a major EU luxury sports car brand. We are currently selling thermal barrier production parts to GM, Toyota, and ACC, among others, and prototype thermal barrier parts to a number of other companies. We are also continuing our efforts to develop additional thermal barrier products for sale to others in the EV market. As a result of our existing contract with GM and other OEMs, current sales to others in the EV market and any future supply of our products to the automotive industry, including through specific contracts, we are subject to a number of risks, including, but not limited to:

- Under our contracts with GM, they are not obligated to make any purchases from us and may terminate the contracts at any time. There can be no assurance that significant revenue, or any revenue at all, will result from the contracts. In 2025, GM reduced its demand for our aerogel product, which had a significant adverse impact on our business and operations. If GM further reduces their demand for our aerogel products, it could have a further adverse impact on our business and operations.
- In order to support the projections and estimates of our product demand that our potential automotive customers present to us, we made substantial capital and other investments without any assurance that such potential demand will materialize. For example, under a contract with GM, we are obligated to

supply products up to a daily maximum quantity even without a specific purchase commitment. This required us to invest in capacity, infrastructure and personnel. These investments resulted in substantial capital expenditures that may not result in any commensurate increase in revenue, or any increase at all. Even if significant sales of our products to automotive OEMs materialize, the need to make these significant capital investments, as well as the costs related to developing these products and related process and manufacturing developments, and the costs of meeting the stringent requirements of the automotive industry, could result in sales to the automotive industry being significantly less profitable than we expect, or potentially unprofitable.

- Automotive OEMs require that we timely meet stringent requirements with respect to capital investment and quality standards in connection with our efforts to develop, sell and support products for use in the EV market. We may not be able to meet these requirements on a timely basis or at all.
- Automotive OEMs require suppliers of various tiers to assume liability for ordinary warranty expenses and product liability issues that are not necessarily commensurate with the roles the supplier played in the development of the final product sold to the consumer. This could expose us to significantly greater risk of liability for warranty expenses and/or for defects, failures or accidents involving the final products sold to the consumer.
- Automotive OEMs purchasing from us may have certain rights to intellectual property developed by us in connection with our work for that OEM. These rights could permit the OEM to purchase products similar to ours from other third-party suppliers or to develop internally products that could replace our products in their manufacturing process.
- We face significant competition in selling our products to the automotive industry and anticipate that competition increasing over time, both from products similar to ours and from other technologies that may address in a superior fashion the technical issues currently addressed by our products. In particular, we face significant competition from Chinese firms, many of whom have longstanding experience in supplying EV OEMs and are part of a Chinese EV industry that we believe is in many ways more mature than the EV industry in the United States and other markets. In order to compete with such firms and sustainably participate in the automotive market, we will have to overcome the advantages possessed by those Chinese firms.
- EVs and battery technologies are evolving at a rapid pace. They may evolve in such a way as to render our products obsolete. While we are investing considerable capital and other resources based on what we believe to be the currently identified needs of the industry, our belief as to the current needs of the industry may be incorrect or our technology, products or other resources may not be applicable to the future needs of the industry.

Our ability to successfully sell our products to the automotive industry will depend in large part on our ability to manage these and other risks.

Our estimates regarding market opportunity for our products in the EV market and the assumptions on which our financial targets are based may prove to be inaccurate, which may cause our actual results to materially differ from such targets, which may adversely affect our future profitability, cash flows, and stock price.

Our estimates regarding market opportunity for our products in the EV market, the estimated awarded business of our thermal barrier business, the assumptions underlying our estimates regarding market opportunity, awarded business and our financial targets, including any revenue targets we may provide from time to time, are dependent on certain estimates and assumptions related to, among other things, demand for our products from our automotive OEM customers, development and launch of innovative new products, market share projections, product pricing and sale, volume and product mix, volatility, material prices, distribution, cost savings, and our ability to generate sufficient cash flow to reinvest in our existing business. Awarded business typically includes business under arrangements that our customers in the EV market have the right to terminate without penalty. If actual production orders from our EV market customers are not consistent with the projections we use in calculating the amount of our awarded business, we could realize substantially less revenue over the life of these projects. The

estimates and financial targets are based on estimates that our management believes are reasonable with respect to our future results of operations, based on present circumstances, and have not been reviewed by our independent accountants. Some assumptions upon which the estimates and financial targets are based, however, invariably will not materialize due to the inevitable occurrence of unanticipated events and circumstances beyond our management's control or the occurrence of events that were believed to be less likely to occur. Our estimates regarding market opportunity and our financial targets are based on historical experience and on various other estimates and assumptions that we believe to be reasonable under the circumstances and at the time they are made, and our actual results may differ materially from our expectations. Any material variation between our estimates and financial targets and our actual results may adversely affect our future profitability, cash flows and stock price.

Our working capital requirements involve estimates based on demand and production expectations and may decrease or increase beyond those currently anticipated, which could materially harm our results of operations and financial condition.

In order to fulfill the product delivery requirements of our direct and end-user customers, we plan for working capital needs in advance of customer orders. In particular, our OEM customers estimate and place their orders significantly in advance of the time they are needed, requiring us to plan our working capital needs well in advance of delivering their orders. As a result, we base our funding and inventory decisions on estimates of future demand. If demand for our products does not increase as quickly as we have estimated or drops off sharply, our inventory and expenses could rise, and our business and results of operations could suffer. Alternatively, if we experience sales in excess of our estimates, which has occurred in previous reporting periods, our working capital needs may be higher than currently anticipated. Additionally, our EV customers' forecasts have been and may continue to be prone to multiple and frequent revisions resulting in changing demand levels. Our ability to meet this excess or changing customer demand depends on our ability to arrange for additional financing for any ongoing working capital shortages, since it is likely that cash flow from sales will lag behind these investment requirements. If we are unable to obtain adequate financing when needed, it could adversely affect our ability to invest in the working capital required to maintain and grow our business.

Automotive OEM Customer Relationship Risks

Our relationships with automotive OEM customers involve multiple interconnected risks that could materially adversely impact our business, revenues, and profitability. These risks include but are not limited to being party to contracts without minimum commitments, pricing pressures, and cost reduction initiatives, selection of cell chemistries, battery pack system architectures, and customer market share and production declines.

We receive automotive OEM purchase orders for specific components supplied for particular vehicles. Typically, our automotive OEM customers agree to purchase their requirements for specific products but are not required to purchase any minimum quantity of products from us. Therefore, a significant decrease in demand for certain key models or groups of related models sold by any of our automotive OEM customers, a shift in our automotive OEM customers' purchasing strategy, or change in their battery form factor, or the ability of a manufacturer to re-source and discontinue from us for a particular model or group of models, could have a material adverse effect on us and reduce the value of the awarded business. To the extent that we do not maintain our existing business with our automotive OEM customers because of a decline in their production requirements or because the contracts expire or are terminated for convenience, we will need to attract new customers or gain new business with existing customers, or our results of operations and financial condition as well as the value of the awarded business will be adversely affected.

In addition, cost-cutting initiatives adopted by our customers in the EV market or our automotive OEM customers result in increased downward pressure on pricing. In addition, our customers in the EV market often reserve the right to terminate their supply contracts for convenience, which enhances their ability to obtain price reductions. Automotive OEMs also possess significant leverage over their suppliers, including us, because the automotive technology and component supply industry is highly competitive, serves a limited number of customers, has a high fixed cost base and historically has had excess capacity. Based on these factors, and the fact that our automotive OEM customers' product programs are anticipated to encompass large volumes, our customers are able

to negotiate favorable pricing. Accordingly, we are subject to substantial continuing pressure from automotive OEMs to reduce the price of our products. It is possible that pricing pressures beyond our expectations could intensify as automotive OEMs pursue restructuring and cost-cutting initiatives. If we are unable to generate sufficient production cost savings in the future to offset price reductions, our gross margin and profitability would be adversely affected.

Furthermore, trends in the selection of cell chemistries, battery pack system architectures, and the adoption of active cooling methods may reduce thermal complexities to render the demand for our thermal barrier products less obvious. Due to the safety issues, we believe that some vehicle manufacturers tend to select less thermally demanding and inherently safer cell chemistries and design choices at the expense of lower energy densities and lower driving range. Such systems may not present a demanding thermal problem requiring solutions like our thermal barrier products. If the EV landscape evolves in such direction, the demand for our products will not materialize, which will have a material adverse effect on our business and operations.

Our current thermal barrier product is compatible with pouch and prismatic cells, but not cylindrical cells. If our customers were to use cylindrical cells for their platform, our current thermal barrier product would not be compatible, resulting in reduced demand for our product from one of our OEM customers, which would adversely affect our business and results of operations.

In the future, we anticipate receiving a large proportion of our revenue in the EV market, particularly from automotive OEM customers. Accordingly, our revenues may be adversely affected by decreases in any of their businesses or market share. For instance, a worldwide semiconductor shortage adversely impacted the automotive industry in 2022, 2021 and 2020, resulting in reduced vehicle production schedules and sales from historical levels. Such events in the future could adversely impact our financial condition, operating results and cash flows and could reduce the value of the awarded business and our revenue targets. Furthermore, because our customers typically have no obligation to purchase a specific quantity of parts, a decline in the production levels of any of our major customers, particularly with respect to EV models for which we become a significant supplier, could reduce our sales and thereby adversely affect our financial condition, operating results and cash flows and could reduce the value of the awarded business and our revenue targets.

Our success in the EV market is dependent upon consumers' willingness to purchase and use EVs and demand for EVs generally.

Our success in the EV market is highly dependent upon the purchase and use by consumers of EVs. If the market for EVs does not gain broad market acceptance or develops more slowly than we anticipate, our business, prospects, financial condition, and operating results will be harmed. The market for EVs is relatively new, rapidly evolving, characterized by rapidly changing technologies, price competition, additional competitors, evolving government regulation and industry standards, frequent new vehicle announcements, long development cycles for EVs OEMs, and changing consumer demands and behaviors. Factors that may influence the purchase and use of EVs include:

- perceptions about EV quality, safety (in particular with respect to lithium-ion battery packs), design, performance and cost, especially if adverse events or accidents occur that are linked to the quality or safety of EVs;
- perceptions about vehicle safety in general and, in particular, safety issues that may be attributed to the use of advanced technology, including vehicle electronics and regenerative braking systems;
- the decline of an EV's range resulting from (i) deterioration over time in the battery's ability to hold a charge or (ii) operation in colder weather;
- concerns about electric grid capacity and reliability, which could derail efforts to promote EVs as a practical solution to vehicles that require gasoline;
- the environmental consciousness of consumers;
- volatility in the cost of oil and gasoline;

- safety concerns around EVs generally and battery systems in particular; and
- access to charging stations, standardization of EVs charging systems and consumers' perceptions about convenience and cost to charge an EV.

The influence of any of the factors described above may cause current or potential customers not to purchase EVs and could impact the widespread consumer adoption of EVs, which would materially adversely affect our business, operating results, financial condition and prospects.

In addition, there has been an increase in consumer preferences for mobility on demand services, such as car- and ride-sharing, as opposed to automobile ownership, which may result in a long-term reduction in the number of vehicles per capita and in turn result in lower demand for our products in the EV market. These evolving areas have also attracted increased competition from entrants outside the traditional automotive industry. If we do not continue to respond quickly and effectively to this evolutionary process, our results of operations could be adversely impacted.

Failure by us to develop, maintain and strengthen strategic relationships with industry leaders to commercialize our products in the EV market may adversely affect our results of operations and our ability to grow our business.

Our business strategy requires us to align the design and performance attributes of our products and technologies to the evolving needs of the market. To facilitate this process, we have sought out partnerships and relationships with industry leaders in order to assist in the development and commercialization of our products. We face competition from other manufacturers of insulation, thermal barriers and similar products in seeking out and entering into such partnerships and relationships with industry leaders in our targeted EV market and we may therefore not be successful in establishing and maintaining strategic relationships in those markets.

We will continue engage with EV manufacturers to realize the full potential of our Aerogel Technology Platform within the EV market. In the event that we are unable to engage with additional industry leaders or to develop products that meet market needs, we may be less able or unable to penetrate that market. As a result, we may lessen or lose our ability to grow our business in the EV market that could adversely affect our business, financial condition and results of operations, including impairing our profitability.

We are currently dependent on a single manufacturing facility located in East Providence, RI, as well as our third-party external manufacturing facilities in China. Any significant disruption to these facilities or the failure of any one of our three production lines in our East Providence, RI facility to operate according to our expectation could have a material adverse effect on our business and results of operations.

While we plan to make additional productivity improvements in our existing East Providence facility, we are currently reliant on the three production lines in a single manufacturing facility located in East Providence, Rhode Island, as well as our third-party external manufacturing facility in China to meet our customers' demands. Our ability to meet the demands of our customers depends on efficient, proper and uninterrupted operations at our East Providence facility and our external manufacturing facility in China. Accordingly, in the event of a significant disruption to our sole manufacturing facility or third-party external manufacturing facilities in China, or breakdown of any of the production lines at our sole manufacturing facility in East Providence, we currently do not expect that we would have sufficient inventory in stock to meet demand until the production lines return to operation or our third-party external manufacturing facilities in China deliver the required aerogel products.

In addition, power failures or disruptions, the breakdown, failure, or substandard performance of equipment, or the damage or destruction of buildings and other facilities due to fire or natural disasters could severely affect our ability to continue our operations. In the event of such disruptions, we are unlikely to find suitable alternatives or may not be able to make needed repairs on a timely basis and at reasonable cost, which could have a material adverse effect on our business and results of operations. In particular, our manufacturing processes include the use of high pressures, high temperatures, and flammable chemicals, which subject us to a significant risk of loss resulting from fire, spill, or related event. In February 2026, there was a fire at our manufacturing facility in East

Providence, Rhode Island, which damaged one of our emissions control units and rendered it inoperable. We are in the process of replacing the damaged emissions control unit with a new unit, but do not expect to have the replacement online and fully functional until the second half of 2026. Until the damaged emissions control unit is replaced, we are reliant on our one remaining emissions control unit, which is older and smaller than the damaged control unit, to continue manufacturing operations at our East Providence facility and to meet customer demand for certain of our products. Assuming the continued successful operation of our remaining emissions control unit, we expect to be able to meet current levels of anticipated demand for our products. However, if demand increases materially before our damaged emissions control unit is replaced, we may not be able to meet customer demand, which may have a material adverse impact on our business and operations. In addition, if the remaining emissions control unit were to fail or otherwise cease to operate before the damaged unit is replaced, we may not be able to manufacture product at our East Providence facility, which may also have a material adverse impact on our business and operations.

The insurance policies we maintain to cover losses caused by fire or natural disaster, including business interruption insurance, may not adequately compensate us for any such losses and will not address a loss of customers that we expect would result or may have large deductibles insufficient to support our continuing operations.

We have engaged third-party external manufacturing facilities in China to supplement our supply of our aerogel products. Our reliance on these external manufacturing facilities subjects us to operational, quality, regulatory, and geopolitical risks that could disrupt our supply chain, harm our reputation, and adversely affect our business operations.

We have engaged external manufacturing facilities in China for a supplemental supply of our aerogel products. We expect to meet our long-term aerogel demand by maximizing capacity at our East Providence facility and utilizing a flexible supply strategy, including but not limited to using our external manufacturing capabilities in China, which currently support our Energy Industrial segment and are capable of delivering increased aerogel production capacity. If our external manufacturing facilities are unable to deliver the required aerogel product on a timely basis, we may experience delays in delivering our finished aerogel product to customers in the energy industrial market. In addition, because our third-party external manufacturing facilities have manufacturing facilities in China, their ability to provide us with adequate supplies of high-quality products on a timely and cost-efficient basis is subject to a number of additional risks and uncertainties, including political, social and economic instability and other factors that could impact the shipment of supplies. In 2022, the indirect parent of the external manufacturing facility we engaged in 2023 was added to the list of “Chinese military companies” that are “operating directly or indirectly in the United States” in accordance with Section 1260H of the National Defense Authorization Act for Fiscal Year 2021. There are certain government contract related restrictions that are or will be imposed on Section 1260H list entities and their controlled affiliates. While we currently have no contracts that would be affected by these restrictions, and the legal impact of being included on the list is relatively limited, our work with a listed entity may have a material adverse effect on our reputation and our business opportunities. If our manufacturers are unable to provide us with adequate supplies of high-quality aerogel products on a timely and cost-efficient basis, our operations could be disrupted and our revenue and business operations may suffer. Moreover, if our third-party external manufacturing facilities cannot consistently produce high-quality products that are free of defects and/or violates applicable worker or product safety rules, regulations or laws, we may experience a loss of customers, which may also reduce our revenues and may harm our reputation and brand. Furthermore, our third-party external manufacturing facilities may become subject to various supply chain disruptions, including for key inputs into their manufacturing process such as methanol. Such disruptions could be the result of pandemics or public health crises, and/or geopolitical disputes and conflicts, any of which could slow or halt the delivery of products to us and increase the price of certain materials due to resulting increases in costs of raw materials and shipping costs.

We are party to a production contract with a contract manufacturer in China to produce certain of our aerogel products. Pursuant to the contract, the contract manufacturer is obligated to deliver products to us as we issue purchase orders on an as needed basis through the term of the agreement, which expires in 2026. The term of the contract will automatically extend for additional one-year periods unless either party notifies the other of its intention not to renew the contract. While we have agreed to purchase our requirement for certain aerogel products,

we have no obligation to purchase any minimum quantity under the contract. In addition, we may terminate the contract at any time and for any or no reason. As of December 31, 2025, we had open purchase orders with the contract manufacturer of approximately $5.9 million.

Furthermore, our external manufacturing facility in China is subject to risks and uncertainties relating to the laws and regulations of China and the changes in relations between the United States and China. If the Chinese government determines that our manufacturing facility does not comply with applicable regulations, our business could be adversely affected. If the regulatory agencies of the People's Republic of China (the PRC) determine that the agreements that establish the structure and relationship for our operations in China do not comply with PRC regulatory restrictions on foreign investment, we could be subject to severe penalties. The PRC has broad discretion in dealing with violations of laws and regulations, including levying fines, revoking business and other licenses and requiring actions necessary for compliance. In particular, licenses and permits issued or granted by relevant governmental agencies may be revoked at a later time by other regulatory agencies. We cannot predict the effect of the interpretation of existing or new PRC laws or regulations on our business. Any of these or similar actions could significantly disrupt our operations or restrict us from conducting a substantial portion of our operations, which could materially and adversely affect our business, financial condition and results of operations.

Under its current leadership, the government of China has been pursuing economic reform policies, including by encouraging foreign trade and investment. However, there is no assurance that the Chinese government will continue to pursue such policies, that such policies will be successfully implemented, that such policies will not be significantly altered, or that such policies will be beneficial to our partnerships or activities in China. Additionally, the U.S. government has called for substantial changes to foreign trade policy with China and has raised, and has proposed to further raise in the future, tariffs on several Chinese goods. China has retaliated with increased tariffs on U.S. goods. In February 2026, the U.S. Supreme Court issued a ruling striking down certain tariffs previously imposed under the International Emergency Economic Powers Act ("IEEPA"). Following the Supreme Court's decision, the U.S. presidential administration announced its intention to invoke other laws to collect tariffs and announced new tariffs on imports from all countries, in addition to any existing non-IEEPA tariffs. Any further changes in U.S. trade policy could trigger retaliatory actions by affected countries, including China, resulting in trade wars.

We may encounter manufacturing challenges in the EV market.

The volume and timing of sales to our customers in the EV market may vary due to a wide range of factors, including but not limited to, variation in demand for our customers' products; our customers' attempts to manage their inventory; design changes; changes in our customers' manufacturing strategy; our customers' production schedules; acquisitions of or consolidations among customers; and disruptions in the supply of raw materials or other supplies used in our customers' products. Due in part to these factors, we believe that many of our automotive OEM customers and customers in the EV market do not commit to long-term production schedules. Our inability to forecast the level of customer orders with certainty makes it difficult to schedule production and maximize utilization of manufacturing capacity.

From time to time, we have underutilized our manufacturing lines. This excess capacity means we incur increased fixed costs in our products relative to the net revenue we generate, which could have an adverse effect on our results of operations, particularly during economic downturns. If we are unable to improve utilization levels for these manufacturing lines and correctly manage capacity, the increased expense levels will have an adverse effect on our business, financial condition and results of operations. In addition, we are operating a fabrication facility in Mexico. Facilities located in Mexico or other countries are subject to a number of additional risks and uncertainties, including increasing labor costs, which may result from market demand or other factors, political, social and economic instability, difficulty in enforcing agreements, or unexpected changes in laws, regulations or policy. Additionally, our manufacturing activities in Mexico and China may also be adversely affected by political events, terrorist events and hostilities, complications due to natural, nuclear or other disasters or the spread of an infectious disease, virus or other widespread illness. These uncertainties could have a material adverse effect on the continuity of our business and our results of operations and financial condition.

From time to time, we have had difficulty in consistently producing products that meet applicable product specifications and technical and delivery requirements, and such difficulties could expose us to financial, contractual, or other liabilities.

Our insulation products are technologically advanced and require a precise and complex manufacturing process. Because of the precision and complexity of this manufacturing process and the high-performance characteristics of our products, from time to time we have had difficulty in consistently producing products that meet applicable specifications and technical and delivery requirements, including our customer and end-user specifications and requirements. In the future we, or our third-party external manufacturing facilities in China, may have difficulty in consistently producing products that meet applicable specifications and technical and deliver requirements. At certain times in the past, the growth in demand for our products has contributed to this difficulty by putting significant pressure on our management, our personnel and our production facilities.

Furthermore, we seek to lower our manufacturing costs, while maintaining appropriate performance characteristics, and to improve the per square foot costs of our silica aerogel blankets by optimizing our formulations to reduce material costs. Any failure to meet the specifications for our products as a result of our attempts to optimize our formulations, or otherwise, or technical and delivery requirements could result in the termination of existing customer contracts or purchase orders, the elimination or reduction of future purchase orders, the impairment of customer relationships, and the incurrence of financial, contractual or other liabilities. Products that do not meet these specifications or requirements may also expose us to warranty and product liability claims and associated adverse publicity. Any such termination, reduction, impairment, liability or publicity could result in a broader loss of existing customers and revenues and delay the execution of our business plans, disrupt our operations and could have a material adverse effect on our results of operations and financial condition.

A substantial portion of our revenue comes from sales in foreign countries, and we are planning to further expand our operations outside of the United States, which subjects us to increased economic, trade, foreign exchange, operational, and political risks that could materially adversely impact our business, financial conditions and results of operations and also increase our costs and make it difficult for us to operate profitably.

A substantial portion of our sales are to destinations outside of the United States, including Mexico, China, United Arab Emirates, Thailand, Malaysia, Sweden, France, Singapore, South Korea, Canada, Japan, and Australia. Total revenue generated from outside of the United States, based on our shipment destination, amounted to $99.0 million or 37% of total revenue, $194.2 million or 43% of total revenue and $87.7 million or 37% of total revenue, for the fiscal years ended December 31, 2025, 2024 and 2023, respectively. Furthermore, we rely on our external manufacturing capabilities in China, which currently support our Energy Industrial segment and are capable of delivering increased aerogel production capacity. In addition, we began operating an automated fabrication facility in Mexico and commenced operations during 2022.

As a result, we are subject to a number of risks, including, but not limited to:

- the effect of applicable U.S. and foreign tax structures, including tax rates that may be higher than tax rates in the United States or taxes that may be duplicative of those imposed in the United States;
- trade relations among the United States and those foreign countries in which our customers and suppliers have operations, including protectionist measures such as tariffs and import or export licensing requirements, whether imposed by the United States or such foreign countries, in particular the strained trade relations between the United States and China since 2018;
- general economic and political conditions in each country, which may interfere with, among other things, our supply chain, our customers and all of our activities in a particular location;
- difficulty in the enforcement of contractual obligations in non-U.S. jurisdictions and the collection of accounts receivable from foreign accounts;
- different regulatory regimes in the various countries in which we operate or sell our products;
- inadequate intellectual property protection in foreign countries;

- the difficulties and increased expense in complying with multiple and potentially conflicting domestic and foreign laws, regulations, product approvals and trade standards, including the U.S. Foreign Corrupt Practices Act, or FCPA, and similar anti-bribery laws in non-U.S. jurisdictions, as well as the rules and regulations of the U.S. Department of Treasury's Office of Foreign Assets Control, or OFAC, and similar sanctions laws;
- foreign currency exchange controls, restrictions and fluctuations, which could result in reduced revenue and increased operating expense;
- transportation delays or interruptions;
- labor rules and collective bargaining arrangements in foreign jurisdictions, particularly in Mexico, where the majority of our employees are represented by a labor union and subject to a collective bargaining agreement;
- difficulty in staffing and managing (including ensuring compliance with internal policies and controls) geographically widespread operations; and
- armed conflicts, terrorist activity, and political unrest, particularly given the use of our products at energy facilities.

Additionally, we have generated revenue from LNG projects located in Russia in recent years. The current Russian-Ukrainian conflict and the emerging response from western nations, including sanctions, may have an adverse effect on our revenue and results of operations.

In addition, sales of our products are generally conducted in U.S. dollars, and we also bid for foreign projects in U.S. dollars. The strengthening of the U.S. dollar against the local currencies in the countries into which we sell our products may result in our products becoming more expensive relative to competing insulation products priced in local currencies. If the U.S. dollar strengthens, our sales into foreign countries with relatively weaker currencies may be adversely impacted, and we may be less competitive in bidding for projects in those markets.

Inadequate funding for the SEC and other government agencies, or a work slowdown or stoppage at those agencies as part of a broader federal government shutdown, could hinder their ability to hire and retain key leadership and other personnel, prevent new products and services from being developed or commercialized in a timely manner, or otherwise prevent those agencies from performing normal business functions on which the operation of our business may rely, which could negatively impact our business.

The ability of governmental agencies to meet their mandates can be affected by a variety of factors, including government budget and funding levels, the ability to hire and retain key personnel, and statutory, regulatory, and policy changes. Government funding of the SEC and other government agencies on which our operations may rely, including those that fund research and development activities, is subject to the political process, which is inherently fluid and unpredictable. For example, over the last several years, the U.S. government has shut down several times, most recently in October 2025, resulting in certain regulatory agencies such as the SEC furloughing critical employees and suspending critical activities. In early 2025, following the inauguration of President Trump, the Trump Administration began implementing a large-scale reduction of the federal government workforce as well as major organizational changes and consolidating throughout the executive branch. The impact of mass layoffs at governmental offices with which we interact is unclear at this time, and organizational changes remain fluid. If a prolonged government shutdown or slowdown occurs, or a significant reduction in force makes it difficult for offices with which we interact to respond timely, it could have a material adverse effect on our business. Further, the ongoing or future government shutdowns could impact our ability to access the public markets and obtain necessary capital in order to properly capitalize and continue our operations.

Changes in U.S. trade policy and the impact of tariffs may have a material adverse effect on our business, results of operations and financial condition. Changes in the U.S. regulatory framework may also impact EV demand, which could have a material adverse effect on our business, results of operations and financial condition.

Our business, results of operations and financial condition may be adversely affected by uncertainty and changes in U.S. trade policies, including tariffs, quotas, trade agreements or other trade restrictions imposed by the U.S. or other governments. For example, in April 2025, the U.S. government announced a 10% tariff on product imports from almost all countries and individualized higher tariffs on certain other countries. On October 10, 2025 the U.S. Government announced a 100% tariff on all product imports from China, bringing the total China tariff rate to 130% tariff effective November 1, 2025. While several tariff announcements have been followed by announcements of limited exemptions and temporary pauses, in February 2026, the U.S. Supreme Court issued a ruling striking down certain tariffs previously imposed under the IEEPA. Following the Supreme Court's decision, the U.S. presidential administration announced its intention to invoke other laws to collect tariffs and announced new tariffs on imports from all countries, in addition to any existing non-IEEPA tariffs. These actions have caused substantial uncertainty and volatility in financial markets and may result in retaliatory measures on U.S. goods.

Our business requires access to materials to manufacture our products, some of which we source from suppliers located outside the United States. Any imposition of or increase in tariffs or other restrictions on imports of materials on which our products rely, as well as corresponding price increases for such materials available domestically, if any, could increase our costs. We would likely be unable to pass all or any such cost increases on to our customers and such cost increases could materially and adversely affect our business, results of operations and financial condition, including our gross margin.

Tariffs or other trade restrictions may lead to continuing uncertainty and volatility in U.S. and global financial and economic conditions and commodity markets, declining consumer confidence, significant inflation and diminished expectations for the economy. Such conditions could have a material adverse impact on our business, results of operations and financial position. Also, disruptions and volatility in the financial markets may lead to adverse changes in the availability, terms and cost of capital. Such adverse changes could increase our costs of capital and limit our access to external financing sources.

Additionally, while EV sales grew in prior years, EV demand has begun to stabilize in the United States and may decline in future years as result of the changing regulatory framework in the United States, including elimination of the federal EV tax credit. Consumers continue to express concerns with respect to access to charging infrastructure, affordability and battery range, which may limit broader adoption of EVs. If EV demand remains uncertain or reduces while OEMs continue to shift product strategies and production plans, there could be a material adverse effect on our business and results of operations. As discussed above, since taking office in January 2025, President Trump issued a series of executive orders, including an executive order eliminating the EV mandate. The One Big Beautiful Bill Act, which was signed into law in July 2025, eliminates multiple credits previously made available for new and used EVs. Significant shifts to increase or decrease EV demand could have material impacts on the operations of our OEM partners, which could lead to a material adverse effect on our business and our results of operations.

We rely on sales to a limited number of direct customers, including distributors, contractors, OEMs, partners and end-user customers for the substantial majority of our revenue, and the loss of one or more significant direct customers or several of our smaller direct customers could materially harm our business. In addition, we understand from our customers that a substantial majority of their sales of our products are to a small number of end-user customers and the loss of one or more significant end-user customers or several of our smaller end-user customers could materially harm our business.

A substantial majority of our revenue is generated from sales to a limited number of direct customers, including distributors, contractors, OEMs, partners and end-user customers. For the fiscal years ended December 31, 2025, 2024 and 2023, total revenue from our top ten direct customers represented 84%, 84% and 80% of our revenues, respectively. GM and Distribution represented 59% and 9% of our total revenue in 2025, respectively; 64% and 6% of our total revenue in 2024, respectively; and 41% and 14% of our total revenue in 2023, respectively. Although the composition of our significant distributors, contractors, OEMs, partners and end-user customers will vary from period to period, we expect that most of our revenues will continue, for the foreseeable future, to come from sales to a relatively small number of direct customers. In addition, we understand from our direct customers that a substantial majority of their sales of our products are to a small number of end-user customers.

Our direct customer concentration also creates accounts receivable concentrations and related risks. As of December 31, 2025, GM and Distribution accounted for 41% and 13% of our accounts receivable, respectively.

A substantial amount of our expected sales in the EV market in 2026 are expected to be to a single customer. The substantial majority of our sales to distributors are transacted on a purchase order basis. The contracts we enter into with our direct customers generally do not include long-term commitments or minimum volumes that ensure future sales of our products. In addition, we understand that our direct customers' contracts with end-user customers also generally do not include such commitments or minimums. Consequently, our results of operations may fluctuate significantly from period-to-period based on the actions of one or more significant direct customers or end-user customers.

A direct customer may take actions that affect us for reasons that we cannot anticipate or control, such as reasons related to an end-user customer's financial condition, contractual arrangements with end-user customers, changes in business strategy or operations, the introduction of alternative competing products, or as the result of the perceived quality or cost-effectiveness of our products. Our agreements with these direct customers may be canceled if we fail to meet certain product specifications or materially breach the agreement or for other reasons outside of our control. In addition, our direct customers may seek to renegotiate the terms of current agreements upon maturity or renewal. The loss of, or a reduction in sales or anticipated sales to, one or more of our significant direct customers or end-user customers or several of our smaller direct customers or end-user customers could have a material adverse effect on our business, financial condition, and results of operations.

Shortages of the raw materials used in the production of our products, increases in the cost of such materials or disruptions in our supply chain could have a material adverse impact on our financial condition and results of operations.

The raw materials used in the production of our products consist primarily of fiber battings, silica precursors, CO_2 and other additives. In addition, the production process requires the use of process gases and other materials typical to the chemical processing industry, as well as access to electricity, natural gas, water, and other basic utilities. Although we are not dependent on a single supplier, we are dependent on the ability of our third-party suppliers to supply such materials on a timely and consistent basis. While these materials and utilities are available from numerous sources, they may be, and have been in the past, subject to fluctuations in availability and price.

In addition, our third-party suppliers may not dedicate sufficient resources to meet our scheduled delivery requirements or our suppliers may not have sufficient resources to satisfy our requirements during any period of sustained or growing demand. Failure of suppliers to supply, delays in supplying or disruptions in the supply chain for our raw materials, or adverse allocations in the supply of certain high demand raw materials could materially adversely affect the results of our operations. Supply disruptions may affect our ability to meet contractual commitments or delivery schedules on a timely basis and could materially negatively impact our results of operations.

Most of our raw materials are procured through individual purchase orders or short-term contracts and not through long-term contracts that ensure a fixed price or guaranteed supply for an extended period. This procurement strategy may not support sustained long-term supply chain stability. Fluctuations in the prices of these raw materials could have a material adverse effect on our results of operations. Our suppliers also seek alternative uses for our raw materials at higher price points. Such competitive uses for our raw materials create material price and availability risks to our business. In addition, our ability to pass increases in raw material prices on to our customers is limited due to competitive pricing pressure and the time lag between the increase in costs and the implementation of related price increases.

In particular, we purchase a variety of silica precursors from several suppliers, mostly pursuant to individual purchase orders or short-term contracts and not pursuant to long-term contracts. We do not have a secure, long-term supply of all of our silica precursors. We may not be able to establish arrangements for secure, long-term silica precursor supplies at prices consistent with our current costs or may incur a delay in supply while we seek alternative sources. From time-to-time, we experienced a significant increase in the price of certain silica precursors due to a supply imbalance or other factors in the silanes market. While we seek to reformulate our products to

reduce our reliance on materials that are susceptible to significant price fluctuations, while maintaining appropriate performance characteristics, our efforts may not be successful. Any inability to continue to purchase silica precursors without long-term agreements in place, or to establish a long-term supply of silica precursors at prices consistent with our current cost estimates, would have a material adverse effect on our ability to increase our sales and achieve profitability.

To keep pace with expected future demand for our products and to diversify our supply chain, we are planning to expand the supply of raw materials available to us by securing commitments to expand supply from existing raw material suppliers and by identifying and qualifying additional suppliers of critical raw materials. However, our efforts to expand the supply of raw materials may not be successful or could lead to significant increase in our raw material costs. Any such failure or increase in raw material costs would have a material adverse effect on our ability to increase our sales or to achieve profitability.

In light of the increased demand for many of our raw materials, we have expanded our supplier base beyond North America, to Europe and Asia, and specifically to China. We do not have considerable experience managing issues arising out of this globalized supply chain and these risks are significantly magnified during global supply chain disturbances. If such disturbances persist and manifest in different forms, they present additional substantial operational difficulties that would have a material adverse effect on our ability to meet our customer demands or fulfill our contractual obligations to our customers.

Additionally, our suppliers may prioritize their resources for any long-term commitments to third parties and to our detriment. We may not be in a position to find alternate suppliers in a timely manner to continue to operate consistent with our obligations to or expectations of our customers.

A sustained downturn in the energy industry, due to lower oil and gas prices or reduced energy demand, could decrease demand for some or all of our products and services, which could have a material adverse effect on our business, financial condition and results of operations.

Demand for a significant portion of our products and services in the energy industrial and sustainable insulation materials industry depends on the level of capital expenditure by companies in the energy industry, which depends, in part, on current and expected energy prices. Prices of oil and gas have been highly volatile in the past several years with oil prices reaching a high above $100 per barrel in mid-2014 to a low below $12 per barrel in early 2020, and in 2022, climbing to over $90 per barrel. The volatility in oil prices and declines in oil prices, which are often associated with unrelated world events, such as the conflict between Russia and Ukraine and political instability in Ukraine, as well as the conflicts in the Middle East and tensions between China and Taiwan, and other areas in the world, have resulted, from time to time, in a reduction in capital expenditures by many companies in the energy industry, and in particular by end-users of our products involved in the construction and expansion of offshore and onshore oil and gas production facilities. Sustained lower energy prices may also reduce our energy industrial and sustainable insulation materials end-users' need to improve energy savings by using premium-priced insulation products like ours, thus reducing demand for our products and causing downward pressure on the pricing of our products. A sustained downturn in the capital expenditures of our energy industrial and sustainable insulation materials customers, whether due to periods of lower energy prices or a further decrease in the market price of oil and gas or otherwise, and including the perception that such a downturn might occur or continue, may delay capital projects, decrease demand for our products and cause downward pressure on the prices we charge for our products, which, in turn, could have a material adverse effect on our business, financial condition and results of operations. Such downturns, including the perception that they might occur or continue, could have a significant negative impact on the market price of our common stock.

The market for insulation products incorporating aerogel blankets is relatively undeveloped and our products may never be widely adopted, which would have a material adverse effect on our business.

The market for insulation products utilizing aerogel blankets is relatively undeveloped. Accordingly, our future results of operations will depend in large part on our ability to gain market share of the global energy industrial and sustainable insulation materials markets as well as the EV industry. Our ability to gain market share in these markets is highly dependent on the acceptance of our products by large, well-established end-users,

distributors, contractors, and OEMs. The insulation market has historically been slow to adopt new technologies and products. Most insulation types currently in use in the energy industrial and sustainable insulation materials markets were developed over 50 years ago. In addition, there is a tendency of end-users in some of our markets to opt for the lower short-term costs associated with traditional insulation materials. If we fail to educate existing and potential end-users, distributors, contractors, and OEMs of the benefits and value offered by our aerogel products, or if existing users of our products no longer rely on aerogel insulation for their insulation needs, our ability to sell our products and grow our revenue could be limited.

Our business strategy also includes the development of next generation products with the performance characteristics and price points required by markets outside of the energy industrial and sustainable insulation materials markets, including the EV market. These performance and price requirements can be more demanding than those we faced in energy industrial and sustainable insulation materials markets. In the event that we are unable to develop products that meet market needs, we may be unable to penetrate such markets. In addition, the development of innovative product and manufacturing methods requires the dedication of significant human, technical and financial resources, with no certainty of success or recovery of our related investment. As a result, we may be unable to grow our business in markets outside of the energy industrial and sustainable insulation materials markets, which could adversely affect our financial performance.

Because we are often a new supplier offering new types of materials to our end-user customers, we also may face concerns from these end-user customers about our reliability and our ability to produce our products in a volume sufficient to meet their supply and quality control needs. As a result, we may experience a reluctance or unwillingness by existing end-user customers to expand their use of our products and by potential end-user customers to begin using our products. Our products may never reach mass adoption, and changes or advances in technologies could adversely affect the demand for our products.

A failure to increase, or a decrease in, demand for aerogel insulation products caused by lack of end-user, market or distribution channel acceptance, technological challenges or competing technologies and products would result in a lower revenue growth rate or decreased revenue, either of which could have a material adverse effect on our business and our results of operations.

Our products are expensive relative to other insulation products, which could make it more difficult for us to grow our revenue and achieve broader adoption of our aerogel products.

While we believe our products have superior performance attributes and may sometimes have the lowest cost on a fully installed basis or offer life-cycle cost savings, our competitors offer many traditional insulation products that are priced below our products. Our products are expensive relative to alternative insulation products and end-user customers may not value our products' performance attributes sufficiently to pay their premium price. This could make it more difficult for us to grow our revenue and achieve broader adoption of our aerogel products. While we seek to lower our manufacturing costs, while maintaining appropriate performance characteristics, and to improve the per square foot costs of our silica aerogel blankets by optimizing our formulations to reduce material costs, we may not be successful in doing so. In addition, some of the benefits of our products are based on reduced installation time and related labor expense. In regions where labor costs are significantly lower than in the United States and Europe, the cost benefits of reduced installation times may not be adequate to overcome the relatively high price of our products and may make it more difficult for us to grow our revenue in those regions.

The insulation markets we serve are highly competitive. If we are unable to compete successfully, we may not be able to increase or maintain our market share and revenues.

We face strong competition primarily from established manufacturers of traditional insulation materials. Large producers of traditional insulation materials, such as Johns Mansville, Saint-Gobain, Knauf Gips, Owens Corning and Rockwool, dominate the insulation market. In addition, we face increasing competition from other companies seeking to develop high-performance insulation materials, including aerogel insulation. We are aware of competitors including Armacell International S.A., JIOS Aerogel Pte. Ltd., Unifrax Holding Co. (Alkegen), Beerenberg AS, Guangdong Alison Hi-Tech Co., Ltd., Nano Tech Co., Ltd., Beerenberg AS, IBIH Advanced Materials Co., Ltd., Nameite New Materials Technology Co., Ltd., Guizhou Aerospace Wujiang Electro-Mechanical Equipment Co.,

Ltd., Shenzhen Aerogel Technology Co., Ltd., and a growing number of other competitors that manufacture, sell, or resell aerogel-based insulation products. Our competitors could focus their substantial financial resources to develop new or additional competing products or develop products that are more attractive to potential customers than the products that we offer. We expect to face an increasing amount of competition in the aerogel insulation market over the next several years as existing competitors and new entrants seek to develop and market their own aerogel products.

Because some insulation manufacturers are substantially larger and better capitalized than we are, they may have the ability to sell their products at substantially lower costs to a large, existing customer base. Our products are expensive relative to other insulation products and end-user customers may not value our products' superior performance attributes sufficiently to pay their premium price. In addition, from time to time, we may increase the prices for our products and these price increases may not be accepted by our end-user customers and could result in a decreased demand for our products. Similarly, we may make changes to our products in order to respond to customer demand or to improve their performance attributes and these changes may not be accepted by our end-use customers and could result in a decrease in demand for our products. These competitive factors could:

- make it more difficult for us to attract and retain customers;
- cause us to slow the rate of increase of our prices, delay or cancel planned price increases, lower our prices or discount our prices in order to compete; and
- reduce our market share and revenues.

Any of these outcomes could have a material adverse effect on our results of operations, financial condition and cash flows.

We have entered into and may enter into future agreements that may limit our ability to broadly market our products or could involve future obligations, which could make it more difficult for us to commercialize certain of our products and negatively affect our business and results of operations.

In order to develop and commercialize our products, we may enter into joint development agreements or commercial arrangements. We cannot be certain that any products will be successfully developed under any such agreement or, even if developed, that they will be successfully produced or commercialized. These agreements may contain exclusivity, ownership of intellectual property, and other terms that may limit our ability to commercialize any products or technology developed in connection with such agreements, including in ways that we do not envision at the time of entering into the agreement. In addition, these agreements may not obligate either party to make any purchases and may contain technical specifications that must be achieved to the satisfaction of our partner, which we cannot be certain we will be able to achieve. If our ability to commercialize products or technology developed in connection with these agreements is limited or if we fail to achieve the technical specifications that may be required, then our business, financial condition, and results of operations could be materially adversely affected.

We may not be able to successfully develop and introduce new products in a timely manner at competitive prices, which would limit our ability to grow and maintain our competitive position and could adversely affect our financial conditions, results of operations and cash flow.

Our growth depends primarily on continued increase in the sales of existing products, including by improving the performance of existing products, as well as the successful development and introduction of new products, including new products for applications within the EV market, which face the uncertainty of customer acceptance and reaction from competitors. New product development requires considerable resources and attention that may shift our focus from and may disrupt our current operations, given that we have fewer resources than many of our competitors. We may not be able to sustainably manufacture new products with attractive margins and we may experience higher production inefficiencies than expected. Any delay in the development or launch of a new product could result in our not being the first to market, which could compromise our competitive position. Even if we manage to develop and introduce new products, such products may not address market needs or otherwise compete with third-party products. Even if our new products are adopted by the market, we may not achieve the growth in

revenue that we expect from such new products and our investment in these efforts may not be proportional to our expected or actual revenue growth. If we are unable to develop and introduce new products in a cost-effective manner or otherwise manage effectively the operations related to new products, our results of operations and financial condition could be adversely impacted.

If we do not continue to develop and maintain distribution channels for our products and to meet our customers' demand for our products, our results of operations could be adversely affected.

For a significant portion of our revenues, we rely on sales to distributors who then sell our products to end-users in our target markets. Our success depends, in part, on our maintaining satisfactory relationships with these distributors and developing new relationships in new geographies. Our distributors require us to meet expectations of delivery, quality, and pricing of our products, at both the distribution channel level and at the level of the end-user of our products. If we fail to meet expected standards, our revenues would decline and this could materially adversely affect our business, results of operations, and financial condition. In addition, we have been unable at times to produce sufficient amounts of our products to meet demand from our distributors and customers and we may not be able to avoid capacity constraints in the future if demand exceeds our expectations or we fail to expand our capacity in our East Providence facility or through our external manufacturing facility in China, in a timely manner. If we are unable to deliver our products within such short timeframes, we may be at risk of losing direct or end-user customers. Accordingly, shortfalls in sales could materially adversely affect our business and results of operations.

The qualification process for our products can be lengthy and unpredictable, potentially delaying adoption of our products and causing us to incur significant expense potentially without recovery.

Qualification of our products by many of our direct and end-user customers can be lengthy and unpredictable and many of these direct and end-user customers have extended budgeting and procurement processes. This extended sales process requires the dedication of significant time by our personnel and our use of significant financial resources, with no certainty of success or recovery of our related expenses. Furthermore, even after an extensive qualification process, our products may fail to meet the standards sought by our end-user customers and may not be qualified for use by such end-user customers. Additionally, our continued process improvements and cost-reduction efforts may require us or the end-users to re-qualify our products. Failure to qualify or re-qualify our products may result in us losing such companies as end-users of our products, which would cause a decrease in our revenue or revenue growth rate, either of which could materially adversely affect our business and results of operations.

Our revenue may fluctuate, which may result in a high degree of variability in our results of operations and make it difficult for us to plan based on our future outlook and to forecast our future performance, and the results of our operations could be materially adversely affected if our operating expenses incurred do not correspond with the timing of our revenues.

Our revenue may fluctuate from period to period due to a wide variety of factors. Since we rely on sales to a limited number of direct customers/distributors and end-user customers, changes in demand from one or more direct customers or end-users can significantly impact our revenue from period to period. In addition, the sales cycles for our products, including their qualification for use, are long and can result in unpredictability in our revenues. We expect to have an increasing percentage of our products sold for use in capital projects in the energy industrial market, which orders tend to be larger and more sporadic. This will further increase this unpredictability and the difficulty for us in forecasting quarterly or annual performance. Because of these factors, we have a limited basis on which to predict our quarterly revenue. Our profitability from period-to-period may also vary due to the mix of products that we sell in different periods. These factors may result in a high degree of variability in our results of operations and will make it difficult for us to accurately evaluate and forecast quarterly or annual performance and to plan based on our future outlook.

Most of our operating expenses, such as manufacturing facility expenses, employee compensation and research expenses, are either relatively fixed in the short-term or incurred in advance of sales. In addition, our spending levels are based in part on our expectations regarding future revenues. As a result, if revenues for a

particular quarter are below expectations, we may not be able to proportionately reduce operating expenses for that quarter. Our reliance on sales to a limited number of direct customers, distributors and end-user customers, the length of our sales cycles and the potentially increasing percentage of our products sold for use in capital projects each can cause sporadic demand for our products that would limit our ability to predict future sales. This limitation could result in our being unable to reduce spending quickly enough to compensate for reductions in sales and could therefore adversely affect our results of operations for any particular operating period. The costs associated with these measures are being and will continue to be incurred in advance of our anticipated revenue opportunities, which may negatively impact our results of operations and profitability in the near term.

We are exposed to the credit risk of some of our direct customers, including distributors, contractors and OEMs, which subjects us to the risk of non-payment for our products.

We distribute our products, in part, through a network of distributors, contractors and OEMs, some of which may not be well capitalized and may be of a lower credit quality. This direct customer network subjects us to the risk of non-payment for our products. In addition, we operate in a number of countries characterized by intermittent governmental, market and financial crises. In addition, during periods of economic downturn in the global economy, our exposure to credit risks from our direct customers may increase, and our efforts to monitor and mitigate the associated risks may not be effective. In the event of additional non-payments by one or more of our direct customers, our business, financial condition and results of operations could be materially adversely affected.

If we are unable to maintain our technological advantage over our competitors, our business may be materially adversely affected.

We research, develop, manufacture and sell high-performance aerogel insulation products. Rapid and ongoing changes in technology and product standards could quickly render our products less competitive, or even obsolete, particularly if we fail to continue to improve the performance of our insulation products. We are currently developing new applications for our existing products as well as new aerogel technologies; however, our efforts may not be successful and new applications or technologies may not be commercially useful. Other companies that are seeking to enhance traditional insulation materials have recently introduced or are developing other emerging insulation technologies. These competitors are engaged in significant development work on these various insulation products. Competing technologies that outperform our insulation in one or more performance attributes could be developed and successfully introduced.

We are also aware of certain companies, including Armacell International S.A., Beerenberg AS, JIOS Aerogel Pte. Ltd., Unifrax Holding Co. (Alkegen), IBIDEN Co., Ltd., Guangdong Alison Hi-Tech Co, Ltd., Nano Tech Co, Ltd, IBIH Advanced Materials Co., Ltd., Nameite New Materials Technology Co., Ltd., Guizhou Aerospace Wujiang Electro-Mechanical Equipment Co., Ltd., Shenzhen Aerogel Technology Co., Ltd., and a variety of other companies that have developed or are developing and/or marketing products using aerogel technology similar to our technology. These or other companies have developed significant aerogel manufacturing capacity, have introduced or could introduce aerogel products that compete directly with our products and could in the future outperform our products in one or more performance attributes, could be offered to our customers as a cheaper alternative to our products or may result in increased pricing pressure on our products. As a result of increasing competitive activity by other companies in the aerogel insulation market, both now and in the future, we may not be able to sustain our competitive position in our target markets. Any degradation in our competitive position could have a material adverse effect on our business, financial condition and results of operations.

In addition, certain technological advancements may render our products obsolete. In particular, the future direction of EV battery packs may strike a commercially reasonable balance between the need for higher energy densities and the need for better safety outcomes. A rapid progress towards technologies such as solid electrolytes, safer electrode active materials (such as lithium iron phosphate (LFP) cathodes) may provide a better balance of energy density and safety, render our premium thermal barriers obsolete and have a material adverse effect on our business, financial condition and results of operations.

Negative perceptions regarding the safety, quality or other attributes of our products or a failure or a perceived failure of our products could have a material adverse effect on our results of operations and could make us unable to continue our business.

It is essential to our existing business and to our future growth that our products are considered safe. Even modest perceptions by existing or potential distributors, contractors or end-user customers in our target markets that our products are not safe could have a critical impact on our ability to sell our products and to continue as a business. Further, our competitors have in the past, and may in the future, seek to create or perpetuate such perceptions. There is risk of an actual or perceived failure of our products or other negative perceptions regarding our products, such as perceived health hazards. For example, dust is produced by our products during their installation and use, which increases the likelihood of the perception of a hazard. Another example is the potential in very high temperature applications for material failure. Like most insulation products, our Pyrogel XT and XTE products will normally go through a controlled burn-in process immediately after exposure to high temperatures. If installed improperly, the burn-in may proceed too rapidly and the material may become damaged. In addition, the thermal performance of our materials may degrade over time due to a variety of operational or environmental conditions. We take steps to educate our distributors, contractors, OEMs and end-user customers on the nature of our products and the proper installation and operating procedures in order to mitigate these risks. Such an event, or the perception of such an event, could quickly result in our direct and end-user customers replacing our products with traditional insulation materials which could have a material adverse effect on our results of operations.

***Trends in adoption of cathode chemistries may adversely affect the adoption of silicon-rich carbon aerogels that we are developing for use in anodes*.**

Success in adoption of our silicon rich anode materials that we are developing for use in anodes depends on the need for matching cathode chemistries requiring high anode performance. Cathodes typically comprise oxides of metals such as nickel, manganese, aluminum and cobalt. One current trend is towards developing a higher nickel and lower (or no) cobalt-based cathode. Such cathodes require a matching higher performance anode like those manufactured with our silicon-rich carbon aerogel materials. Another trend is to use lower capacity, but safer cathode chemistries such as lithium iron phosphate LFP. Certain battery manufacturers and automotive OEMs have already brought vehicles to the market with LFP cathodes. While vehicles with LFP cathodes may have lower energy densities leading to lower driving ranges, they are safer and have lower costs. If mass-market adoption of lower performance chemistries such as LFP continues, the demand for higher performing anodes including those containing our silicon-rich carbon aerogel materials will be reduced or limited to higher end vehicles, thus limiting our market participation.

We or the third parties upon which we depend may be adversely affected by general political, unstable market and economic conditions and other events beyond our control and our business continuity and disaster recovery plans may not adequately protect us from a serious disaster.

We are subject to the risks arising from adverse changes in market and economic and political conditions, both domestically and globally, including trends toward protectionism and nationalism, other unfavorable changes in economic conditions as well as disruptions in global credit and financial markets, such as inflation, failures and instability in U.S. and international banking systems, downgrades of the U.S. credit rating, rising interest rates, slower economic growth or a recession, and other events beyond our control, such as natural disasters, pandemics, epidemics, political instability, and armed conflicts and wars, including the ongoing conflict between Russia and Ukraine, the conflicts in the Middle East and tensions between China and Taiwan. The short and long-term implications of Russia's invasion of Ukraine, the conflicts in the Middle East and tensions between China and Taiwan are difficult to predict at this time. We continue to monitor any adverse impact that the outbreak of war in Ukraine and the subsequent institution of sanctions against Russia by the United States and several European and Asian countries may have on the global economy in general, on our business and operations and on the businesses and operations of our suppliers and customers, as well as the ongoing tensions between China and Taiwan. For example, a prolonged conflict may result in challenges associated with timely receipt of customer payments and banking transactions, increased inflation, escalating energy prices and constrained availability, and thus increasing costs, of raw materials.

Increases in inflation have the potential to adversely affect our liquidity, business, financial condition and results of operations by increasing our overall cost structure. The existence of inflation in the economy has resulted in, and may continue to result in, higher interest rates and capital costs, shipping costs, supply shortages, increased costs of labor, weakening exchange rates and other similar effects. As a result of inflation, we have experienced and may continue to experience, cost increases. Although we may take measures to mitigate the impact of this inflation, if these measures are not effective our business, financial condition, results of operations and liquidity could be materially adversely affected. Even if such measures are effective, there could be a difference between the timing of when these beneficial actions impact our results of operations and when the cost inflation is incurred.

Additionally, increases in inflation, along with the uncertainties surrounding geopolitical developments and global supply chain disruptions, have caused, and may in the future cause, global economic uncertainty and uncertainty about the interest rate environment. A failure to adequately respond to these risks could have a material adverse impact on our financial condition, results of operations or cash flows.

The U.S. debt ceiling and budget deficit concerns have increased the possibility of credit-rating downgrades and economic slowdowns, or a recession in the United States. On August 1, 2023, Fitch Ratings downgraded the United States' long-term foreign currency issuer default rating to AA+ from AAA as a result of these repeated debt ceiling and budget deficit concerns. The impact of this or any further downgrades to the U.S. government's sovereign credit rating or its perceived creditworthiness could adversely affect the U.S. and global financial markets and economic conditions.

If the equity and credit markets deteriorate, it may make any necessary equity or debt financing more difficult to secure, more costly or more dilutive. Failure to secure any necessary financing in a timely manner and on favorable terms could harm our growth strategy, financial performance and stock price and could require us to delay or abandon plans with respect to our business. Further, if the financial institutions with which we do business enter receivership or become insolvent in the future, there is no guarantee that the Department of the Treasury, the Federal Reserve and the FDIC will intercede to provide us and other depositors with access to balances in excess of the $250,000 FDIC insurance limit, that we would be able to access our existing cash, cash equivalents and investments, that we would be able to maintain any required letters of credit or other credit support arrangements, or that we would be able to adequately fund our business for a prolonged period of time or at all, any of which could have a material adverse effect on our business, financial condition and results of operations. We cannot predict the impact that the high market volatility and instability of the banking sector more broadly could have on economic activity and our business in particular. In addition, there is a risk that one or more of our current service providers, external manufacturing facilities or other third parties with which we conduct business may not survive difficult economic times, the ongoing conflict between Russia and Ukraine, the conflicts in the Middle East, the tensions in Asia, the instability of the banking sector, and the uncertainty associated with current worldwide economic conditions, which could directly affect our ability to attain our operating goals on schedule and on budget.

The effects of current and future economic and political conditions and other events beyond our control on us, our suppliers, external manufacturing facilities and customers could severely disrupt our operations and have a material adverse effect on our business, results of operations, financial condition and prospects. If a natural disaster, power outage or other event occurred that prevented us from using all or a significant portion of our headquarters, that damaged critical infrastructure, such as our external manufacturing facilities manufacturing facilities, or that otherwise disrupted operations, it may be difficult or, in certain cases, impossible for us to continue our business for a substantial period of time. The disaster recovery and business continuity plans we have in place may prove inadequate in the event of a serious disaster or similar event. We may incur substantial expenses as a result of the limited nature of our disaster recovery and business continuity plans, which could have a material adverse effect on our business.

Adverse developments affecting the financial services industry, such as actual events or concerns involving liquidity, defaults or non-performance by financial institutions or transactional counterparties, could adversely affect our current and projected business operations and our financial condition and results of operations.

Actual events involving limited liquidity, defaults, non-performance or other adverse developments that affect financial institutions, transactional counterparties or other companies in the financial services industry or the

financial services industry generally, or concerns or rumors about any events of these kinds or other similar risks, have in the past and may in the future lead to market-wide liquidity problems. For example, on March 10, 2023, Silicon Valley Bank (SVB) was closed by the California Department of Financial Protection and Innovation, which appointed the Federal Deposit Insurance Corporation (the FDIC) as receiver.

Inflation and rapid increases in interest rates have led to a decline in the trading value of previously issued government securities with interest rates below current market interest rates. Although the U.S. Department of Treasury, FDIC and Federal Reserve Board have announced a program to provide up to $25 billion of loans to financial institutions secured by certain of such government securities held by financial institutions to mitigate the risk of potential losses on the sale of such instruments, widespread demands for customer withdrawals or other liquidity needs of financial institutions for immediate liquidity may exceed the capacity of such program. There is no guarantee that the U.S. Department of Treasury, FDIC and Federal Reserve Board will provide access to uninsured funds in the future in the event of the closure of other banks or financial institutions, or that they would do so in a timely fashion.

Although we assess our banking relationships as we believe necessary or appropriate, our access to funding sources and other credit arrangements in amounts adequate to finance or capitalize our current and projected future business operations could be significantly impaired by factors that affect us, the financial institutions with which we have arrangements directly, or the financial services industry or economy in general. These factors could include, among others, events such as liquidity constraints or failures, the ability to perform obligations under various types of financial, credit or liquidity agreements or arrangements, disruptions or instability in the financial services industry or financial markets, or concerns or negative expectations about the prospects for companies in the financial services industry. These factors could involve financial institutions or financial services industry companies with which we have financial or business relationships, but could also include factors involving financial markets or the financial services industry generally.

The results of events or concerns that involve one or more of these factors could include a variety of material and adverse impacts on our current and projected business operations and our financial condition and results of operations. These could include, but may not be limited to, the following:

- delayed access to deposits or other financial assets or the uninsured loss of deposits or other financial assets;
- loss of access to revolving existing credit facilities or other working capital sources and/or the inability to refund, roll over or extend the maturity of, or enter into new credit facilities or other working capital resources;
- potential or actual breach of contractual obligations that require us to maintain letters of credit or other credit support arrangements; or
- termination of cash management arrangements and/or delays in accessing or actual loss of funds subject to cash management arrangements.

In addition, investor concerns regarding the U.S. or international financial systems could result in less favorable commercial financing terms, including higher interest rates or costs and tighter financial and operating covenants, or systemic limitations on access to credit and liquidity sources, thereby making it more difficult for us to acquire financing on acceptable terms or at all. Any decline in available funding or access to our cash and liquidity resources could, among other risks, adversely impact our ability to meet our operating expenses, financial obligations or fulfill our other obligations, result in breaches of our financial and/or contractual obligations or result in violations of federal or state wage and hour laws. Any of these impacts, or any other impacts resulting from the factors described above or other related or similar factors not described above, could have material adverse impacts on our liquidity and our current and/or projected business operations and financial condition and results of operations.

In addition, any further deterioration in the macroeconomic economy or financial services industry could lead to losses or defaults by parties with whom we conduct business, which in turn could have a material adverse effect on our current and/or projected business operations and results of operations and financial condition. For example, a

party with whom we conduct business may fail to make payments when due, default under their agreements with us, become insolvent or declare bankruptcy. Any bankruptcy or insolvency, or the failure to make payments when due, of any counterparty of ours, or the loss of any significant relationships, could result in material losses to us and may have material adverse impacts on our business.

Regulation of greenhouse gas emissions could reduce demand for hydrocarbon products and lead to a sustained downturn in the energy industry, which could decrease demand for our products and have a material adverse effect on our business, financial condition and results of operation.

Due to growing concerns about the risks of climate change, a number of countries are adopting or considering adopting regulations to reduce greenhouse gas emissions. Any potential greenhouse gas regulations, while potentially helpful in the adoption of EVs, could have the impact of increasing energy costs, reducing the demand for hydrocarbons, decreasing profitability and return on investment in the energy industry, and leading to a sustained downturn in the energy industry. Demand for a significant portion of our products depends on the aggregate level of capital expenditure in the energy industry, which depends, in part, on the expected return on such investments. A sustained period of diminished returns or expected returns on capital deployed in the energy industry as a result of greenhouse gas regulations or otherwise, may delay capital projects, decrease demand for our products and cause downward pressure on the prices we charge for our products, which, in turn, could have a material adverse effect on our business, financial condition, results of operations and the market price of our common stock.

Employee strikes and labor-related disruptions involving us or one or more of our automotive OEM customers or suppliers may adversely affect our operations.

Our business is labor-intensive. A strike or other form of significant work disruption by our employees would likely have an adverse effect on our ability to operate our business. A labor dispute involving us or one or more of our automotive OEM customers or suppliers, or that could otherwise affect our operations, could reduce our sales and harm our profitability. A labor dispute involving another supplier to our automotive OEM customers that results in a slowdown or a closure of our automotive OEM customers' assembly plants where our products are included in the assembled parts or vehicles could also adversely affect our business and harm our profitability. In addition, our inability or the inability of any of our automotive OEM customers, our suppliers or our customers' suppliers to negotiate an extension of a collective bargaining agreement upon its expiration could reduce our sales and harm our profitability. The majority of our employees located in Mexico are represented by a labor union and subject to a collective bargaining agreement. In February 2026, our employees in Mexico voted to approve the collective bargaining agreement with the FASIM union. If our employees in Mexico refuse to approve a collective bargaining agreement in the future, we may encounter disruptions in our business, which may adversely affect our operations. Significant increases in labor costs as a result of the renegotiation of collective bargaining agreements could also adversely affect our business and harm our profitability. Recently, labor shortages have persisted throughout the economy and our industry is no different. If we are unable to address any labor shortages or increased labor costs adequately, we may not be able to meet demand for our product, which may impact our results of operations and the value of the awarded business.

If we lose key personnel upon whom we are dependent, or if we are unable to successfully recruit and retain skilled employees, we may not be able to manage our operations and meet our strategic objectives.

Our continued success depends to a considerable degree upon the continued services of a small number of our employees with critical knowledge of our products, our manufacturing process, our intellectual property, our customers, and our global operations. The loss or unavailability of any of these individuals could harm our ability to execute our business plan, maintain important business relationships, and complete certain product development initiatives, which could harm our business. In the event that any of these key individuals leave their employment with us or take new employment with a competitor, our business and results of operations could be materially adversely affected. In addition, our continued success depends upon the availability, contributions, vision, skills, experience, and effort of our senior management, financial, sales and marketing, engineering, and production teams and our ability to recruit additional experienced personnel, particularly as we pursue growth opportunities in the EV market. We do not maintain "key person" insurance on any of our employees. We have entered into employment agreements with certain members of our senior management team, but none of these agreements guarantee the

services of the individual for a specified period of time. All of the agreements with members of our senior management team provide that employment is at-will and may be terminated by the employee at any time and without notice.

The loss of the services of any of our key employees or our inability to recruit and retain qualified personnel or advisors might impede our operations or the achievement of our strategic and financial objectives. The loss or interruption of the service of any of these individuals or our inability to attract or retain other qualified personnel or advisors could have a material adverse effect on our business, financial condition, and results of operations and could significantly reduce our ability to manage our operations and implement our strategy.

Because of our significant international operations, we could be materially adversely affected by violations of the U.S. FCPA and similar anti-corruption, anti-bribery, and anti-kickback laws.

We operate on a global basis, with 37% of our product sales in 2025 made to destinations outside of the United States, including Mexico, China, United Arab Emirates, Thailand, Malaysia, Sweden, France, Singapore, South Korea, Canada, Japan, and Australia. Our business operations and sales in countries outside of the United States are subject to anti-corruption, anti-bribery and anti-kickback laws and regulations, including restrictions imposed by the FCPA, as well as the United Kingdom Bribery Act of 2010 (the UK Bribery Act). The FCPA, UK Bribery Act, and similar anti-corruption, anti-bribery and anti-kickback laws in other jurisdictions generally prohibit companies, their intermediaries and their agents from making improper payments to government officials or any other persons for the purpose of obtaining or retaining business. We operate and sell our products in many parts of the world that have experienced governmental corruption to some degree and, in certain circumstances, strict compliance with anti-corruption, anti-bribery and anti-kickback laws may conflict with local customs and practices. We train our employees concerning anti-corruption, anti-bribery, and anti-kickback laws and have policies in place that prohibit employees from making improper payments. We continue to implement internal controls and procedures designed to ensure that we comply with anti-corruption, anti-bribery, and anti-kickback laws, rules and regulations and mitigate and protect against corruption risks. We cannot provide assurance that our internal controls and procedures will protect us from reckless, criminal or other acts committed by our employees or third-parties with whom we work. If we are found to be liable for violations of the FCPA or similar anti-corruption, anti-bribery, and anti-kickback laws in international jurisdictions, either due to our own acts or out of inadvertence, or due to the acts or inadvertence of others, we could suffer criminal or civil fines or penalties or other repercussions, including reputational harm, which could have a material adverse effect on our business, results of operations, and financial condition.

A failure to comply with export control or economic sanctions laws and regulations could have a material adverse impact on our business, results of operations or financial condition. We may be unable to ensure that our distributors comply with applicable sanctions and export control laws.

We face several risks inherent in conducting business internationally, including compliance with applicable economic sanctions laws and regulations, such as laws and regulations administered by OFAC, the United States Department of State and the United States Department of Commerce. We must also comply with all applicable export control laws and regulations of the United States and other countries. Violations of these laws or regulations could result in significant additional sanctions including criminal or civil fines or penalties, more onerous compliance requirements, more extensive debarments from export privileges or loss of authorizations needed to conduct aspects of our international business.

In certain countries, we may engage third-party agents or intermediaries, such as customs agents, to act on our behalf. If these third-party agents or intermediaries violate applicable laws, their actions may result in criminal or civil fines or penalties or other sanctions being assessed against us. We take certain measures designed to ensure our compliance with U.S. export and economic sanctions law, and we believe that we have never sold our products to Iran, Cuba, Sudan, North Korea or Syria through third-party agents or intermediaries or made any effort to attract business from any of these countries. However, it is possible that some of our products were sold or will be sold to distributors or other parties that, without our knowledge or consent, re-exported or will re-export such products to these countries. Although none of our non-U.S. distributors are located in, or to our knowledge, conduct business with Iran, Cuba, Sudan, or Syria, we may not be successful in ensuring compliance with limitations or restrictions

on business with these or other countries subject to economic sanctions. There can be no assurance that we will be in compliance with export control or economic sanctions laws and regulations in the future.

Any such violation could result in significant criminal or civil fines, penalties or other sanctions and repercussions, including reputational harm that could have a material adverse impact on our business, results of operations or financial condition.

Our activities and operations are subject to numerous health and safety laws and regulations. If we violate such regulations, we could face penalties and fines or be required to curtail or cease operations.

We are subject to numerous health and safety laws and regulations in each of the jurisdictions in which we operate. These health and safety laws and regulations apply to us including with regard to hazardous substances that we use in our manufacturing process and that certain of our products contain. These substances include titanium dioxide, ethanol, methanol and ammonia, each of which has been determined, in certain forms, with certain contaminants and at certain levels, to be hazardous, possibly carcinogenic, or otherwise harmful to humans. We may also consider and adopt the use of other hazardous substances or substances potentially containing hazardous contaminants, with similar or higher risks in connection with new products or modifications to our current products and related manufacturing.

Our processes also require the use of other regulated substances in raw material delivery and manufacturing, including among others, ethanol. Applicable laws and regulations require us to obtain and maintain permits and approvals and implement health and safety programs and procedures to control risks associated with our operations. Compliance with those laws and regulations can require us to incur substantial costs. Moreover, if our compliance programs are not successful, we could be subject to penalties or to revocation of our permits, which may require us to curtail or cease operations of the affected facilities. In particular, the construction of future, potential facilities will require us to obtain and maintain new permits from various regulatory authorities and if the issuance of such permits is delayed or denied, it would slow or potentially prevent the expansion of our manufacturing capacity. Violations of laws, regulations and permit requirements may also result in criminal sanctions, injunctions and the denial or revocation of our various permits.

While we use hazardous substances, including titanium dioxide, carbon black, and similar chemicals, in forms and at levels that are subject to current rules and regulations, such rules and regulations may become more stringent such that we are required to modify our manufacturing process and such that our customers' use of our products may be impacted. Regulatory changes contemplated in several regions may substantially increase these risks. Changes in the products or manufacturing processes may require the customers to perform an extensive re-qualification process, which our customers may not want to undertake for various reasons, resulting in the customer switching to competing products. In addition, changes in our production or manufacturing process may result in uses above currently permitted levels. Such uses or changes in rules or regulations could materially adversely affect our business, financial condition, and results of operations.

Health and safety laws, regulations and permit requirements may become more stringent or otherwise change. Any such changes could require us to incur materially higher costs than at present. Our costs of complying with current and future health and safety laws, regulations and permit requirements, and any liabilities, fines or other sanctions resulting from violations of them, could adversely affect our business, financial condition, and results of operations.

We may face certain product liability or warranty claims on our products, including from improper installation of our products by third parties. As a consequence, we could lose existing and future business and our ability to develop, market and sell our insulation could be harmed.

The design, development, production and sale of our products involve an inherent risk of product liability claims and associated adverse publicity. We seek to lower our manufacturing costs, while maintaining appropriate performance characteristics, and to improve the per square foot costs of our silica aerogel blankets by optimizing our formulations to reduce material costs. If our products do not function as represented as a result of such changes in formulations, we may face warranty claims on our products. In addition, we may be named directly in product

liability suits relating to our products, even for defects resulting from errors of our distributors, contractors, OEMs, partners, or end-user customers. These claims could be brought by various parties, including distributors, contractors, OEMs, partners, and other direct end-user customers who are purchasing products directly from us, or end-user customers who purchase our products from our distributors. We could also be named as co-parties in product liability suits that are brought against the distributors, contractors, OEMs, partners, and end-user customers. Our products are often installed in our end-user customers' complex and capital-intensive facilities in inherently hazardous or dangerous environments, including in the energy, petrochemical, and power generation industries, where the potential liability from risk of loss could be substantial. The failure of our products to perform to customer expectations, whether or not because of improper installation, could give rise to warranty claims against us. We take steps to educate our distributors, contractors, OEMs, partners, and end-user customers about the proper installation procedures to mitigate the risk of an uncontrolled burn-in for very high temperature applications of Pyrogel XT and XTE. However, installation of our products is handled by third parties over whom we have no control and errors or defects in their installation may also give rise to claims against us, diminish our brand, or divert our resources from other purposes. Any of these claims, even if without merit, could result in costly litigation or divert management's attention and resources. In addition, many of our products are integrated into the final products of our customers. The integration of our products may entail the risk of product liability or warranty claims based on malfunctions or hazards from both our products and the final products of our customers.

A material product liability claim may seriously harm our results of operations, as well as damage our customer relationships and reputation. Although we carry general liability insurance, our current insurance coverage could be insufficient to protect us from all liability that may be imposed under these types of claims. In addition, our distributors, contractors, OEMs, partners, and end-user customers may not have adequate insurance to cover against potential claims. If claims or losses exceed our liability insurance coverage, we may go out of business. In addition, insurance coverage is expensive, may be difficult to obtain and may not be available in the future on acceptable terms or at all. A significant increase in the cost of insurance coverage could adversely affect our business, financial condition and results of operations.

Furthermore, if any of our products are or are alleged to be defective, particularly the products that we sell to our OEM customers, we may be required to participate in a recall involving such products. Each automotive manufacturer has its own practices regarding product recalls and other product liability actions relating to its suppliers. However, as suppliers become more integrally involved in the vehicle design process and assume more of the vehicle assembly functions, OEMs continue to look to their suppliers for contribution when faced with recalls and product liability claims. OEMs also require their suppliers to guarantee or warrant their products and bear the costs of repair and replacement of such products under new vehicle warranties. Depending on the terms under which we supply products to an automotive OEM, an automotive OEM may attempt to hold us responsible for some or all of the repair or replacement costs of products under new vehicle warranties when the OEM asserts that the product supplied did not perform as warranted.

In addition, as we adopt new technology, we face an inherent risk of exposure to the claims of others that we have allegedly violated their intellectual property rights. We cannot ensure that we will not experience any material warranty, product liability or intellectual property claim losses in the future or that we will not incur significant costs to defend such claims.

We may incur significant costs complying with environmental, health and safety laws, and related claims, and failure to comply with these laws and regulations could expose us to significant liabilities, which could materially adversely affect our results of operations.

Costs of compliance with regional, national, state, and local existing and future environmental, health and safety laws, and regulations could adversely affect our cash flow and results of operations. We are required to comply with numerous environmental laws and regulations and to obtain numerous governmental permits in order to operate our facilities and in connection with the design, development, manufacture, and transport of our products and the storage, use, handling, and disposal of hazardous substances, including environmental, health and safety laws, regulations and permits governing air emissions or water usage and disposal. We may incur significant additional costs to comply with these requirements, which are becoming stringent in a progressive manner. If we fail to comply with these current and new requirements, we could be subject to civil or criminal liability, damages and

fines, require substantial capital investment to remedy non-compliance, and our operations could be curtailed, suspended, or shutdown. In addition, certain foreign laws and regulations may affect our ability to export products outside of the United States. Existing environmental, health and safety laws, and regulations could be revised or reinterpreted and new laws and regulations could be adopted or become applicable to us or our products, and future changes in environmental, health and safety laws, and regulations could occur. These factors may materially increase the amount we must invest to bring our processes into compliance and impose additional expense on our operations.

Among the changes to environmental laws and regulations that could occur is the adoption of regulatory frameworks to reduce greenhouse gas emissions, which a number of countries, particularly in the European Union, have adopted, or are considering adopting, including the 2015 Paris Agreement on Climate Change. These include adoption of cap and trade regimes, carbon taxes, restrictive permitting, increased efficiency standards, and incentives or mandates for renewable energy, any of which could increase the costs of manufacturing our products and increase our compliance costs, and/or reduce demand for our products from our customers in the energy industry, all of which could materially adversely affect our business and results of operations.

In addition, private lawsuits, including claims for remediation of contamination, personal injury or property damage, or actions by regional, national, state and local regulatory agencies, including enforcement or cost-recovery actions, may materially increase our costs. Certain environmental laws make us potentially liable on a joint and several basis for the remediation of contamination at or emanating from properties or facilities that we currently or formerly owned or operated or properties to which we arranged for the disposal of hazardous substances. Such liability may require us to pay more than our fair share and could require us to address contamination caused by others. For example, the site of our East Providence facility contains certain levels of contamination caused by prior third-party activities on and near the site. Such contamination remains in place under a state-approved deed restriction, and we are required to comply with such deed restriction and the accompanying soil management plan. In general, the deed restriction prohibits the residential use of the property and the use of groundwater as potable water, and requires the maintenance of engineering controls and annual inspections to help prevent exposure to contaminated soils. The soil management plan requires us to notify the state environmental agency with respect to any soil excavation, stockpiling, sampling, and off-site disposal of excavated soil. Although we have not had to make material expenditures to satisfy these requirements to date, in the future, we may incur additional costs to comply with these requirements and failure to do so could disrupt the operation of our facility or could subject us to liability for environmental remediation. We may incur liability relating to the remediation of contamination, including contamination we did not cause. Furthermore, ethanol, one of the materials that we handle in large quantities in our manufacturing process is subject to additional laws and regulations including those administered by the U.S. Alcohol and Tobacco Tax and Trade Bureau. While we seek to comply with the stringent requirements of these laws and regulations, these laws and regulations are complex and are subject to interpretation. Any changes in these laws or regulations or any interpretation thereof, or changes in our manufacturing processes may require us to request changes to our existing permits or obtain new permits. Any requests to change our existing permits or obtain new permits may be delayed or denied and may require us to modify our manufacturing processes, which could be costly and time consuming and could adversely affect our business and results of operations.

We may not be able to obtain or maintain, from time to time, all required environmental regulatory approvals. A delay in obtaining any required environmental regulatory approvals or failure to obtain and comply with them could materially adversely affect our business and results of operations.

Breakdowns, security breaches, loss of data, and other disruptions of our information technology systems could compromise sensitive information related to our business, prevent us from accessing critical information, and expose us to liability, which would cause our business and reputation to suffer.

In the ordinary course of our business, we collect and store sensitive data, including intellectual property, our proprietary business information and that of our suppliers, customers and business partners, and personally identifiable information about our employees and business contacts. We manage and maintain our applications and data utilizing on-site and off-site systems. These applications and data encompass a wide variety of business-critical information including research and development information, commercial information, and business and financial information. We face four primary risks relative to protecting this critical information: loss of access; inappropriate

or unauthorized disclosure; inappropriate or unauthorized modification; and inadequate monitoring of our controls over the first three risks.

The secure processing, storage, maintenance, and transmission of this critical information is vital to our operations and business strategy, and we devote resources to protecting such information. Although we take measures to protect sensitive information from unauthorized access or disclosure, our information technology and infrastructure may be vulnerable to breakdowns, attacks by hackers, viruses, breaches or interruptions due to employee error, malfeasance or other disruptions, faulty password management or lapses in compliance with privacy and security mandates. Any such virus, breakdown, attack, breach, or interruption could compromise our networks and the information stored there could be accessed by unauthorized parties, publicly disclosed, lost, or stolen. Third parties may attempt to fraudulently induce employees or other persons into disclosing usernames, passwords or other sensitive information, which may in turn be used to access our information systems, commit identity theft or carry out other unauthorized or illegal activities. Any such breach could compromise our networks and the information stored there could be accessed, publicly disclosed, lost or stolen. Additionally, leveraging artificial intelligence (AI) capabilities to potentially improve internal functions and operations presents further risks and challenges, including the possibility of creating new attack methods for adversaries. The use of AI to support business operations carries inherent risks related to data privacy, intellectual property, and security, such as intended, unintended, or inadvertent transmission of proprietary, confidential, or sensitive information, as well as challenges related to implementing and maintaining AI tools, such as developing and maintaining appropriate datasets for such support. If we fail to implement adequate safeguards, the use of AI may introduce additional operational vulnerabilities by producing inaccurate outcomes based on flaws in the underlying data or methodologies, or unintended results.

We engage third-party vendors and service providers to store and otherwise process some of our data, including sensitive and personal information. Our vendors and service providers may also be the targets of the risks described above, including cyberattacks, ransomware, malicious software, phishing schemes, fraud and the increased use of AI. From time to time, we get notifications that such vendors experienced cyber security breaches. Our ability to monitor our vendors and service providers' data security is limited, and, in any event, third parties may be able to circumvent those security measures, resulting in the unauthorized access to, misuse, disclosure, loss or destruction of our data, including sensitive and personal information, and disruption of our or third-party service providers' systems. We and our third-party service providers may face difficulties in identifying, or promptly responding to, potential security breaches and other instances of unauthorized access to, or disclosure or other loss of, information. Any hacking or other attack on our or our third-party service providers' or vendors' systems, and any unauthorized access to, or disclosure or other loss of, information suffered by us or our third-party service providers or vendors, or the perception that any of these have occurred, could result in legal claims or proceedings, loss of intellectual property, liability under laws that protect the privacy of personal information, negative publicity, disruption of our operations and damage to our reputation, which could divert our management's attention from the operation of our business and materially and adversely affect our business, revenues and competitive position. Moreover, we may need to increase our efforts to train our personnel to detect and defend against cyber- or phishing-attacks, which are becoming more sophisticated and frequent, and we may need to implement additional protective measures to reduce the risk of potential security breaches, which could cause us to incur significant expenses. Recently, Russian ransomware gangs have threatened to increase hacking activity against critical infrastructure of any nation or organization that retaliates against Moscow for its invasion of Ukraine. Any such increase in such attacks on our third-party provider or other systems could adversely affect our network systems or other operations. We have measures in place that are designed to detect and respond to such security incidents and breaches of privacy and security mandates, but there can be no assurance that our efforts will prevent or detect such breakdowns or breaches in our systems, if at all.

Any such security breach or interruption, as well as any action by us or our employees or contractors that might be inconsistent with the rapidly evolving data privacy and security laws and regulations applicable within the United States and elsewhere where we conduct business, could result in enforcement actions by U.S. states, the U.S. federal government or foreign governments, liability or sanctions under data privacy laws that protect personally identifiable information, regulatory penalties, other legal proceedings such as but not limited to private litigation, the incurrence of significant remediation costs, disruptions to our development programs, business operations and collaborations, diversion of management efforts and damage to our reputation, which could harm our business and

operations. Because of the rapidly moving nature of technology and the increasing sophistication of cybersecurity threats, our measures to prevent, respond to and minimize such risks may be unsuccessful.

In addition, our insurance may be insufficient to cover our losses resulting from cyber-attacks (including ransomware), breaches, or other interruptions, and any incidents may result in loss of, or increased costs of, such insurance. The successful assertion of one or more large claims against us that exceed available insurance coverage, the occurrence of changes in our insurance policies, including premium increases or the imposition of large deductible or co-insurance requirements, or denials of coverage, could have a material adverse effect on our business, including our financial condition, results of operations and reputation.

Risks Related to Our Intellectual Property

Our inability to protect our intellectual property rights could negatively affect our business and results of operations.

Our ability to compete effectively depends in part upon developing, maintaining and/or protecting intellectual property rights relevant to our aerogel product forms, applications, manufacturing technologies, and brand names. We rely principally on a combination of patent protection, trade secret laws, confidentiality and nondisclosure agreements, trademark registrations, common law rights, and licensing arrangements to establish and protect the intellectual property rights relevant to our business. However, these measures may not be adequate in every given case to permit us to gain or keep any competitive advantage, particularly in those countries where the laws do not protect our proprietary rights as fully as or where the enforcement tools are weaker or less effective than those in the United States. In particular, since aerogels were developed approximately 80 years ago, there has been a wide range of research, development and publication related to aerogels, which makes it difficult to establish intellectual property rights to many key elements of aerogel technology and to obtain patent protection. Accordingly, much of the general technology that we use in our manufacture of aerogel blankets is not protected by patents. As a result, we may be unable to meaningfully protect against third-party products incorporating aerogel blankets or compositions.

Where we consider it appropriate, our strategy is to seek patent protection in the United States and other countries on technologies used in or relating to our aerogel product forms, applications and manufacturing technologies. As of December 31, 2025, we had 90 issued U.S. patents and 310 issued foreign patents. The issuance of a patent is not conclusive as to its scope, validity or enforceability. Thus, any patent held by us or to be issued to us from a pending patent application, could be challenged, invalidated or held unenforceable in litigation or proceedings before the USPTO and/or other patent tribunals in the United States or in foreign jurisdictions. Third parties could develop technologies that circumvent the patent protection we have secured. No consistent policy regarding the breadth of patent claims has emerged to date in the United States and the landscape could become more uncertain in view of future rule changes by the USPTO, the introduction of patent reform legislation and decisions in patent law cases by the federal courts including the United States Supreme Court.

The patent landscape outside of the United States is even less predictable. As a result, the validity and enforceability of patents cannot be predicted with certainty. For example, we are aware of competitors that manufacture and market aerogel insulation products in China, where it may be difficult for us to enforce our intellectual property rights against these or other competitors.

In addition, we may fail to apply for patents on important technologies or innovative products in a timely fashion, if at all, and our existing and future patents may not be sufficiently broad to prevent others from practicing our technologies or from developing competing products or technologies, in particular given the long history of aerogel development. Furthermore, third parties could practice our intellectual property rights in territories where we do not have patent protection or where processes for remedies for infringement of intellectual property are unclear or still evolving. Such third parties may then try to import products made using our intellectual property rights into the United States or other countries. We may not be able to prevent such imports practically even if we obtain appropriate legal remedies. Our strategy is to seek registration of trademarks for our brands in many, but not all, of the jurisdictions in which we sell our products based on various factors, including our sales volumes in the jurisdiction, our ability to enforce local laws, and cost. Our strategy may not be adequate to protect our brands in all circumstances, especially in foreign jurisdictions. In certain jurisdictions, third parties may seek to register

trademarks on the names of our products and brands before we do, thus requiring us to change branding strategies or otherwise deal with the issue.

Our pending patent applications are directed to various enabling technologies for the product forms, applications and manufacturing technologies that support our current business, as well as aspects of products under development or contemplated for the future. The issuance of patents from these applications involves complex legal and factual questions and, thus, we cannot provide assurance that any of our pending patent applications will result in the issuance of patents to us. The USPTO, relevant foreign patent offices and other relevant patent tribunals may deny or require significant narrowing of claims in our pending patent applications. Patents issued as a result of any of our pending patent applications may not cover our enabling technology and/or the products or processes that support our current or future business or afford us with significant commercial protection against others with similar technology. Proceedings before the USPTO or foreign patent offices could result in adverse decisions as to the priority of our inventions and the narrowing or invalidation of claims in issued patents. In addition, our pending patent applications filed in foreign countries are subject to laws, rules and procedures that differ from those of the United States, and thus foreign patent applications may not be granted even if counterpart United States patents are issued.

Our potential inability to adequately protect our intellectual property as a result of engaging external manufacturing facilities in China for the supplemental supply of our aerogel products could negatively impact our performance.

In connection with our engagement of external manufacturing facilities in China, we expect to implement customary manufacturer safeguards onsite, such as the use of confidentiality agreements with employees, to protect our proprietary information and technologies during the manufacturing process of our aerogel products. However, these safeguards may not effectively prevent unauthorized use of such information and technical know-how, or prevent the external manufacturing facilities from retaining them. Although the courts in China are increasing and broadening their protection of intellectual property rights, the legal regime governing intellectual property rights in China is relatively immature and it is often difficult to create and enforce intellectual property rights or protect trade secrets there. We face risks that our proprietary information may not be afforded the same protection in China as it is in countries with well-developed intellectual property laws, and local laws may not provide an adequate remedy in the event of unauthorized disclosure of confidential information. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights in China, and failure to obtain or maintain trade secret protection could adversely affect our competitive business position. In the event that the third-party external manufacturing facilities of our proprietary aerogel product misappropriates our intellectual property, our business, prospects and financial condition could be materially and adversely affected.

We have in the past initiated intellectual property litigation and any future intellectual property litigation may be costly, and could limit or invalidate our intellectual property rights, divert time and efforts away from business operations, require us to pay damages and/or costs and expenses and/or otherwise have a material adverse impact on our business, and we could become subject to additional such intellectual property litigation in the future.

The success of our business is highly dependent on protecting our intellectual property rights. Unauthorized parties may attempt to copy or otherwise obtain and use our products and/or enabling technology. Policing the unauthorized use of our intellectual property rights is difficult and expensive, as is enforcing these rights against unauthorized use by others. Identifying unauthorized use of our intellectual property rights is difficult because we may be unable to monitor the technologies and/or materials being employed by other parties. The steps we have taken or will take may not prevent unauthorized use of our intellectual property rights, particularly in foreign countries where enforcement of intellectual property rights may be more difficult than in the United States.

Our continued commercial success will also depend in part upon not infringing the patents or violating other intellectual property rights of third parties. We are aware of patents and patent applications generally relating to aspects of our technologies filed by, and issued to, third parties. We cannot determine with certainty whether patents or patent applications of other parties may materially affect our ability to conduct our business. There may be existing patents of which we are unaware that we may inadvertently infringe, resulting in claims against us or our customers. In recent years, Chinese, Japanese and South Korean entities have filed a significant number of patent

applications related to aerogel products in both their home countries and in foreign countries. These patents in application areas of aerogels may make it more difficult for OEMs and end-user customers in these countries to use our products in new and different applications, which in turn may limit our ability to penetrate new markets.

In the event that the manufacture, use and/or sale of our products or technologies is challenged, or if our product forms or technologies conflict with patent rights of others, or our operations conflict with trademark or similar rights of others, third parties could bring legal actions against us in the United States, Europe or other countries, claiming damages and seeking to enjoin the manufacturing and/or marketing of our products. In addition, it is not possible to predict with certainty what patent claims may arise from pending patent applications of third parties. In the United States, for example, patent prosecution can proceed in secret prior to issuance of a patent, provided such application is not filed in a foreign jurisdiction. For U.S. patent applications that are also filed in foreign jurisdictions, such patent applications will not be published until 18 months from the filing date of the application. As a result, third parties may be able to obtain patents with claims relating to our product forms, applications and/or manufacturing processes which they could attempt to assert against us or our end-users.

In the case of any of the above, litigation may be necessary to enforce, protect or defend our intellectual property rights or to determine the validity and scope of the intellectual property rights of others. Any such litigation could be unsuccessful, cause us to incur substantial costs, divert resources and the efforts of our personnel away from daily operations, harm our reputation, and/or result in the impairment of our intellectual property rights. In some cases, litigation may be threatened or brought by a patent holding company (otherwise known as non-practicing entities or patent "trolls") or other adverse patent owner who has no relevant product revenues and against which our patents may provide little or no deterrence. If we are found to infringe any patents, regardless of whether litigation is brought against us by third parties or brought by us against third parties, we could be required to:

- pay substantial monetary damages, including lost profits, reasonable royalties and/or treble damages if an infringement is found to be willful;
- totally discontinue or substantially modify any products or processes that are found to be in violation of another party's intellectual property rights; and/or
- seek a license to continue making and selling our products and/or using our manufacturing processes, which we may not be able to obtain on reasonable terms, if at all, which could significantly increase our operating expenses and/or decrease our revenue.

In the actions brought by us against third parties we may be required to pay costs and expenses of opposing parties, including attorney fees, if we lose.

If our competitors are able to use our technology without payment to us, our ability to compete effectively could be materially harmed. Our contracts generally indemnify our customers for third-party claims of intellectual property infringement related to the manufacture and use of our products, and typically up to the amount of the purchase price paid for the product, which could cause us to become involved, and subject to liability, in litigation between our customers and third parties. The expense of defending these claims may adversely affect our results of operations.

Patents covering technologies that are similar or superior to our technologies may be developed or obtained by third parties. We may need to seek licenses to these technologies, which could limit our ability to manufacture our products and have a material adverse effect on our business and results of operations.

Competitors or other third parties may independently develop and obtain patents covering technologies that are similar or superior to the product forms, applications or manufacturing technologies that we employ. In such event, we may need to obtain licenses for these technologies. However, we may not be able to obtain licenses on reasonable terms, if at all, which could limit our ability to manufacture our current and/or future products and operate our business.

Our contracts with third parties could negatively affect our intellectual property rights.

To further our product development efforts, our scientists and engineers work closely with customers and other third parties to research and develop advancements in aerogel product forms, applications, and manufacturing technologies. We have entered into agreements with private third parties to independently or jointly research, design, and develop new devices and systems that incorporate aerogel material. In some instances, the research and development activities that we conduct under contract with private third parties may produce intellectual property to which we may not have ownership or exclusive rights and will be unable to protect or monetize.

Furthermore, there could be disputes between us and a private third party as to the ownership rights to any inventions that we develop in collaboration with such third party. Any such dispute may cause us to incur substantial costs including potential license obligations, and could place a significant strain on our financial resources, divert the attention of management from our core business, and harm our reputation.

We rely on trade secrets to protect our technology, and our failure to obtain or maintain trade secret protection could materially adversely affect our competitive business position.

We rely in part on trade secret protection to protect confidential and proprietary information relating to our technology, particularly where we do not believe patent protection is appropriate or obtainable. We continue to develop and refine the manufacturing technologies used to produce our aerogel products and believe that we have already developed, and will continue to develop, significant know-how related to these technologies. However, trade secrets can be difficult to protect. We may not be able to maintain the secrecy of this information and competitors may develop or acquire equally or more valuable information related to the manufacture of comparable aerogel products. Our strategy for scale-up of commercial production will continue to require us to share confidential and proprietary information with the U.S. government and other third parties. While we take reasonable efforts to protect our trade secrets, our employees, consultants, contractors or scientific and other advisors, or those of our business partners, may intentionally or inadvertently disclose our confidential and proprietary information to competitors. Any enforcement of claims by us that a third party has obtained and is using our trade secrets is expensive, time consuming and uncertain. In addition, foreign courts are sometimes less willing than United States courts to protect trade secrets.

We require all employees and consultants to execute confidentiality and/or nondisclosure agreements upon the commencement of an employment or consulting arrangement with us, which agreements generally require that all confidential and proprietary information developed by the individual or made known to the individual by us during the course of the individual's relationship with us be kept confidential and not disclosed to third parties. These agreements further generally provide that inventions conceived by the individual in the course of rendering services to us will be our exclusive property. Nevertheless, these agreements may not be honored and our confidential and proprietary information may be disclosed, or these agreements may be unenforceable or difficult to enforce. We also require customers and vendors to execute confidentiality and/or nondisclosure agreements. However, we have not obtained such agreements from all of our customers and vendors. Moreover, some of our customers may be subject to laws and regulations that require them to disclose information that we would otherwise seek to keep confidential. Our confidential and proprietary information may be otherwise disclosed without our authorization or knowledge. Moreover, third parties could reverse engineer our manufacturing processes, independently develop substantially equivalent confidential and proprietary information or otherwise gain access to our trade secrets. Additionally, cyber security threats, especially originating from countries such as China, Russia, Iran, and North Korea as broadly reported in the media, pose a significant risk to maintaining control of our trade secrets. Failure to maintain trade secret protection could enable others to produce competing products and adversely affect our competitive business position.

Risks Related to Our Data Privacy and Other Personal Information

We may be subject to, or may in the future become subject to, U.S. federal and state, and foreign laws and regulations imposing obligations on how we collect, use, disclose, store, and process personal information. Our actual or perceived failure to comply with such obligations could result in liability or reputational harm and could harm our business. Ensuring compliance with such laws could also impair our efforts to maintain and expand our customer base, and thereby decrease our revenue.

We are subject to data protection laws and regulations that address privacy and data security. The legislative and regulatory landscape for data protection continues to evolve, and in recent years there has been an increasing focus on privacy and data security issues. In the United States, numerous federal and state laws and regulations, including state data breach notification laws, state health information privacy laws and federal and state consumer protection laws govern the collection, use, disclosure and protection of health-related and other personal information. Failure to comply with data protection laws and regulations could result in government enforcement actions, which could include civil or criminal penalties, private litigation and/or adverse publicity and could negatively affect our operating results and business.

Various U.S. states now regulate the processing of personal information. For example, California was the first of an increasing number of states to enact comprehensive state privacy legislation with the California Consumer Privacy Act (CCPA), which went into effect in January of 2020. The CCPA established a privacy framework for covered businesses by creating an expanded definition of personal information, establishing data privacy rights for California residents, requiring covered businesses to provide disclosures to California residents, and creating a statutory damages framework with the potential for severe damages for violations of the CCPA and for businesses that fail to implement reasonable security procedures and practices to prevent data breaches, as well as a private right of action for certain data breaches. Additionally in 2020, California voters passed the California Privacy Rights Act (CPRA), which went into effect on January 1, 2023. The CPRA significantly amended the CCPA, potentially resulting in further uncertainty, additional costs and expenses in an effort to comply and additional potential for harm and liability for failure to comply. Among other things, the CPRA established a new regulatory authority, the California Privacy Protection Agency, which enacts new regulations under the CPRA and has expanded enforcement authority. More U.S. states are enacting similar legislation, increasing compliance complexity and increasing risks of failures to comply. In 2023, comprehensive privacy laws in Virginia, Colorado, Connecticut, and Utah all took effect, and laws in Montana, Oregon, and Texas took effect in 2024. Laws in a number of other U.S. states took effect, or are set to take effect, in 2025, 2026, and beyond. Additional U.S. states have proposals under consideration, all of which are likely to increase our regulatory compliance costs and risks, exposure to regulatory enforcement action, and other liabilities.

Likewise, the Federal Trade Commission and state attorneys general have been actively enforcing laws that protect consumers from unfair and deceptive acts or practices, including with respect to privacy and security. If our public statements regarding collection, use, storage or disclosure of personal information are or are perceived to be inconsistent with our actual practices, we may face claims under Section 5 of the Federal Trade Commission Act or state law equivalents.

Numerous other countries have, or are developing, laws governing the collection, use and transmission of personal information as well. EU member states and other jurisdictions have adopted data protection laws and regulations, which impose significant compliance obligations.

In the ordinary course of business, we transfer personal data from Europe and other jurisdictions to the United States or other countries and may be subject to the GDPR and UK GDPR as well as other foreign data protection laws. Europe and other jurisdictions have enacted laws requiring data to be localized or limiting the transfer of personal data to other countries and impose other restrictions on processing of sensitive personal data, including genetic information and testing. In particular, the EEA and the UK have significantly restricted the transfer of personal data to the United States and other countries whose privacy laws it generally believes are inadequate. Other jurisdictions may adopt or have already adopted similarly stringent data localization and cross-border data transfer laws. In July 2023, the European Commission adopted an adequacy decision for a new mechanism for transferring personal data from the EU to the United States, the EU-U.S. Data Privacy Framework, which provides EU individuals with several new rights, including the right to obtain access to their data, or obtain correction or deletion of incorrect or unlawfully handled data. In addition, the EU-U.S. Data Privacy Framework offers additional redress avenues for violations, including free of charge independent dispute resolution mechanisms and an arbitration panel. The UK followed the European Commission in October of 2023 and adopted its "extension" to the EU-U.S. Data Privacy Framework. The European Commission and the UK will continually review developments in the United States along with their adequacy decisions. Adequacy decisions can be adapted or even withdrawn in the event of developments affecting the level of protection in the applicable jurisdiction. Future actions of EU and UK data protection authorities are difficult to predict, and the GDPR permits EU states to frame national legislation that may

derogate from the GDPR. For example, we are subject to the GDPR, the UK GDPR, and the German federal data privacy law, the Bundesdatenschutzgesetz, and we are subject to the regulatory authority of the Baden-Württemberg data protection authority, all of which could have conflicting compliance requirements.

If there is no lawful manner for us to transfer personal data from the EEA, the UK or other jurisdictions to the United States, or if the requirements for a legally-compliant transfer are too onerous, we could face significant adverse consequences, including the interruption or degradation of our operations at significant expense, increased exposure to regulatory actions, substantial fines and penalties, the inability to transfer data and work with partners, vendors and other third parties, and injunctions against our processing or transferring of personal data necessary to operate our business. Additionally, companies that transfer personal data out of the EEA and UK to other jurisdictions, particularly to the United States, are subject to increased scrutiny from regulators, individual litigants, and activist groups. Some European regulators have ordered certain companies to suspend or permanently cease certain transfers out of Europe for allegedly violating the GDPR’s cross-border data transfer limitations. Regulators in the United States such as the Department of Justice are also increasingly scrutinizing certain personal data transfers and, effective October of 2025, the DOJ has implemented what is known as the Bulk Transfer Rule restricting transfers of bulk sensitive personal data (like health, genomic, or financial info) and U.S. government-related data to "countries of concern" (e.g., China, Russia) or related entities, focusing on national security by preventing adversary access. It requires U.S. companies to implement data security programs, audit compliance, and maintain records, with significant penalties for violations, aiming to safeguard sensitive U.S. data from foreign adversaries.

Applicable data privacy and data protection laws may conflict with each other, and by complying with the laws or regulations of one jurisdiction, we may find that we are violating the laws or regulations of another jurisdiction. Furthermore, the number of government investigations related to data security incidents and privacy violations continue to increase and government investigations typically require significant resources and generate negative publicity, which could harm our business and reputation.

Despite our efforts, we may not have fully complied in the past and may not in the future. Failure to comply with current and future laws and regulations could result in government enforcement actions (including the imposition of significant penalties), criminal and civil liability for us and our officers and directors, private litigation and/or adverse publicity that negatively affects our business.

Risks Related to Our Common Stock

We have incurred and will continue to incur increased costs and demands upon management as a result of complying with the laws and regulations affecting public companies in the United States, which may adversely affect our results of operations.

As a public company we have incurred and will continue to incur significant legal, accounting and other expenses that we did not incur as a private company. The Sarbanes-Oxley Act of 2002 (Sarbanes-Oxley Act), the Dodd-Frank Wall Street Reform and Consumer Protection Act, the listing requirements of The New York Stock Exchange and other applicable securities rules and regulations impose various requirements on public companies, including establishment and maintenance of effective disclosure and financial controls and corporate governance practices. Moreover, these rules and regulations have increased our legal and financial compliance costs and has made some activities more time-consuming. We are subject to the reporting requirements of the Exchange Act that require us to file, among other things, Quarterly Reports on Form 10-Q and Annual Reports on Form 10-K. Under Section 302 of the Sarbanes-Oxley Act as a part of each of these reports, our chief executive officer and chief financial officer are required to evaluate and report their conclusions regarding the effectiveness of our disclosure controls and procedures and to certify that they have done so. Effective internal controls are necessary for us to provide reliable financial reports and prevent fraud. The process of documenting our internal controls and complying with Section 404 is expensive and time consuming, and requires significant attention of management.

Complying with these requirements applicable to public companies may at times place a strain on our personnel, information technology systems and resources while diverting management’s attention from other business concerns. We have engaged outside service providers with appropriate public company compliance

experience and technical accounting knowledge to support our compliance efforts, and we may need to engage additional service providers in the future to ensure compliance which may cause us to incur additional operating costs.

These and other requirements may also make it more difficult or more costly for us to obtain or maintain certain types of insurance, including directors' and officers' liability insurance. We may be forced to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage.

The impact of these requirements could also make it more difficult for us to attract and retain qualified persons to serve on our Board of Directors, our board committees or as executive officers. Any one of these requirements could have a material adverse effect on our business, financial condition and results of operations.

Because we are a public company, we are obligated to develop and maintain proper and effective internal control over financial reporting. If our internal controls over financial reporting are determined to be ineffective, or if our auditors are otherwise unable to attest to their effectiveness, investor confidence in our company, and our common stock price, may be adversely affected.

Pursuant to Section 404(a) of the Sarbanes-Oxley Act, we have furnished a report by management on the effectiveness of our internal control over financial reporting for the fiscal year ended December 31, 2025 and will continue to do so in each year thereafter. This assessment is required to include disclosure of any material weaknesses identified by our management in our internal control over financial reporting. Our independent registered public accounting firm is required to formally attest to the effectiveness of our internal control over financial reporting for the fiscal year ended December 31, 2025 and subsequent years.

We continue to assess our system of internal controls over financial reporting and successfully completed documentation necessary to perform the annual evaluation required to comply with Section 404. In future periods, we may discover, and not be able to remediate timely, significant deficiencies or material weaknesses.

If we were to identify one or more material weaknesses in our internal control, we may be unable to assert that our internal controls are effective. If we are unable to assert that our internal controls over financial reporting are effective, we could lose investor confidence in the accuracy and completeness of our financial reports or it could cause us to fail to meet our reporting obligations, which could have a material adverse effect on the price of our common stock. In addition, any failure to comply with Section 404 could subject us to a variety of administrative sanctions, including SEC action, ineligibility for short-form resale registration, the suspension or delisting of our common stock from The New York Stock Exchange, and the inability of registered broker-dealers to make a market in our common stock, which would further reduce our stock price and could harm our business.

The trading market in our common stock has been limited and substantially less liquid than the average trading market for a stock quoted on The New York Stock Exchange.

Since our initial listing on The New York Stock Exchange on June 13, 2014, the trading market in our common stock has been limited and substantially less liquid than the average trading market for companies listed on The New York Stock Exchange. The listing of our common stock on The New York Stock Exchange does not assure that a meaningful, consistent and liquid trading market currently exists or will exist in the future. We cannot predict whether a more active market for our common stock will develop in the future. An absence of an active trading market could adversely affect our stockholders' ability to sell our common stock at current market prices in short time periods, or possibly at all. An inactive market may also impair our ability to raise capital by selling our common stock and may impair our ability to acquire other companies, products or technologies by using our common stock as consideration. Additionally, analyst coverage of our common stock may be limited and such lack of coverage may have a depressive effect on the market price for our common stock.

We expect that the price of our common stock will continue to fluctuate substantially, which could subject us to securities class action litigation and result in substantial losses to our stockholders.

The price of our common stock has fluctuated in the past and may continue to fluctuate in a broad range. Such fluctuations may be due to a number of factors, including the following, some of which are beyond our control:

- volume and timing of orders for our products;
- quarterly and yearly variations in our or our competitors' results of operations;
- our announcement or our competitors' announcements regarding new products, product enhancements, significant contracts, number of distributors, acquisitions or strategic investments;
- announcements or speculation regarding the activities or plans of our automotive OEM customers and the perceived impact on their demand for our products;
- announcements of technological innovations relating to aerogels, thermal management and energy industrial insulation;
- results of operations or projections that vary from the expectations of securities analysts and investors;
- the periodic nature of our sales cycles, in particular for capital projects in the energy industrial market;
- our ability to develop, obtain regulatory clearance or approval for and market new and enhanced products on a timely basis;
- future sales of our common stock, including sales by our executive officers, directors and significant stockholders and their respective affiliates;
- announcements by third parties of significant claims or proceedings against us, including with regard to intellectual property and product liability;
- changes in accounting principles;
- general U.S. and global economic conditions and other factors, including factors unrelated to our operating performance or the operating performance of our competitors; and
- other risks described herein.

Furthermore, the U.S. stock market has at times experienced extreme volatility that in some cases has been unrelated or disproportionate to the operating performance of particular companies. These broad market and industry fluctuations may adversely affect the market price of our common stock, regardless of our actual operating performance.

In the past, following periods of market volatility, stockholders have instituted securities class action litigation. If we become involved in securities litigation, it could have a substantial cost and divert resources and the attention of our senior management team from our business regardless of the outcome of such litigation.

Securities analysts may not continue coverage of our common stock or may issue negative reports, which may have a negative impact on the market price of our common stock.

The trading market for our common stock relies in part on the research and reports that industry or financial analysts publish about us or our business. Securities analysts may elect not to provide research coverage of our common stock. If securities analysts do not cover or continue to cover our common stock, the lack of research coverage may cause the market price of our common stock to decline. If one or more of the analysts who elects to cover us downgrades our stock, our stock price would likely decline substantially. If one or more of these analysts ceases coverage of us, we could lose visibility in the market, which in turn could cause our stock price to decline. Many investment banking firms are required to contract with independent financial analysts for their stock research. It may be difficult for companies such as ours, with smaller market capitalizations, to attract independent financial analysts that will cover our common stock. This could have a negative effect on the market price of our stock.

Anti-takeover provisions in our Certificate of Incorporation and restated bylaws, and Delaware law, could delay or discourage a takeover.

Anti-takeover provisions in our restated certificate of incorporation, as amended (our Certificate of Incorporation), and restated bylaws and Delaware law may have the effect of deterring or delaying attempts by our stockholders to remove or replace management, engage in proxy contests and effect changes in control. The provisions of our charter documents include:

- procedures for advance notification of stockholder nominations and proposals;
- the inability of our stockholders to call a special meeting of the stockholders and the inability of our stockholders to act by written consent;
- the ability of our Board of Directors to create new directorships and to fill any vacancies on the Board of Directors;
- the ability of our Board of Directors to amend our restated bylaws without stockholder approval; and
- the ability of our Board of Directors to issue up to 5,000,000 shares of preferred stock without stockholder approval upon the terms and conditions and with the rights, privileges and preferences as our Board of Directors may determine.

In addition, as a Delaware corporation, we are subject to Delaware law, including Section 203 of the Delaware General Corporation Law (DGCL). In general, Section 203 prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years following the date that the stockholder became an interested stockholder unless certain specific requirements are met as set forth in Section 203. These provisions, alone or together, could have the effect of deterring or delaying changes in incumbent management, proxy contests or changes in control.

Our restated certificate of incorporation designates a state or federal court located within the State of Delaware as the exclusive forum for certain types of actions and proceedings that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our Certificate of Incorporation provides that, subject to limited exceptions, a state or federal court located within the State of Delaware will be the exclusive forum for (1) any derivative action or proceeding brought on our behalf, (2) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, (3) any action asserting a claim against us arising pursuant to any provision of the DGCL, our Certificate of Incorporation or our restated bylaws, or (4) any other action asserting a claim against us that is governed by the internal affairs doctrine. This exclusive forum provision does not apply to suits brought to enforce a duty or liability created by the Exchange Act. It could apply, however, to a suit that falls within one or more of the categories enumerated in the exclusive forum provision and asserts claims under the Securities Act of 1933, as amended (the Securities Act), inasmuch as Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rule and regulations thereunder. There is uncertainty as to whether a court would enforce such provision with respect to claims under the Securities Act, and our stockholders will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and to have consented to the provisions of our Certificate of Incorporation described above. This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and employees. Alternatively, if a court were to find these provisions of our Certificate of Incorporation inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving such matters in other jurisdictions, which could adversely affect our business and financial condition.

Our stockholders may experience future dilution as a result of future equity offerings.

We may offer shares of our common stock or other securities convertible into or exchangeable for our common stock in order to raise additional capital in the future. We cannot assure our stockholders that we will be

able to sell shares or other securities in any other offering at a price per share that is equal to or greater than the price per share or the price per security our stockholders paid for our shares or other securities. Investors purchasing shares or other securities in the future could have rights, preferences or privileges senior to those of our stockholders and our stockholders may experience dilution. Our stockholders may incur additional dilution upon the exercise of any outstanding stock options or warrants, the issuance and vesting of restricted stock units, or the issuance, vesting or exercise of other equity awards.

We do not intend to pay cash dividends in the foreseeable future and, consequently, our stockholders' ability to achieve a return on their investment will depend on appreciation in the price of our common stock.

We have never declared or paid cash dividends on our common stock and we do not intend to pay any cash dividends on our common stock in the foreseeable future. We currently expect to retain all available funds and any future earnings for use in the operation and expansion of our business. In addition, the terms of our revolving credit facility restrict our ability to pay dividends and any future credit facilities, loan agreements, debt instruments or other agreements may further restrict our ability to pay dividends. Payments of future dividends, if any, will be at the discretion of our Board of Directors after taking into account various factors, including our business, results of operations and financial condition, current and anticipated cash needs, plans for expansion and any legal or contractual limitations on our ability to pay dividends. As a result, capital appreciation, if any, of our common stock will be our stockholders' sole source of potential gain for the foreseeable future.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This report includes forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act that relate to future events or our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to differ materially from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. Words such as, but not limited to, “believe,” “expect,” “anticipate,” “estimate,” “intend,” “seek,” “may,” “plan,” “potential,” “predict,” “project,” “targets,” “likely,” “will,” “would,” “could,” “should,” “continue,” and similar expressions or phrases, or the negative of those expressions or phrases, are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Although we believe that we have a reasonable basis for each forward-looking statement contained in this report, we caution you that these statements are based on our projections of the future that are subject to known and unknown risks and uncertainties and other factors that may cause our actual results, level of activity, performance or achievements expressed or implied by these forward-looking statements, to differ. The description of our Business set forth in Item 1, the Risk Factors set forth in this Item 1A and our Management’s Discussion and Analysis of Financial Condition and Results of Operations set forth in Item 7, as well as other sections in this report, discuss some of the factors that could contribute to these differences. These forward-looking statements include, among other things, statements about:

- the expected future growth of the market for our aerogel products and our continued gain in market share, in particular in the EV market, the energy industrial and sustainable insulation market, the lithium-ion battery thermal barrier markets, and other markets we target;
- our beliefs about the competitive strengths and value propositions of our technology and our products and our ability to gain additional market share and enter into new markets based on those strengths;
- our expectation that our investment in incremental manufacturing and operating expense will sustain long-term growth in our existing markets and develop new business opportunities;
- our plans to continue to develop and optimize aerogel products for high-value applications within the sustainable insulation materials market and our plan to realize revenue from this market;
- our plans and expectations to partner with industry leaders in the battery and EV market or such partnerships resulting in products and technologies or otherwise resulting in meaningful financial results;
- our expectations about the size and timing of awarded business in the EV market, future revenues and profit margins, arising from our supply relationship and contract with automotive OEMs and our ability to win more business and increase revenue in the EV market;
- our pursuit of high-value opportunities for our aerogel products within different segments of the EV market, the global insulation market, including the sustainable insulation materials market, and our plans to leverage our aerogel technology platform to develop innovative, aerogel enhanced products for applications in new markets;
- our plans to focus additional resources to continue to grow our share of the EV market and the energy industrial insulation market;
- the current or future trends in the energy, energy industrial, chemical and refinery, LNG, sustainable insulation materials, EV thermal barrier or other markets and the impact of these trends on our business;
- our investments in the EV market and aerogel technology platform;
- our pursuit of and the expected greater adoption of our products in the LNG and power generation markets and our expectation that product revenue will be generated in large part by demand for insulation associated with scheduled plant shutdowns, or turnarounds, and other maintenance-related projects;
- our expectation that our products will be specified during the design phase in a growing number of new plant construction and capital expansion projects and our expectation that we will have an increasing percentage of our products sold for use in capital projects;
- our expectation that the growth in global energy demand and EV market will result in increased new-build and large capacity expansion projects, driving demand for our aerogel products;
- our plans to continue our strategy of working with innovative companies to target and penetrate additional market opportunities;

- our plans to develop strategic partnerships to facilitate market penetration beyond the energy industrial and sustainable insulation materials market, as well as the expected goals and priorities of such strategic partnerships;
- our belief that an adequate long-term supply of silica-precursors and other raw materials is available and that our plans to reduce reliance on precursors susceptible to significant price fluctuations will be successful;
- our belief that we can strategically increase our capacity to meet the demand or that we will be able to make such capacity increases in a timely manner;
- our expectation in our ability to implement lower cost product formulations and realize material purchasing efficiencies;
- our belief that our portfolio of patents, trade secrets and know-how present a significant barrier to potential new entrants in the production of aerogel blanket insulation;
- our expectation that we will be successful in enforcing and defending our patents against competitors and that such patents are valid and enforceable, as well as our expectations about the costs and consequences of our current or potential future patent litigation and the potential for additional patent litigation;
- our belief that our products possess strong competitive advantages over traditional insulation materials, including the superior thermal performance and the thin, easy-to-use and durable blanket form of our products;
- our belief that we can make additional productivity improvements in our existing East Providence facility and utilize a flexible supply strategy, including but not limited to use of our external manufacturing capabilities in China, which currently support Aspen's Energy Industrial segment and are capable of delivering increased aerogel production capacity for 2026 and beyond;
- our belief that our end-use customers will continue to invest in major energy industrial projects;
- our expectation that we will continue to sell our products in the sustainable insulation materials and other end markets;
- our expectations that our work with partners will accelerate the commercialization of these carbon aerogel anode materials in the EV market;
- our belief that the potential for significant technological innovation in traditional insulation materials is limited and that new high-performance materials will be required to meet evolving market requirements for energy efficient insulation systems;
- our belief that our aerogel products and manufacturing processes are proprietary and that we can protect our patents, trade secrets and know-how associated therewith;
- our belief that we can continue to improve the cost efficiency of our manufacturing process, that our current expansion plans offer attractive returns on incremental invested capital, and that we will focus our development efforts on new products and next generation technology with application in new, high value market segments;
- our belief that we will have opportunities to address additional high value applications in the multi-billion dollar global insulation market, and that we are well-positioned to leverage a decade's worth of research and development to design and commercialize disruptive aerogel products for a wide array of new markets;
- our expectations about future material costs and manufacturing expenses as a percentage of revenue, including the impact of engaging one or more external manufacturing facilities in China for the supplemental supply of our aerogel products;
- our expectation about the ability of the Chinese external manufacturing facilities that we engage to consistently supply the aerogel product that we order in a timely manner;
- our belief that our products have the lowest cost on a fully-installed basis or offer significant life-cycle cost savings in energy industrial and certain other applications as compared to traditional insulation materials;
- our plans to continue to expand our global sales force and distribution network to support anticipated growth in customers and demand for our products and our plans to seek to promote greater enterprise-wide utilization of our products by existing end-use customers;
- our expectations and projections about future revenues, revenue growth, costs, expenses, production volumes, manufacturing productivity, gross profit, profitability, net loss, loss per share and Adjusted EBITDA, sources and uses of cash, liquidity, cash flow, capital requirements and the sufficiency of our existing cash balance and available credit;
- our expectations that most of our revenue will continue to come from a relatively small number of customers for the foreseeable future;

- our expectations of long-term revenue growth, with increasing levels of gross profit and improved cash flows from operations and our expectations that we will incur significant capital expenditures related to the expansion of our manufacturing capacity to support this expected long-term growth in demand;
- our expectations that our material costs will drop in absolute dollars and remain stable as a percentage of revenue in 2026 and our manufacturing expense will decrease in absolute dollars and increase as a percentage of revenue in 2026;
- our expectation to continue to increase investment in research and development in our efforts to enhance and expand our aerogel technology platform;
- our expectations about the impact of new accounting pronouncements on our consolidated financial statements and related disclosures;
- our belief that our experienced and dedicated leadership team will provide us with a competitive advantage in the industry;
- our belief of our technological and market leadership in aerogels;
- the expected future development of new aerogel technologies;
- our expectations about limitations of net operating losses;
- our expectation of rising interest rates and operating costs;
- rising inflation; and
- our beliefs about our Mexico thermal barrier assembly facility and our external manufacturing facility in China, and their timely operations, their ability to meet the demand, the growth in thermal barrier demand to match the assembly operation and vice versa.

We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. We have included important cautionary statements in this report, particularly in the Risk Factors set forth in Item 1A of this Annual Report on Form 10-K, that we believe could cause actual results or events to differ materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments we may make.

You should read this report and the documents that we reference in this report and have filed as exhibits to this report completely and with the understanding that our actual future results may be materially different from what we expect. The forward-looking statements contained in this report are made as of the date of this report, and we do not assume, and specifically disclaim, any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise.

Item 1B. UNRESOLVED STAFF COMMENTS

None.

Item 1C. CYBERSECURITY

We recognize the critical importance of maintaining the trust and confidence of customers, suppliers, business partners and employees toward our business and are committed to protecting the confidentiality, integrity and availability of our business operations and systems. Our Board of Directors is actively involved in oversight of our risk management activities, and cybersecurity represents an important element of our overall approach to risk management. Our cybersecurity policies, standards, processes and practices are based on recognized frameworks established by the National Institute of Standards and Technology (NIST) the International Organization for Standardization and other applicable industry standards. Our customers' requirements for their suppliers to have certain cybersecurity policies, standards and processes in place also drives and guides some of our policies and practices. In general, we seek to address cybersecurity risks through a comprehensive, cross-functional approach that is focused on preserving the confidentiality, security and availability of the information that we collect and store by identifying, preventing and mitigating cybersecurity threats and effectively responding to cybersecurity incidents when they occur.

Cybersecurity Risk Management and Strategy; Effect of Risk

We face risks related to cybersecurity such as unauthorized access, cybersecurity attacks and other security incidents, including as perpetrated by hackers and unintentional damage or disruption to hardware and software systems, loss of data, and misappropriation

of confidential information. To identify and assess material risks from cybersecurity threats, we maintain a comprehensive cybersecurity program to ensure our systems are effective and prepared for information security risks. The program includes regular oversight of our programs for security monitoring for internal and external threats to ensure the confidentiality and integrity of our information assets. We consider risks from cybersecurity threats alongside other company risks as part of our overall risk assessment process. We employ a range of tools and services, including regular network and endpoint monitoring, audits, vulnerability assessments, penetration testing, threat modeling and tabletop exercises to inform our risk identification and assessment. As discussed in more detail under “Cybersecurity Governance” below, our Nominating, Governance and Risk Committee provides oversight of our cybersecurity risk management and strategy processes, which are led by our Director of Information Security, our Chief Financial Officer and our Chief Administrative Officer.

We also identify our cybersecurity threat risks by comparing our processes to standards set by the NIST, International Organization for Standardization and the Center for Internet Security, as well as by engaging experts to attempt to infiltrate our information systems. To provide for the availability of critical data and systems, maintain regulatory compliance, manage our material risks from cybersecurity threats, and protect against and respond to cybersecurity incidents, we undertake the following activities:

- monitor emerging data protection laws and implement changes to our processes that are designed to comply with such laws;
- through our policies, practices and contracts (as applicable), require employees, as well as third parties that provide services on our behalf, to treat confidential information and data with care;
- employ technical safeguards that are designed to protect our information systems from cybersecurity threats, including firewalls, intrusion prevention and detection systems, anti-malware functionality and access controls, which are evaluated and improved through vulnerability assessments and cybersecurity threat intelligence;
- provide regular, mandatory training for our employees, Board members and certain contractors regarding cybersecurity threats as a means to equip them with effective tools to address cybersecurity threats and incident response preparedness, and to communicate our evolving information security policies, standards, processes and practices;
- conduct regular phishing email simulations for all employees and contractors with access to our email systems to enhance awareness and responsiveness to possible threats;
- conduct annual cybersecurity management and incident training for current employees involved in our systems and processes that handle sensitive data;
- run tabletop exercises to simulate a response to a cybersecurity incident and use the findings to improve our processes and technologies;
- leverage the NIST incident handling framework to help us identify, protect, detect, respond and recover when there is an actual or potential cybersecurity incident; and
- carry cybersecurity risk insurance that provides protection against the potential losses arising from a cybersecurity incident.

Our incident response plan coordinates the activities we take to prepare for, detect, respond to and recover from cybersecurity incidents, which include processes to triage, assess severity for, escalate, contain, investigate and remediate the incident, as well as to comply with potentially applicable legal obligations and mitigate damage to our business and reputation.

As part of the above processes, we periodically engage with consultants, auditors and other third parties, including having independent third-party consultants review our cybersecurity program to help identify areas for continued focus, improvement and compliance.

Our processes also address cybersecurity threat risks associated with our use of third-party service providers, including our suppliers and manufacturers who have access to customer, supplier and employee data or our systems. In addition, cybersecurity considerations affect the selection and oversight of our third-party service providers. We perform diligence on third parties that have access to our systems, data or facilities that house such systems or data, and continually monitor cybersecurity threat risks identified through such diligence. Additionally, we endeavor to require those third parties that could introduce significant cybersecurity risk to us to agree to manage their cybersecurity risks in specified ways.

We describe whether and how risks from identified cybersecurity threats, including as a result of any previous cybersecurity incidents, have materially affected or are reasonably likely to materially affect us, including our business strategy, results of

operations, or financial condition, under the heading "Risks Related to Our Business and Strategy" which disclosures are incorporated by reference herein.

In the last three fiscal years, we have not experienced any material cybersecurity incidents and the expenses we have incurred from cybersecurity incidents were immaterial. This includes penalties and settlements, of which there were none.

Cybersecurity Governance; Management

Cybersecurity is an important part of our risk management processes and an area of focus for our Board of Directors and management. The Nominating, Governance and Risk Committee of our Board of Directors is responsible for the oversight of risks from cybersecurity threats.

At least quarterly, our Nominating, Governance and Risk Committee receives an update from management of our cybersecurity threat risk management and strategy processes covering topics such as data security posture, results from third-party assessments, progress towards pre-determined risk-mitigation-related goals, our incident response plan, and material cybersecurity threat risks or incidents and developments, as well as the steps management has taken to respond to such risks. Our Nominating, Governance and Risk Committee receives prompt and timely information regarding any known or suspected cybersecurity incident that meets established reporting thresholds, as well as ongoing updates regarding any such incident until it has been addressed. In addition, the Chairperson of our Nominating, Governance and Risk Committee meets quarterly with our Director of Information Security, Chief Financial Officer, and Chief Legal Officer to review materials concerning the ongoing maturation of the Company's cybersecurity program, the effectiveness of its information security controls, and current and emerging material cybersecurity threat risks. Our Nominating, Governance and Risk Committee receives materials discussing current and emerging material cybersecurity threat risks, and describing our ability to mitigate those risks, as well as recent developments, evolving standards, technological developments and information security considerations arising with respect to our peers and third parties.

Members of our Nominating, Governance and Risk Committee and Board of Directors are also encouraged to regularly engage in conversations with management on cybersecurity-related news events and discuss any updates to our cybersecurity risk management and strategy programs. Members of our Nominating, Governance and Risk Committee and Board of Directors continue to receive updates around the cybersecurity threat landscape and ongoing best practices as a means of continuing education in the area. Material cybersecurity threat risks are also considered during separate Board meeting discussions of important matters like enterprise risk management, operational budgeting, business continuity planning and disaster recovery, product management, and other relevant matters.

Our cybersecurity risk management and strategy processes, which are discussed in greater detail above, are led by our Director of Information Security, Chief Financial Officer and Chief Administrative Officer. Such individuals have collectively over 30 years of prior work experience in various roles involving managing information security, developing cybersecurity strategy, implementing effective information and cybersecurity programs, as well as several relevant degrees and certifications, including Certified Information Security Manager, Certified Information Systems Auditor, Certified Information Systems Security Professional, Global Information Assurance Certification, and Certified Ethical Hacker. These management team members are informed about and monitor the prevention, mitigation, detection, and remediation of cybersecurity incidents through their management of, and participation in, the cybersecurity risk management and strategy processes described above, including the operation of our incident response plan. As discussed above, these management team members and other relevant subject matter experts report to the Nominating, Governance and Risk Committee of our Board of Directors about material cybersecurity threat risks, among other cybersecurity related matters, on a quarterly basis.

Item 2. PROPERTIES

Our corporate headquarters are located in Northborough, Massachusetts, where we occupy approximately 51,650 square feet under a lease expiring on December 31, 2031. We also own an approximately 148,000 square foot manufacturing facility in East Providence, Rhode Island. We lease additional spaces for research, administrative, manufacturing, and warehousing purposes in four

locations in the United States and two locations in Mexico under leases expiring between July 31, 2026 and April 30, 2034. The table below shows a summary of the square footage of these locations as of December 31, 2025:

Leased Properties by Location (In square ft.)	
East Providence, RI	196,969
Marlborough, MA	58,965
Monterrey, MX	266,381
Northborough, MA	51,650
Statesboro, GA	53,015

Item 3. LEGAL PROCEEDINGS

Patent Enforcement Actions Initiated by Aspen

- In April 2023, we filed a patent infringement complaint at the Seoul Central District Court and a petition for investigation of unfair trade practices in the Korea Trade Commission (KTC). The complaint and petition alleged that Beerenberg Services AS, Beerenberg Korea Ltd., and Bronx (China) Co., Ltd. have infringed several of our Korean patents in connection with the import and sale of certain aerogel products in Korea. The asserted patents include (a) Korean patents related to high performance reinforced aerogel compositions and (b) Korean counterparts of the patents previously successfully asserted against Nano Tech Co., Ltd. and Guangdong Alison Hi Tech., Ltd. in Germany and the United States. We are seeking injunctive relief and monetary damages against the defendants. In May 2023, we learned of a decision by the KTC to institute an investigation against Beerenberg Korea Ltd. and Bronx (China) Co., Ltd. on the basis of our petition. In April 2024, the KTC concluded its investigation into unfair international trade practices by Beerenberg Korea Ltd. and Bronx (China) Co., Ltd., with a decision that our asserted composition patent claims were invalid and our asserted process patent claims were not infringed. In August 2024, we appealed the KTC decision at the Seoul Administrative Court. In October 2024, the Korean Intellectual Property Trial and Appeal Board (IPTAB) issued decisions in invalidation actions filed by Beerenberg Korea Ltd. finding our patents invalid. In November 2024, the Korean IPTAB issued a decision in an invalidation action filed by LG Chem Ltd. against one of the Korean patents opposed by Beerenberg, also finding the patent invalid. In December 2024, the Korean IPTAB issued decisions in invalidation actions filed by Bronx (China) Co., Ltd. against our process patents finding the patents invalid. During 2025, we filed appeals at the Korean IP High Court against the Beerenberg, LG Chem, and Bronx IPTAB decisions. These appeals remain pending as of the date of this Annual Report on Form 10-K. Our patent infringement case against Beerenberg Services AS and Beerenberg Korea Ltd. at the Seoul District Court and our appeal of the KTC decision against Beerenberg Korea Ltd. and Bronx (China) Co., Ltd. at the Seoul Administrative Court are stayed pending the final outcome of the IPTAB appeals.

Other Litigation Matters

In October 2022, we were served with a summons from Aerogels Poland Nanotechnology LLC (APN), a former distributor of our products in Poland with whom we previously terminated our distribution agreements because of APN's failure to pay amounts due to us. The summons asserts causes of action for declaratory judgment, breach of contract, breach of implied contract, equitable estoppel and fraud, and states that plaintiffs will seek declaratory judgment, actual and liquidated damages in the sum of $20 million, in addition to attorneys' fees. We were not served with any complaint at the time the summons was served. In December 2022, we filed a notice of appearance in New York County Supreme Court and a demand upon plaintiffs to file and serve a complaint. In March 2023, plaintiffs filed a complaint asserting various causes of action consistent with those set forth in the October 2022 summons, and a demand for monetary damages and other relief in excess of $16 million. In July 2023, we filed a motion to compel arbitration, and in February 2024, the Court granted our motion and stayed the litigation pending arbitration. On March 7, 2024, APN filed a Notice of Appeal, indicating its intent to appeal the Court's decision ordering arbitration. However, APN has yet to perfect its appeal. To the extent APN seeks to pursue claims in an arbitration proceeding, we intend to continue to vigorously defend this matter, including seeking our legal costs.

Due to their nature, it is difficult to predict the outcome or the costs involved in any litigation or administrative proceedings, including any appeals process. Furthermore, the counterparties in these proceedings may have significant resources and interest to litigate and therefore, these litigation matters could be protracted and may ultimately involve significant legal expenses.

In addition to the foregoing, we have been and may be from time to time a party to other legal proceedings that arise in the ordinary course of business and to other patent enforcement actions to assert our patent rights.

Item 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

Item 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information and Dividend Policy

Our common stock is trading on The New York Stock Exchange (NYSE) under the symbol "ASPN." As of March 10, 2026, there were approximately 19 stockholders of record of our common stock.

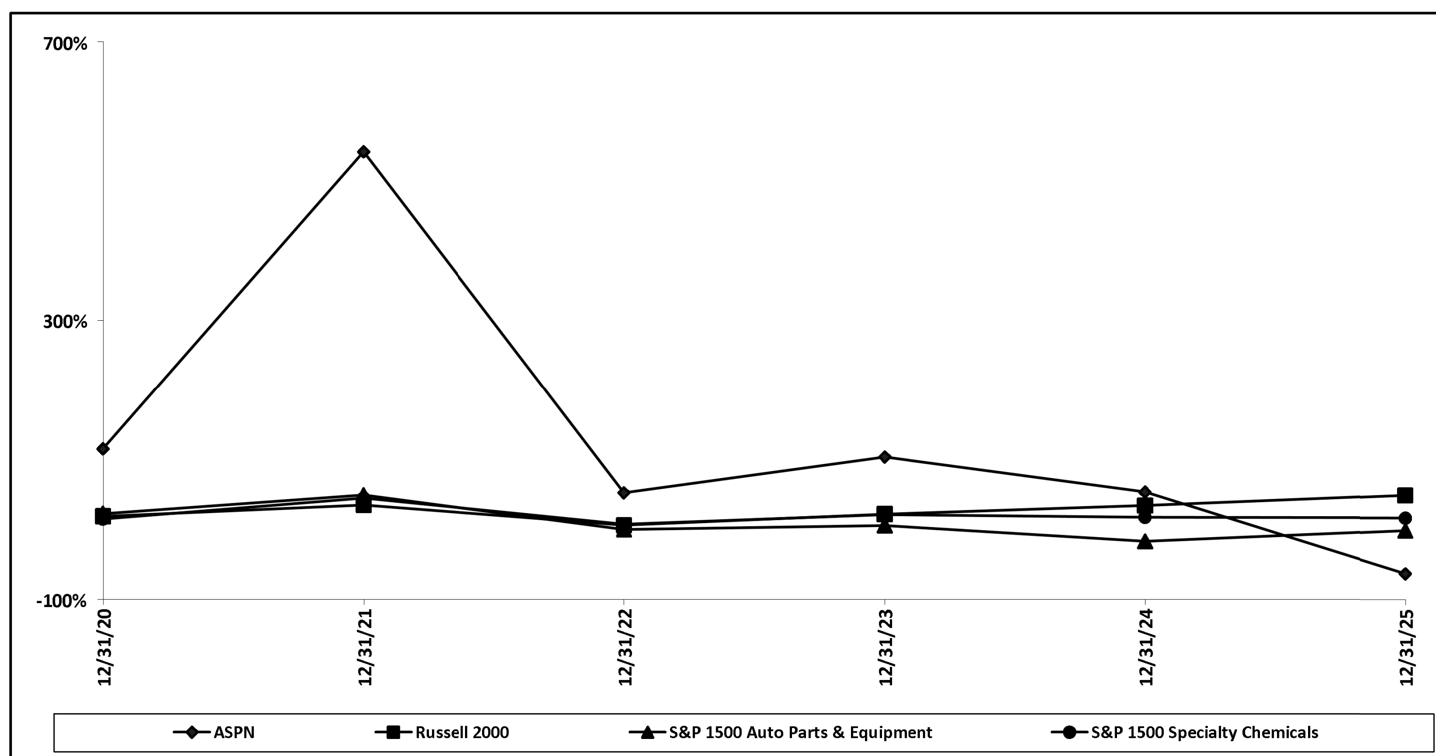
Dividends

We have not paid dividends to our stockholders since our inception, and we do not plan to pay cash dividends in the foreseeable future. We currently intend to retain earnings, if any, to finance the development and expansion of our business.

Stock Performance Graph

This performance graph is not "soliciting material," is not deemed filed with the SEC and is not to be incorporated by reference in any filing by us under the Securities Act or the Exchange Act whether made before or after the date hereof and irrespective of any general incorporation language in any such filing. The stock price performance shown on the graph is not necessarily indicative of future price performance.

Comparison of Cumulative Total Return



Unregistered Sales of Equity Securities and Use of Proceeds

(a) *Unregistered Sales of Equity Securities*. Not applicable.

(b) *Use of Proceeds from Initial Public Offering of Common Stock*. Not applicable.

(c) *Purchases of Equity Securities By the Issuer and Affiliated Purchasers*. We did not repurchase any of our equity securities during the year ended December 31, 2025.

Item 6. [RESERVED]

Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and the related notes thereto included in this Annual Report on Form 10-K. In addition to historical information, some of the information contained in the following discussion and analysis or set forth elsewhere in this report, including information with respect to our plans and strategy for our business, includes forward-looking information that involves risks, uncertainties and assumptions. You should read the Risk Factors set forth in Item 1A of this Annual Report on Form 10-K for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis. Our actual results and the timing of events could differ materially from those anticipated by these forward looking statements.

Investors and others should note that we routinely use the Investors section of our website to announce material information to investors and the marketplace. While not all of the information that we post on the Investors section of our website is of a material nature, some information could be deemed to be material. Accordingly, we encourage investors, the media, and others interested in us to review the information that we share on the Investors section of our website, https://www.aerogel.com/. The information contained on, or that can be accessed through, our website is not a part of, or incorporated by reference in, this Annual Report on Form 10-K or our other filings with the SEC. We have included our website address in this Annual Report on Form 10-K solely as an inactive textual reference.

Products

Our core businesses are organized into two reportable segments: Thermal Barrier and Energy Industrial. The following describes our key product offerings and new product innovations by reportable segment.

Thermal Barrier

We have developed a number of promising aerogel products and technologies for the electric vehicle (EV) market, including our proprietary line of PyroThin aerogel thermal barriers for use in battery packs in EVs. Our PyroThin product is an ultra-thin, lightweight and flexible thermal barrier designed with other functional layers to impede the propagation of thermal runaway across multiple lithium-ion battery system architectures. Our thermal barrier technology is designed to offer a unique combination of thermal management, mechanical performance and fire protection properties. These properties enable EV manufacturers to achieve critical battery performance and safety goals by impeding the propagation of thermal runaway in lithium-ion battery systems at the battery cell, module, and pack levels across multiple lithium-ion battery system architectures. Our ultra-thin, lightweight and flexible thermal barriers are designed to allow battery manufacturers to achieve critical safety goals without sacrificing energy density.

We have entered into multi-year production contracts with a number of automotive EV original equipment manufacturer (OEM) customers to supply fabricated, multi-part thermal barriers for use in the battery systems of their EV models. These customers include General Motors LLC (GM), Scania, Automotive Cells Company, which is a battery cell joint venture between Stellantis N.V, Saft-TotalEnergies and Mercedes-Benz (ACC), Audi, a luxury brand of the Volkswagen Group, Volvo Truck, and a large EU battery manufacturer to supply a next generation vehicle platform of a major EU luxury sports car brand. We are currently supplying thermal barrier production parts to GM, Toyota, and ACC, and thermal barrier prototype parts to a number of global manufacturers of EVs, grid storage, and home battery systems. During 2025, 2024 and 2023, we sold $168.9 million, $306.8 million and $110.1 million, respectively, of our PyroThin thermal barriers, primarily to GM.

Energy Industrial

We design, develop and manufacture innovative, high-performance aerogel insulation used primarily in the energy industrial market. We believe our aerogel blankets deliver the best thermal performance of any widely used insulation product available on the market today and provide a combination of performance attributes unmatched by traditional insulation materials. Our insulation products help end-users to improve resource efficiency, reduce energy consumption, and reduce the carbon footprint of their operations. These products enable compact system design, reduce installation time and costs, promote freight and logistics cost savings, reduce system weight, minimize required storage space, and enhance job site safety. Our insulation products reduce the incidence of corrosion under insulation, which is a significant maintenance cost and safety issue in energy industrial facilities. Our

end-user customers select our products where thermal performance is critical and to save money, improve resource efficiency, enhance sustainability, preserve operating assets, and protect workers. Our insulation is used by oil producers and the owners and operators of refineries, petrochemical plants, liquefied natural gas (LNG) facilities, power generating assets, and other energy industrial sites. Our Pyrogel® and Cryogel® product lines have undergone rigorous technical validation by industry leading end-users and achieved significant market adoption.

We also derive revenue from a number of other end markets. Customers in these markets use our products for applications such as military aircrafts, trains, and buses. We believe we will have additional opportunities to address high-value applications in the global insulation market, as well as in adjacent market opportunities such as energy storage applications, including battery energy storage systems, electrification applications and other potential adjacent applications subject to their commercial potential, the differentiation of our products, and the ability to leverage our existing manufacturing platform.

We market and sell our products primarily through a sales force based in North America, Europe, and Asia. The efforts of our sales force are supported by a small number of sales consultants with extensive knowledge of a particular market or region. Our sales force is responsible for establishing and maintaining customer and partner relationships, delivering highly technical information and ensuring high-quality customer service.

Our salespeople work directly with end-user customers and engineering firms to promote the qualification, specification and acceptance of our aerogel and thermal barrier products. We also rely on an existing and well-established channel of qualified insulation distributors and contractors in more than 50 countries around the world to ensure rapid delivery of our aerogel products and strong end-user support.

Manufacturing Operations

We manufacture our products using our proprietary technology at our facility in East Providence, Rhode Island, which we have operated since 2008. During 2024, we converted our East Providence facility to support the growth of the thermal barrier program. We manage the capacity of our East Providence facility on an ongoing basis in order to meet expected demand for our aerogel products. We also utilize a flexible supply strategy, including, but not limited to, use of our external manufacturing capabilities in China, which currently support our Energy Industrial segment. Pursuant to our supply contract with this contract manufacturer, they are obligated to deliver products to us as we issue purchase orders on an as-needed basis through the term of the contract. The contract automatically renews year-to-year unless either party notifies the other of its intention not to renew the contract. While we have agreed to purchase our requirement for certain Energy Industrial products from the contract manufacturer, we have no obligation to purchase any minimum quantity under the contract and we may terminate the contract at any time and for any or no reason. Additionally, we entered into a contract with Prodensa Servicios de Consultora (Prodensa) to establish OPE Manufacturer Mexico S de RL de CV, a maquiladora located in Mexico (OPE), which assembles thermal barrier PyroThin products and operates an automated fabrication facility for PyroThin. We subsequently purchased OPE for a nominal value in accordance with the terms of the agreement.

We expect to meet demand for our aerogel products by utilizing both our East Providence facility and our flexible supply strategy, including, but not limited to, using our external manufacturing capabilities.

MidCap Loan Facility

On August 19, 2024, we and Aspen Aerogels Rhode Island, LLC, a Rhode Island limited liability company (Aspen RI and, together with the Company, each, a Borrower and collectively, the Borrowers) entered into a Credit, Security and Guaranty Agreement (the Credit Agreement and the facilities provided thereunder, collectively, the MidCap Loan Facility), by and among the Borrowers, MidCap Funding IV Trust, as agent (the Agent), MidCap Financial Trust, as term loan servicer (the Term Loan Servicer), the financial institutions or other entities from time to time party thereto as lenders (the Lenders), and the other parties party thereto as additional guarantors and/or borrowers from time to time. The proceeds of the MidCap Loan Facility were used to repurchase our outstanding convertible note, the payment of related fees and expenses and for working capital. Loans borrowed under the MidCap Loan Facility mature on August 19, 2029.

On May 6, 2025, the Borrowers and Aspen Aerogels Georgia, LLC, a Georgia limited liability company (Aspen Georgia), entered into that certain Amendment No. 1 and Joinder to Credit, Security and Guaranty Agreement (Amendment No. 1), by and among the Borrowers, Aspen Georgia, the Agent and the Lenders party thereto, amending the MidCap Loan Facility and on December 16, 2025, the Borrowers, Aspen Georgia, and Aspen Aerogels Mexico Holdings, LLC, a Delaware limited liability company (Aspen Mexico), entered into that certain Amendment No. 2 and Joinder to Credit, Security and Guaranty Agreement (Amendment No. 2), by and among the Borrowers, Aspen Georgia, Aspen Mexico, the Agent and the Lenders party thereto, further amending the MidCap Loan Facility (the MidCap Loan Facility, as amended by Amendment No. 1 and Amendment No. 2, the Amended MidCap Loan Facility).

The Amended MidCap Loan Facility is guaranteed by Aspen Mexico and Aspen Georgia (together with the Borrowers and any future subsidiaries that are required to become guarantors or borrowers pursuant to the terms of the Credit Agreement, collectively, the Loan Parties) and is secured by a lien on substantially all existing and after-acquired assets of the Loan Parties, including the equity interest in Aspen RI, Aspen Mexico and Aspen Georgia owned by us, in each case, subject to customary exceptions.

Pursuant to Amendment No. 1, the financial covenants under the MidCap Loan Facility were amended such that (a) the minimum Liquidity (as defined in the Amended MidCap Loan Facility) which must be maintained at all times has changed from $75 million to an amount equal to the greater of (i) $50 million and (ii) 85% of the then aggregate outstanding principal amount of the Term Loan Facility and (b) the minimum EBITDA level to be tested quarterly has changed to reflect a new range from $15 million to $50 million, with the next test set at $15 million with respect to the fiscal quarter ended June 30, 2025 and a $50 million level applicable commencing with the fiscal quarter ended December 31, 2027 and thereafter. The Liquidity amount trigger of a cash dominion event was also reduced from $100 million to an amount equal to the greater of (i) $50 million and (ii) 85% of the then aggregate outstanding principal amount of the Term Loan Facility.

Pursuant to Amendment No. 2, the financial covenants under the MidCap Loan Facility have been amended such that (a) the applicable minimum liquidity threshold (both for (i) the minimum liquidity financial covenant, which must be maintained by the Company at all times and (ii) the “Cash Dominion Event” definition for purposes of triggering cash dominion) has changed from (i) an amount equal to the greater of (x) $50 million and (y) 85% of the then aggregate outstanding principal amount of the Term Loan (as defined in the Amended MidCap Loan Facility) to (ii) an amount equal to the greater of (x) $50 million and (y) 100% of the then aggregate outstanding principal amount of the Term Loan (as defined in the Amended MidCap Loan Facility) and (b) the minimum EBITDA (as defined in the Amended MidCap Loan Facility) financial maintenance covenant has been removed entirely.

The Amended MidCap Loan Facility includes representations and warranties, affirmative covenants (including reporting obligations), negative covenants and events of default that are usual and customary for facilities of this type, in each case, subject to certain permitted exceptions as set forth therein. In addition, the mandatory prepayment provisions were revised to make clear that any mandatory prepayment of the loans under the Amended MidCap Loan Facility made with proceeds of an asset sale will be used to reduce the Company’s required amortization payments in direct order of maturity, and the basket for making permitted acquisitions under the Amended MidCap Loan Facility was reduced.

Financial Summary

In December 2023, we sold 6,060,607 shares of our common stock at an offering price of $12.38 per share in a registered direct offering for net proceeds of $74.4 million, after deducting offering expenses of approximately $0.6 million.

In October 2024, we sold 4,887,500 shares of our common stock at an offering price of $20.00 per share in a registered direct offering for net proceeds of $93.2 million, after deducting offering expenses of approximately $0.7 million.

Key Metrics and Non-GAAP Financial Measures

We regularly review a number of metrics, including the following key metrics, to evaluate our business, measure our performance, identify trends affecting our business, formulate financial projections and make strategic decisions.

Adjusted EBITDA

We use Adjusted EBITDA, a non-GAAP financial measure, as a means to assess our operating performance. We define Adjusted EBITDA as net income (loss) before interest expense, taxes, depreciation, amortization, stock-based compensation expense and other items, from time to time, which we do not believe are indicative of our core operating performance. Adjusted EBITDA is a supplemental measure of our performance that is not presented in accordance with U.S. GAAP. Adjusted EBITDA should not be considered as an alternative to net income (loss) or any other measure of financial performance calculated and presented in accordance with U.S. GAAP. In addition, our definition and presentation of Adjusted EBITDA may not be comparable to similarly titled measures presented by other companies.

We use Adjusted EBITDA:

- as a measure of operating performance because it does not include the impact of items that we do not consider indicative of our core operating performance;
- for planning purposes, including the preparation of our annual operating budget;

- to allocate resources to enhance the financial performance of our business; and
- as a performance measure used under our bonus plan.

We also believe that the presentation of Adjusted EBITDA provides useful information to investors with respect to our results of operations and in assessing the performance and value of our business. Various measures of EBITDA are widely used by investors to measure a company's operating performance without regard to items that can vary substantially from company to company depending upon financing and accounting methods, book values of assets, capital structures and the methods by which assets were acquired.

Although measures similar to Adjusted EBITDA are frequently used by investors and securities analysts in their evaluation of companies, we understand that Adjusted EBITDA has limitations as an analytical tool, and you should not consider it in isolation or as a substitute for net income (loss), income (loss) from operations, net cash provided by (used in) operating activities or an analysis of our results of operations as reported under U.S. GAAP. Some of these limitations are:

- Adjusted EBITDA does not reflect our historical cash expenditures or future requirements for capital expenditures or other contractual commitments;
- Adjusted EBITDA does not reflect changes in, or cash requirements for, our working capital needs;
- Adjusted EBITDA does not reflect stock-based compensation expense;
- Adjusted EBITDA does not reflect our income tax expense or cash requirements to pay our income taxes;
- Adjusted EBITDA does not reflect our interest expense, or the cash requirements necessary to service interest or principal payments on our debt;
- although depreciation, amortization and impairment charges are non-cash charges, the assets being depreciated, amortized or impaired will often have to be replaced in the future, and Adjusted EBITDA does not reflect any cash requirements for these replacements; and
- other companies in our industry may calculate EBITDA or Adjusted EBITDA differently than we do, limiting their usefulness as a comparative measure.

Because of these limitations, our Adjusted EBITDA should not be considered as a measure of discretionary cash available to us to reinvest in the growth of our business or as a measure of cash available for us to meet our obligations.

To properly and prudently evaluate our business, we encourage you to review the U.S. GAAP financial statements included elsewhere in this Annual Report on Form 10-K, and not to rely on any single financial measure to evaluate our business.

The following table presents a reconciliation of net income (loss), the most directly comparable U.S. GAAP measure, to Adjusted EBITDA for the years presented:

	Year Ended December 31,		
	2025	2024	2023
		($ in thousands)	
Net income (loss)	$ (389,552)	$ 13,375	$ (45,811)
Depreciation and amortization	45,157	22,526	15,318
Stock-based compensation [(1)]	9,173	12,855	10,954
Other (income) expense	8,930	11,959	(3,392)
Loss on extinguishment of debt	—	27,487	—
Income tax expense	2,394	1,714	—
Restructuring and demobilization costs	17,510	—	—
Loss on disposal of property, plant and equipment	18,162	—	—
Impairment of property, plant and equipment	291,164	—	—
Adjusted EBITDA	$ 2,938	$ 89,916	$ (22,931)

(1) Represents non-cash stock-based compensation related to vesting and modifications of stock option grants, restricted stock units (RSUs) and restricted common stock, and cash settled RSUs issued in March 2025.

The following table presents a reconciliation of net income (loss), the most directly comparable U.S. GAAP measure, to Adjusted EBITDA for the quarters presented:

	Three Months Ended 2025				Three Months Ended 2024			
	March 31	June 30	Sept. 30	Dec. 31	March 31	June 30	Sept. 30	Dec. 31
	($ in thousands)							
Net income (loss)	$ (301,249)	$ (9,056)	$ (6,334)	$ (72,913)	$ (1,835)	$ 16,818	$ (12,970)	$ 11,362
Depreciation and amortization	5,793	5,796	5,393	28,175	5,786	5,986	5,321	5,433
Stock-based compensation [(1)]	2,073	3,211	2,642	1,247	4,706	2,971	2,630	2,548
Other (income) expense	832	3,080	2,392	2,626	3,515	2,302	2,616	3,526
Loss on extinguishment of debt	—	—	—	—	—	—	27,487	—
Income tax expense	1,076	821	594	(97)	756	866	267	(175)
Restructuring and demobilization costs	9,790	4,938	1,568	1,214	—	—	—	—
Loss on disposal of property, plant and equipment	—	—	—	18,162	—	—	—	—
Impairment of property, plant and equipment	286,612	955	—	3,597	—	—	—	—
Adjusted EBITDA	$ 4,927	$ 9,745	$ 6,255	$ (17,989)	$ 12,928	$ 28,943	$ 25,351	$ 22,694

(1) Represents non-cash stock-based compensation related to vesting and modifications of stock option grants, RSUs and restricted common stock, and cash settled RSUs issued in March 2025.

Our financial performance, including such measures as net income (loss), earnings per share and Adjusted EBITDA, are affected by a number of factors including volume and mix of aerogel products sold, average selling prices, our material costs and manufacturing expenses, the costs associated with capacity expansions and start-up of additional production capacity, and the amount and timing of operating expenses. Accordingly, we expect that our net income (loss), earnings per share and Adjusted EBITDA will vary from period to period.

During 2025, we experienced a significant decline in volume for our thermal barrier products, primarily driven by lower North American EV production levels. As a result, total revenue decreased by 40% compared to the prior year. Our expectation for 2026 thermal barrier revenue is based, in part, on our OEM customers' production forecasts. The automotive industry in which our OEM customers operate is cyclical and is sensitive to changes in consumer demand, regulatory environments, and broader economic conditions. EV adoption rates in certain markets have been lower than previously anticipated, influenced in part by changes in regulatory frameworks and incentive programs as well as evolving consumer demand. OEMs have adjusted production plans and investment timelines accordingly. These actions have resulted in revised capacity plans and re-timed EV-related investments, particularly in North America. In addition, changes in trade policy and other macroeconomic factors have impacted both our customers and our operating environment, and we expect these conditions to continue to influence demand. OEM customers continue to pursue cost reduction and product redesign initiatives, which may result in engineering changes to the components we supply. Our supply agreements generally include pricing step-down provisions over the production life of a program, consistent with industry practice. We expect thermal barrier revenues to decline in 2026, primarily due to lower anticipated production volumes. In February 2026, there was a fire at our manufacturing facility in East Providence, Rhode Island, which damaged one of our emissions control units and rendered it inoperable. If our remaining emissions control unit were to fail or otherwise cease to operate before the damaged unit is replaced, or if demand for our products increases materially before our damaged emissions control is replaced, we may not able to meet customer demand for our products, which could have a material adverse impact our revenue and earnings.

We expect energy industrial revenue to increase in 2026, driven by anticipated volume growth in our core petrochemical and refinery markets, project-based demand, and continued penetration into adjacent applications.

In response to these developments, we plan to continue cost reduction measures, including reduced headcount and operational efficiency initiatives. As a result, we expect Adjusted EBITDA to decline in 2026 primarily due to lower thermal barrier revenue. However, we expect net loss to improve relative to 2025, as the impairment recorded for the previously planned second plant in Statesboro, Georgia is not expected to recur. We also expect capital expenditures to decrease in 2026.

Revenue

We recognize revenue from the sale of our energy industrial aerogel products and thermal barriers. Revenue is recognized upon the satisfaction of contractual performance obligations.

We record deferred revenue for product sales when (i) we have delivered products but other revenue recognition criteria have not been satisfied or (ii) payments have been received in advance of the completion of required performance obligations.

The following table sets forth the total revenue for the periods presented:

	Year Ended December 31,		
	2025	2024	2023
		($ in thousands)	
Revenue:			
Energy industrial	$ 102,198	$ 145,867	$ 128,639
Thermal barrier	168,905	306,832	110,079
Total	$ 271,103	$ 452,699	$ 238,718

Energy industrial revenue accounted for 38%, 32%, and 54% of total revenue for the years ended December 31, 2025, 2024 and 2023, respectively. We experienced a 40% decrease in total revenue during 2025 driven by the decreases in our EV business and energy industrial business, particularly in Latin and North America.

A substantial majority of our revenue is generated from a limited number of direct customers, including distributors, contractors, fabricators, OEMs, partners and end-user customers. Our ten largest customers accounted for approximately 84% of our total revenue during the year ended December 31, 2025, and we expect that most of our revenue will continue to come from a relatively small number of customers for the foreseeable future.

In 2025, sales to GM and Distribution International, Inc. (Distribution) represented 59% and 9% of our total revenue, respectively. In 2024, sales to GM and Distribution represented 64% and 6% of our total revenue, respectively. In 2023, sales to GM and Distribution represented 41% and 14% of our total revenue, respectively. For each of the noted periods, there were no other customers that represented 10% or more of our total revenues.

We conduct business across the globe and a substantial portion of our revenue is generated outside of the United States. Total revenue from outside of the United States, based on shipment destination, amounted to $99.0 million, or 37% of our total revenue, $194.2 million, or 43% of our total revenue, and $87.7 million, or 37% of our total revenue, in the years ended December 31, 2025, 2024 and 2023, respectively.

Cost of Revenue

Cost of product revenue consists primarily of materials and manufacturing expenses. Cost of product revenue is recorded when the related product revenue is recognized.

Material is a significant component of cost of product revenue and includes fibrous batting, silica materials, CO_2 and other additives. Material costs as a percentage of product revenue were 42%, 38% and 36% for the years ended December 31, 2025, 2024 and 2023, respectively. Material costs as a percentage of product revenue vary from product to product due to differences in average selling prices, material requirements, product thicknesses, and manufacturing yields. In addition, we provide warranties for our products and record the estimated cost within cost of revenue in the period that the related revenue is recorded or when we become aware that a potential warranty claim is probable and can be reasonably estimated. As a result of these factors, material costs as a percentage of product revenue will vary from period to period due to changes in the mix of aerogel products sold, the costs of our raw materials or the estimated cost of warranties. In addition, global supply chain disturbances, increased reliance on foreign materials procurement, industrial gas supply constraints, increases in the cost of our raw materials, engineering changes, higher prototype sales and other factors may significantly impact our material costs and have a material impact on our operations. We expect that material costs will decrease in absolute dollars during 2026 due to projected decline in product shipments and contracts but remain stable as a percentage of revenue due to improved manufacturing, and fabrication yields and a favorable mix of products sold.

Manufacturing expense is also a significant component of cost of revenue. Manufacturing expense includes labor, utilities, maintenance expense, and depreciation on manufacturing assets. Manufacturing expense also includes stock-based compensation of manufacturing employees and shipping costs. Manufacturing expense as a percentage of product revenue was 33%, 22% and 46% for the years ended December 31, 2025, 2024 and 2023, respectively. We expect that manufacturing expense will decline in absolute dollars, due to ongoing cost reduction efforts, and increase as a percentage of revenue during 2026 due to lower expected revenues from the thermal barrier business.

We are also continuing to monitor the impact on our material costs, manufacturing expense, and cost of product revenue from engaging one or more external manufacturing facilities in China to supply our aerogel products.

Gross Profit

Our gross profit as a percentage of revenue is affected by a number of factors, including the volume of products produced and sold, the mix of products sold, average selling prices, our material and manufacturing costs, realized capacity utilization and the costs associated with expansions and start-up of production capacity. Accordingly, we expect our gross profit to vary significantly in absolute dollars and as a percentage of revenue from period to period. Gross profit as a percentage of total revenue was 17%, 40%, and 24% for the years ended December 31, 2025, 2024 and 2023, respectively.

During 2026, we expect gross profit to decline in absolute dollars and as a percentage of revenue due to expected decreases in total revenue and production volumes, offset partially by manufacturing productivity.

Operating Expenses

Operating expenses consist of research and development, sales and marketing, and general and administrative expenses. Operating expenses include personnel costs, legal fees, professional fees, service fees, insurance premiums, travel expense, facilities related costs and other costs, expenses and fees. The largest component of our operating expenses is personnel costs, consisting of salaries, benefits, incentive compensation and stock-based compensation. In any particular period, the timing and extent of personnel additions or reductions, legal activities, including patent enforcement actions, marketing programs, research efforts and a range of similar activities or actions could materially affect our operating expenses, both in absolute dollars and as a percentage of revenue.

Research and Development Expenses

Research and development expenses consist primarily of expenses for personnel engaged in the development of next generation aerogel compositions, form factors and manufacturing technologies. These expenses also include testing services, prototype expenses, consulting services, trial formulations for new products, equipment depreciation, facilities costs and related overhead. We expense research and development costs as incurred. We expect to continue to devote substantial resources to the development of new aerogel technologies.

Sales and Marketing Expenses

Sales and marketing expenses consist primarily of personnel costs, incentive compensation, marketing programs, travel and related costs, consulting expenses and facilities related costs.

General and Administrative Expenses

General and administrative expenses consist primarily of personnel costs, legal expenses, consulting and professional services, audit fees, compliance with securities, corporate governance and related laws and regulations, investor relations and insurance premiums, including director and officer insurance. We expect our general and administrative expenses to decrease as we continue our ongoing cost reduction measures, including reduced headcount. We also expect that the patent enforcement actions, described in more detail under “Legal Proceedings” in Part I, Item 3 of this Annual Report on Form 10-K, if protracted, could result in significant legal expenses over time.

Restructuring and Demobilization Costs

Restructuring and demobilization costs consists of severance and other personnel costs, and costs associated with the demobilization of our previously planned Statesboro Plant.

Loss on Disposal of Property, Plant and Equipment

During the fiscal year ended December 31, 2025, loss on disposal of property, plant and equipment consists of charges to remeasure at fair value less costs to sell the assets of our previously planned Statesboro Plant which have been classified as assets held for sale.

Impairment of Property, Plant and Equipment

During the fiscal year ended December 31, 2025, impairment of property, plant and equipment consists of impairment incurred on our previously planned Statesboro Plant and impairment of other property, plant and equipment in connection with a restructuring action.

During the fiscal year ended December 31, 2024, the impairment of equipment under development was the result of a charge for impairment of assets due to obsolescence following the development of new and more efficient equipment.

Interest Expense, Convertible Note - Related Party

Interest expense, convertible note - related party is net of the capitalized interest related to the $100.0 million in aggregate principal amount of our 2022 Convertible Note.

Interest Income (Expense)

Interest expense consists of interest expense and amortization or write-off of deferred financing costs related to our other financing arrangements, including our Amended MidCap Loan Facility, a failed sale and leaseback arrangement accounted as a financing transaction and interest earned on the cash balances invested in deposit accounts, money market accounts, and high-quality debt securities issued by the U.S. government.

Loss on Extinguishment of Debt

On August 19, 2024, we entered into a note purchase and sale agreement (the Note Repurchase Agreement) with Wood River, LLC (Wood River), an entity affiliated with Koch Disruptive Technologies, LLC (Koch), pursuant to which we repurchased from Wood River $123.9 million in aggregate capitalized principal amount (inclusive of PIK interest paid through June 30, 2024) of the 2022 Convertible Note, such aggregate amount being the entire outstanding amount of the 2022 Convertible Note, for a total purchase price of $150.0 million in cash, which amount equals to the Redemption Price (as defined in the 2022 Convertible Note). Pursuant to the Note Repurchase Agreement, all rights and obligations, covenants and agreements under the 2022 Convertible Note and the Note Purchase Agreement were satisfied and discharged. The Redemption Price less capitalized principal amount and accrued interest to redemption date, of $24.6 million along with unamortized deferred issuance costs was classified in the income statement as Loss on Extinguishment of Debt.

Income from Employee Retention Credit

Employee retention credit consists of other income related to our submitted filings for employee retention credits under the Coronavirus Aid, Relief and Economic Safety Act (the Employee Retention Credits).

Provision for Income Taxes

We have incurred net losses since inception with the exception of the year ended December 31, 2024, and have not recorded benefit provisions for U.S. federal income taxes or state income taxes since the tax benefits of our net losses have been offset by valuation allowances due to the uncertainty associated with the utilization of net operating loss carryforwards. We record tax expenses in connection with our Mexican maquiladora operations.

At December 31, 2025, we had $372.3 million of net operating losses available to offset future federal income tax, if any, of which $145.0 million expire on various dates through December 31, 2037. Net operating losses of $227.3 million generated from 2018 through 2025 have an unlimited carryforward.

Results of Operations

The following tables set forth our results of operations for the periods presented:

	Year Ended December 31,		
	2025	2024	2023
		($ in thousands)	
Revenue	$ 271,103	$ 452,699	$ 238,718
Cost of revenue	225,105	269,802	181,797
Gross profit	45,998	182,897	56,921
Operating expenses			
Research and development	13,416	18,050	16,356
Sales and marketing	28,200	35,677	33,008
General and administrative	55,774	71,125	56,760
Restructuring and demobilization costs	17,510	—	—
Loss on disposal of property, plant and equipment	18,162	—	—
Impairment of property, plant and equipment	291,164	3,510	—
Total operating expenses	424,226	128,362	106,124
Income (loss) from operations	(378,228)	54,535	(49,203)
Other income (expense)			
Interest expense, convertible note - related party	—	(7,550)	(5,328)
Interest income (expense), net	(10,716)	(4,409)	6,534
Income from Employee Retention Credits	—	—	2,186
Loss on extinguishment of debt	—	(27,487)	—
Other income	1,786		
Total other income (expense)	(8,930)	(39,446)	3,392
Income tax expense	(2,394)	(1,714)	—
Net income (loss)	$ (389,552)	$ 13,375	$ (45,811)

Year ended December 31, 2025 compared to year ended December 31, 2024

The following tables set forth our results of operations for the periods presented:

	Year Ended December 31,				Year Ended December 31,	
	2025	2024	$ Change	% Change	2025	2024
	($ in thousands)				(Percentage of total revenue)	
Revenue	$ 271,103	$ 452,699	$ (181,596)	(40)%	100%	100%
Cost of revenue	225,105	269,802	(44,697)	(17)%	83%	60%
Gross profit	45,998	182,897	(136,899)	(75)%	17%	40%
Operating expenses						
Research and development	13,416	18,050	(4,634)	(26)%	5%	4%
Sales and marketing	28,200	35,677	(7,477)	(21)%	10%	8%
General and administrative	55,774	71,125	(15,351)	(22)%	21%	16%
Restructuring and demobilization costs	17,510	—	17,510	100%	6%	—%
Loss on disposal of property, plant and equipment	18,162	—	18,162	100%	7%	—%
Impairment of equipment under development	291,164	3,510	287,654	NM	107%	1%
Total operating expenses	424,226	128,362	295,864	230%	156%	28%
Income (loss) from operations	(378,228)	54,535	(432,763)	(794)%	140%	12%
Other income (expense)						
Interest expense, convertible note - related party	—	(7,550)	7,550	100%	—%	2%
Interest expense, net	(10,716)	(4,409)	(6,307)	143%	4%	1%
Loss on extinguishment of debt	—	(27,487)	27,487	100%	—%	6%
Other income	1,786	—	1,786	100%	1%	—%
Total other income (expense)	(8,930)	(39,446)	30,516	(77)%	3%	9%
Income tax expense	(2,394)	(1,714)	(680)	40%	1%	0%
Net income (loss)	$ (389,552)	$ 13,375	$ (402,927)	3,013%	144%	3%

Revenue

	Year Ended December 31,				Change	
	2025		2024			
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
	($ in thousands)					
Revenue:						
Energy industrial	$ 102,198	38%	$ 145,867	32%	$ (43,669)	(30)%
Thermal barrier	168,905	62%	306,832	68%	(137,927)	(45)%
Total revenue	$ 271,103	100%	$ 452,699	100%	$ (181,596)	(40)%

Total revenue decreased $181.6 million, or 40%, to $271.1 million in 2025 from $452.7 million in 2024. The decrease in total revenue was the result of decreases in both energy industrial and thermal barrier revenue.

Energy industrial revenue decreased by $43.7 million, or 30%, to $102.2 million in 2025 from $145.9 million in 2024. This decrease was driven by a decrease in revenue from the global petrochemical and refinery markets of North America, Europe, and Latin America, and in project-based demand in the subsea market, offset in part by an increase in revenue from the global petrochemical and refinery market of Asia.

Energy industrial revenue for the years ended December 31, 2025 and 2024 included $24.1 million and $28.8 million in sales to Distribution, respectively. The average selling price per square foot of our products decreased by $0.16, or 3%, to $4.95 per square foot for the year ended December 31, 2025, from $5.11 per square foot for the year ended December 31, 2024. The decrease in average selling price reflected a change in the mix of products sold. This decrease in average selling price had the effect of decreasing product revenue by approximately $3.3 million for the year ended December 31, 2025.

In volume terms, product shipments decreased by 7.9 million square feet, or 28%, to 20.6 million square feet of aerogel products for the year ended December 31, 2025, as compared to 28.5 million square feet for the year ended December 31, 2024. The decrease in product volume had the effect of decreasing product revenue by approximately $40.4 million for the year ended December 31, 2025.

Thermal barrier revenue decreased by $137.9 million, or 45%, to $168.9 million in 2025 from $306.8 million in 2024. Thermal barrier revenue for the year ended December 31, 2025 included $160.3 million to a major U.S. automotive OEM. Thermal barrier revenue for the year ended December 31, 2024 included $291.2 million to a major U.S. automotive OEM and $5.9 million to a major Asian automotive OEM.

Energy industrial revenue as a percentage of total revenue was 38% and 32% of total revenue in 2025 and in 2024, respectively. Thermal barrier revenue was 62% and 68% of total revenue in 2025 and in 2024, respectively.

Cost of Revenue

	Year Ended December 31,				Change	
	2025		2024			
	Amount	% of Related Revenue	Amount	% of Related Revenue	Amount	Percentage
	($ in thousands)					
Cost of revenue:						
Energy industrial	$ 64,992	64%	$ 87,425	60%	$ (22,433)	(26)%
Thermal barrier	160,113	95%	182,377	59%	(22,264)	(12)%
Total cost of revenue	$ 225,105	83%	$ 269,802	60%	$ (44,697)	(17)%

Total cost of revenue decreased $44.7 million, or 17%, to $225.1 million in 2025 from $269.8 million in 2024 driven by declines in both thermal barrier and energy industrial cost of revenues.

Energy industrial cost of revenue decreased $22.4 million, or 26%, to $65.0 million from $87.4 million in the comparable period in 2024. The $22.4 million decrease was the result of a $13.7 million decrease in material costs and an $8.7 million decrease in manufacturing and other operating costs due to lower volume in comparison to the same period in 2024.

Thermal barrier cost of revenue decreased $22.3 million to $160.1 million as compared to $182.4 million in the comparable period in 2024. The $22.3 million decrease was the result of a $44.4 million decrease in material cost, partially offset by accelerated depreciation of $22.1 million on certain assets whose useful lives were lowered to align utilization with revised expected demand. Material costs decreased primarily due to lower volume and operational efficiencies generating lower scrap.

Gross Profit

	Year Ended December 31,				Change	
	2025		2024			
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
	($ in thousands)					
Gross profit:						
Energy industrial	$ 37,206	36%	$ 58,442	40%	$ (21,236)	(36)%
Thermal barrier	8,792	5%	124,455	41%	(115,663)	(93)%
Total gross profit	$ 45,998	17%	$ 182,897	40%	$ (136,899)	(75)%

Gross profit decreased $136.9 million, or 75%, to $46.0 million in 2025 from $182.9 million in 2024. The decrease in gross profit was the result of the $181.6 million decrease in total revenue, partially offset by the $44.7 million decrease in total cost of revenue.

Research and Development Expenses

	Year Ended December 31,				Change	
	2025		2024			
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
	($ in thousands)					
Research and development expenses	$ 13,416	5%	$ 18,050	4%	$ (4,634)	(26)%

Research and development expenses decreased by $4.7 million, or 26%, to $13.4 million in 2025 from $18.1 million in 2024. The $4.7 million decrease was the result of decreases in compensation and related costs of $4.4 million, driven by a headcount reduction, operating supplies and equipment of $0.4 million, and professional fees of $0.2 million, partially offset by an increase in other expenditures of $0.3 million.

Research and development expenses as a percentage of total revenue increased to 5% during the year ended December 31, 2025 from 4% in the comparable period in 2024 primarily due to the 40% decrease in revenue from the comparable period in 2024.

Sales and Marketing Expenses

	Year Ended December 31,				Change	
	2025		2024			
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
	($ in thousands)					
Sales and marketing expenses	$ 28,200	10%	$ 35,677	8%	$ (7,477)	(21)%

Sales and marketing expenses decreased by $7.5 million, or 21%, to $28.2 million in 2025 from $35.7 million in 2024. The decrease was the result of decreases in compensation and related costs of $5.2 million, driven by a headcount reduction, employee-related expenses of $1.0 million, marketing expenses of $0.6 million, operating supplies and equipment of $0.5 million, and other expenditures of $0.2 million.

Sales and marketing expenses as a percentage of total revenue increased to 10% in 2025 from 8% in 2024 primarily due to the 40% decrease in revenue from the comparable period in 2024.

General and Administrative Expenses

	Year Ended December 31,				Change	
	2025		2024			
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
	($ in thousands)					
General and administrative expenses	$ 55,774	21%	$ 71,125	16%	$ (15,351)	(22)%

General and administrative expenses decreased by $15.3 million, or 22%, to $55.8 million in 2025 from $71.1 million in 2024. The $15.3 million decrease was the result of decreases in compensation and related costs of $15.9 million, driven by a headcount reduction, employee-related expenses of $0.7 million, foreign currency transaction losses of $2.4 million and professional fees of $1.6 million, partially offset by an increase in bad debt expense of $3.3 million, utilities expenses of $1.7 million and other expenditures of $0.3 million. Compensation and related costs for the year ended December 31, 2024 included $2.0 million of charge from the cancellation of the unearned performance-based restricted shares.

General and administrative expenses as a percentage of total revenue increased to 21% in 2025 from 16% in 2024 primarily due to the 40% decrease in revenue from the comparable period in 2024.

Restructuring and demobilization costs

In February 2025, we announced and began implementing a restructuring plan to realign our operational focus to improve costs and align capital expenditure to anticipated long term demand. The plan included reducing our headcount and ceasing construction of our previously planned Statesboro Plant. In connection with the demobilization, we are no longer pursuing our application for a loan from the Department of Energy's Loan Programs Office and have withdrawn from the loan application process. During each of the three months ended June 30, 2025, September 30, 2025 and December 31, 2025, we announced further headcount reductions to realign our operations and to improve costs. Restructuring and demobilization costs for the year ended December 31, 2025 include

severance and other personnel costs of $8.2 million, facility closures and other costs associated with demobilization of $3.1 million and a write off of deferred financing costs of $6.2 million incurred in connection with pursuing financing for the construction of the Statesboro Plant. We did not incur restructuring and demobilization costs for the year ended December 31, 2024.

Loss on Disposal of Property, Plant and Equipment

Loss on disposal of property, plant and equipment consists of $18.2 million in charges to remeasure at fair value less costs to sell the assets of our previously planned Statesboro Plant which have been classified as assets held for sale.

Impairment of property, plant and equipment

Impairment of property, plant and equipment costs increased $287.7 million, to $291.2 million, for the year ended December 31, 2025 from $3.5 million in the comparable period in 2024. The increase was due to impairment of $286.6 million on our previously planned Statesboro Plant and impairment of $4.6 million incurred on research and development equipment and construction in progress that are no longer needed due to lower forecasted demand in the Thermal Barrier business. Impairment of $3.5 million for the comparable period in 2024 was the result of a charge for impairment of assets due to obsolescence following development of new and more efficient equipment.

Other Income (Expense), net

	Year Ended December 31,				Change	
	2025		2024			
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
	($ in thousands)					
Other income (expense):						
Interest expense, related party	$ —	0%	$ (7,550)	2%	$ 7,550	(100)%
Interest expense, net	(10,716)	4%	(4,409)	1%	(6,307)	143%
Loss on extinguishment of debt	—	0%	(27,487)	6%	27,487	(100)%
Other income	1,786	1%	—	0%	1,786	100%
Total other income (expense), net	$ (8,930)	3%	$ (39,446)	9%	$ 30,516	(77)%

The $7.6 million decrease in interest expense, related party for the year ended December 31, 2025 is the result of the repurchase of the 2022 Convertible Note in August 2024.

The $6.3 million increase in interest expense, net for the year ended December 31, 2025 is the result of a $9.9 million increase in interest expense from the Amended MidCap Loan Facility and sale and leaseback transactions, offset by $1.8 million of deferred financing costs written off related to the loan agreement with GM (the GM Loan Agreement) during the three months ended March 31, 2024 which did not repeat during the comparable period, and an increase in interest income of $1.8 million.

The $27.5 million loss on extinguishment of debt for the year ended December 31, 2025 is the result of the repayment of the 2022 Convertible Note in August 2024.

The $1.8 million increase in other income for the year ended December 31, 2025 is primarily due to a $1.1 million legal settlement payment to us.

Income Tax Expense

The $2.4 million of income tax expense for the year ended December 31, 2025 consists of $2.1 million relating to our maquiladora operations in Mexico and a provision for state income taxes of $0.3 million. We incurred $1.7 million of income tax expense related to our maquiladora operations in Mexico for the comparable period in 2024.

Year ended December 31, 2024 compared to year ended December 31, 2023

The following tables set forth our results of operations for the periods presented:

	Year Ended December 31, 2024	2023	$ Change	% Change	Year Ended December 31, 2024	2023
	($ in thousands)				(Percentage of total revenue)	
Revenue	$ 452,699	$ 238,718	$ 213,981	90%	100%	100%
Cost of revenue	269,802	181,797	88,005	48%	60%	76%
Gross profit	182,897	56,921	125,976	221%	40%	24%
Operating expenses						
Research and development	18,050	16,356	1,694	10%	4%	7%
Sales and marketing	35,677	33,008	2,669	8%	8%	14%
General and administrative	71,125	56,760	14,365	25%	16%	24%
Impairment of equipment under development	3,510	—	3,510	100%	1%	—%
Total operating expenses	128,362	106,124	22,238	21%	28%	44%
Income (loss) from operations	54,535	(49,203)	103,738	(211)%	12%	21%
Other income (expense)						
Interest expense, convertible note - related party	(7,550)	(5,328)	(2,222)	42%	2%	2%
Interest income, net	(4,409)	6,534	(10,943)	(167)%	1%	3%
Loss on extinguishment of debt	(27,487)	—	(27,487)	(100)%	6%	—%
Income from Employee Retention Credits	—	2,186	(2,186)	(100)%	—%	1%
Total other income (expense)	(39,446)	3,392	(42,838)	(1,263)%	9%	1%
Income tax expense	(1,714)	—	(1,714)	(100)%	0%	—%
Net income (loss)	$ 13,375	$ (45,811)	$ 59,186	129%	3%	19%

Revenue

	Year Ended December 31, 2024 Amount	2024 Percentage of Revenue	2023 Amount	2023 Percentage of Revenue	Change Amount	Change Percentage
	($ in thousands)					
Revenue:						
Energy industrial	$ 145,867	32%	$ 128,639	54%	$ 17,228	13%
Thermal barrier	306,832	68%	110,079	46%	196,753	179%
Total revenue	$ 452,699	100%	$ 238,718	100%	$ 213,981	90%

Total revenue increased $214.0 million, or 90%, to $452.7 million in 2024 from $238.7 million in 2023. The increase in total revenue was the result of increases in both energy industrial and thermal barrier revenue.

Energy industrial revenue increased by $17.3 million, or 13%, to $145.9 million in 2024 from $128.6 million in 2023. This increase was driven by a more favorable mix of product shipments in the global petrochemical and refinery markets, particularly in North America, Latin America, and Europe, offset, in part, by a decrease in maintenance-based demand in the global petrochemical and refinery markets in Asia and project-based demand in the subsea market.

Energy industrial revenue for the years ended December 31, 2024 and 2023 included $28.8 million and $33.6 million in sales to Distribution, respectively. The average selling price per square foot of our products increased by $0.58, or 13%, to $5.11 per square foot for the year ended December 31, 2024, from $4.53 per square foot for the year ended December 31, 2023. The increase in average selling price reflected the impact of price increases enacted in 2024 and a change in the mix of products sold, as we strived to maximize capacity in our aerogel manufacturing facility. This increase in average selling price had the effect of increasing product revenue by approximately $16.6 million for the year ended December 31, 2024.

In volume terms, product shipments increased by 0.1 million square feet, or 1%, to 28.5 million square feet of aerogel products for the year ended December 31, 2024, as compared to 28.4 million square feet in the year ended December 31, 2023. The increase in product volume had the effect of increasing product revenue by approximately $0.7 million for the year ended December 31, 2024.

Thermal barrier revenue was $306.8 million for the year ended December 31, 2024, as compared to $110.1 million for the year ended December 31, 2023. Thermal barrier revenue for the year ended December 31, 2024 included $291.2 million to a major U.S. automotive OEM and $5.9 million to a major Asian automotive OEM. Thermal barrier revenue for the year ended December 31, 2023 included $97.5 million to a major U.S. automotive OEM and $5.5 million to a major Asian automotive OEM.

Energy industrial revenue as a percentage of total revenue was 32% and 54% of total revenue in 2024 and in 2023, respectively. Thermal barrier revenue was 68% and 46% of total revenue in 2024 and in 2023, respectively.

Cost of Revenue

	Year Ended December 31,				Change	
	2024		2023			
	Amount	Percentage of Related Revenue	Amount	Percentage of Related Revenue	Amount	Percentage
	($ in thousands)					
Cost of revenue:						
Energy industrial	$ 87,425	60%	$ 94,477	73%	$ (7,052)	(7)%
Thermal barrier	182,377	59%	87,320	79%	95,057	109%
Total cost of revenue	$ 269,802	60%	$ 181,797	76%	$ 88,005	48%

Total cost of revenue increased $88.0 million, or 48%, to $269.8 million in 2024 from $181.8 million in 2023. The increase in total cost of revenue was the result of an increase in thermal barrier, offset, in part, by a decrease in energy industrial cost of revenue.

Energy industrial cost of revenue decreased $7.1 million, or 7%, to $87.4 million from $94.5 million in the comparable period in 2023. The $7.1 million decrease was the result of a $20.1 million decrease in manufacturing and other operating costs and a $13.0 million increase in material costs from the comparable period in 2023. The decrease in manufacturing and other operating costs and increase in material costs was the result of lower volume of energy industrial products manufactured at our plant as we moved manufacturing to the external manufacturing facility.

Thermal barrier cost of revenue increased $95.1 million to $182.4 million as compared to $87.3 million in the comparable period in 2023. The $95.1 million increase was the result of a $23.6 million increase in manufacturing costs and a $71.5 million increase in material costs resulting from the increase in volume from the comparable period in 2023.

Gross Profit

	Year Ended December 31,				Change	
	2024		2023			
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
Gross profit:						
Energy industrial	$ 58,442	40%	$ 34,162	27%	$ 24,280	71%
Thermal barrier	124,455	41%	22,759	21%	101,696	447%
Total gross profit	$ 182,897	40%	$ 56,921	24%	$ 125,976	221%

Gross profit increased $126.0 million, or 221%, to $182.9 million in 2024 from $56.9 million in 2023. The increase in gross profit was the result of the $214.0 million increase in total revenue, partially offset by the $88.0 million increase in total cost of revenue. The increase in total cost of revenue was principally driven by the increase in material costs due to higher volume and overhead costs and additional resources to support our expected higher run-rate revenue in future periods for both our energy industrial and thermal barrier products.

Research and Development Expenses

	Year Ended December 31,				Change	
	2024		2023			
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
	($ in thousands)					
Research and development expenses	$ 18,050	4%	$ 16,356	7%	$ 1,694	10%

Research and development expenses increased by $1.7 million, or 10%, to $18.1 million in 2024 from $16.4 million in 2023. The $1.7 million increase was the result of increases in compensation and related costs of $1.0 million, depreciation and facility related expenses of $0.3 million, utilities expenses of $0.2 million, and other expenses of $0.2 million.

Research and development expenses as a percentage of total revenue decreased to 4% during the year ended December 31, 2024 from 7% in the comparable period in 2023 primarily due to the 90% increase in revenue from the comparable period in 2023.

Sales and Marketing Expenses

	Year Ended December 31,				Change	
	2024		2023			
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
	($ in thousands)					
Sales and marketing expenses	$ 35,677	8%	$ 33,008	14%	$ 2,669	8%

Sales and marketing expenses increased by $2.7 million, or 8%, to $35.7 million in 2024 from $33.0 million in 2023. The increase was the result of increases in depreciation and facility related expenses of $0.7 million, travel related expenses of $0.7 million, compensation and related costs of $0.6 million, utilities expenses of $0.4 million, and other expenses of $0.3 million.

Sales and marketing expenses as a percentage of total revenue decreased to 8% in 2024 from 14% in 2023 primarily due to the 90% increase in revenue from the comparable period in 2023.

General and Administrative Expenses

	Year Ended December 31,				Change	
	2024		2023			
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
	($ in thousands)					
General and administrative expenses	$ 71,125	16%	$ 56,760	24%	$ 14,365	25%

General and administrative expenses increased by $14.3 million, or 25%, to $71.1 million in 2024 from $56.8 million in 2023. The $14.3 million increase was the result of additional staffing costs combined with increases in compensation and related costs of $5.6 million, foreign currency transaction losses of $3.4 million, insurance costs of $2.7 million, utilities expenditures of $2.3 million, and other costs of $0.3 million. Compensation and related costs included a $2.0 million charge from the cancellation of the unearned performance-based restricted shares.

General and administrative expenses as a percentage of total revenue decreased to 16% in 2024 from 24% in 2023 primarily due to the 90% increase in revenue from the comparable period in 2023.

Impairment of Property, Plant and Equipment

The $3.5 million impairment of property, plant and equipment for the year ended December 31, 2024 was the result of a charge for impairment of assets due to obsolescence following development of new and more efficient equipment.

Other Income (Expense), net

	Year Ended December 31,				Change	
	2024		2023			
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
	($ in thousands)					
Other income (expense):						
Interest expense, related party	$ (7,550)	2%	$ (5,328)	2%	$ (2,222)	42%
Interest income (expense), net	(4,409)	1%	6,534	3%	(10,943)	(167)%
Loss on extinguishment of debt	(27,487)	6%	—	0%	(27,487)	(100)%
Income from Employee Retention Credits	—	0%	2,186	1%	(2,186)	(100)%
Total other income (expense), net	$ (39,446)	9%	$ 3,392	1%	$ (42,838)	(1,263)%

Other income (expense), net decreased by $42.8 million to $39.4 million in 2024 from $3.4 million in 2023. The $42.8 million increase was the result of a $27.5 million loss on extinguishment of debt, $6.1 million net impact of capitalized interest relating to our 2022 Convertible Note in the comparable period in 2023, $1.8 million of deferred financing costs related to the GM Loan Agreement (which was terminated on August 16, 2024), $2.2 million of income from Employee Retention Credits in the comparable period in 2023 not repeated in 2024, a $0.9 million decrease of interest income, and a $4.3 million increase of interest expense.

Income Tax Expense

The $1.7 million of income tax expense for the year ended December 31, 2024 was related to our maquiladora operations in Mexico. We did not incur income tax expense for the comparable period in 2023.

Liquidity and Capital Resources

Overview

We have experienced significant losses and invested substantial resources since our inception to develop, commercialize and protect our aerogel technology and to build a manufacturing infrastructure capable of supplying aerogel products at the volumes and costs required by our customers. These investments have included research and development and other operating expenses, capital expenditures, and investment in working capital balances.

On August 19, 2024, we entered into the Credit Agreement with the Agent and the Lenders, as subsequently amended. The Amended MidCap Loan Facility under the Credit Agreement is comprised of (i) the Term Loan Facility in an aggregate principal amount of $125.0 million and (ii) the Revolving Facility in an aggregate principal amount not to exceed the lesser of $100.0 million and the value of the Borrowing Base (as defined in the Credit Agreement). At closing of the Credit Agreement, the Company drew $125.0 million from the Term Loan Facility and $43.0 million from the Revolving Facility. The proceeds of the borrowings at closing, net of fees and costs, were used for repurchasing the 2022 Convertible Notes for $150.0 million and for general corporate purposes.

In October 2024, we entered into an underwriting agreement with Goldman Sachs & Co. LLC and Morgan Stanley & Co. LLC (the Underwriters), pursuant to which we issued and sold an aggregate of 4,887,500 shares of our common stock, which included 637,500 shares pursuant to the Underwriters' option to purchase additional shares of our common stock, to the Underwriters in an underwritten registered direct offering (the Offering). The price to the public in the Offering was $20.00 per share. The net proceeds to us from the Offering were approximately $93.2 million, after deducting underwriting discounts and commissions and offering expenses payable by us.

In January 2024 and September 2024, we entered into sale and leaseback arrangements, pursuant to which we sold certain equipment to an equipment leasing company for one-time cash payments of $5.0 million and $10.0 million, respectively, and leased back such equipment from the leasing company. The associated monthly lease rents will be paid over the lease term of three years.

We believe that our December 31, 2025 cash and cash equivalents balance of $156.9 million will be sufficient to support current operating requirements, current research and development activities and capital expenditures required to support our existing business in the energy industrial and EV markets for at least 12 months from the date of this Annual Report on Form 10-K.

However, we may supplement our cash balance and available credit with equity financings, debt financings, equipment leasing, sale-leaseback transactions, customer prepayments or government grant and loan programs to provide the additional capital necessary to support our long-term growth strategy.

We believe that consummation of equity financings could potentially result in an ownership change under Section 382 of the Internal Revenue Code. Such an ownership change would lead to the use of our net operating loss carryforwards being restricted. Our inability to use a substantial portion of our net operating loss carryforwards would result in a higher effective tax rate and adversely affect our financial condition and results of operations.

Primary Sources of Liquidity

Our principal sources of liquidity are currently our cash and cash equivalents, availability under the Revolving Facility, and cash generated by ongoing operations. Cash and cash equivalents consist primarily of cash, money market accounts, and sweep accounts on deposit with banks. As of December 31, 2025, we had $156.9 million of cash and cash equivalents and $9.5 million of availability under the Revolving Facility.

See "Risk Factors - Risks Related to Our Business and Strategy – We will require additional capital to pursue our growth strategy, but we may not be able to obtain additional financing on acceptable terms or at all" in this Annual Report on Form 10-K for the year ended December 31, 2025.

Analysis of Cash Flow

The following table summarizes our cash flows for the periods indicated:

	Year Ended December 31,		
	2025	2024	2023
		($ in thousands)	
Net cash provided by (used in):			
Operating activities	$ 32,872	$ 45,549	$ (42,612)
Investing activities	(37,449)	(86,262)	(175,455)
Financing activities	(58,129)	122,018	75,477
Net increase (decrease) in cash	(62,706)	81,305	(142,590)
Cash and cash equivalents, beginning of period	221,276	139,971	282,561
Cash and cash equivalents, end of period	$ 158,570	$ 221,276	$ 139,971

Operating Activities

During 2025, we generated $32.9 million in net cash from operating activities, as compared to the generation of $45.5 million in net cash during 2024, a decrease in cash provided by operations of $12.6 million. This decrease in the cash provided by operations was the result of a decrease in net income adjusted for non-cash items of $112.1 million, offset by a decrease in cash used by changes in working capital of $99.5 million.

During 2024, we generated $45.5 million in net cash from operating activities, as compared to the use of $42.6 million in net cash during 2023, a decrease in the use of cash of $88.2 million. This decrease in the use of cash was the result of net income adjusted for non-cash items of $108.0 million, and a decrease in cash used by changes in working capital of $19.8 million.

Investing Activities

Net cash used in investing activities is for capital expenditures for machinery and equipment principally to improve the throughput, efficiency and capacity of our East Providence facility, our automated fabrication facility in Mexico and construction costs for the previously planned Statesboro Plant. Net cash used in investing activities for 2025 and 2024 totaled $37.4 million and $86.3 million, respectively.

Financing Activities

Net cash used in financing activities in 2025 totaled $58.1 million and consisted of $28.0 million in cash used for the repayment of the Revolving Facility, $26.0 million for the repayment of the Term Loan Facility, $5.2 million in repayments of the finance obligation under the sale and leaseback transaction, $0.8 million for payments made for employee tax withholdings associated with the

vesting of RSUs, which were partially offset by proceeds of $1.7 million from employee stock option exercises, $0.2 million in proceeds from employee stock purchase plan purchases and less than $0.1 million in cash used for fees and issuance costs.

Net cash provided by financing activities in 2024 totaled $122.0 million and consisted of $14.9 million in proceeds from a sales leaseback, $10.4 million in proceeds from employee stock option exercises, $120.1 million in proceeds from the Term Loan, net of issues costs, and $42.1 in proceeds from the revolving line of credit, net of issuance costs, $93.2 million in proceeds from the registered direct offering of common stock, net of issuance costs, partially offset by $150.0 million in cash used for the repayment of the 2022 Convertible Note, $6.5 million in cash used for repayments from the Term Loan Facility, $1.3 million in cash used for payments made for employee tax withholdings associated with the vesting of RSUs, and $0.9 million in repayments of a sales leaseback.

Capital Spending and Future Capital Requirements

We have made capital expenditures primarily to develop and expand our manufacturing capacity. Our capital expenditures totaled $37.4 million in 2025, $86.3 million in 2024 and $175.5 million in 2023. As of December 31, 2025, we had capital commitments of approximately $12.3 million, which included commitments for which we have entered into contracts as well as commitments authorized by our Board of Directors. These commitments relate to the enhancement of our existing production lines in our East Providence facility and our fabrication operation in Mexico, and consist primarily of costs for equipment.

As indicated in the overview of the liquidity and capital resources section, to meet expected demand for our aerogel products, we plan to make additional productivity improvements in our existing East Providence facility and utilize a flexible supply strategy, including but not limited to use of our external manufacturing capabilities in China, which currently supports our Energy Industrial segment and are capable of delivering increased aerogel production capacity. Accordingly, we expect to be able to substantially reduce our planned capital expenditures for 2026.

We intend to fund capital expenditures related to additional productivity improvements in our manufacturing facility with our existing cash balance and anticipated cash flows from operations.

Contractual Obligations and Commitments

Operating Leases

We lease office space for our corporate offices in Northborough, Massachusetts, which expires in 2031. We also lease additional facilities in East Providence, Rhode Island; Marlborough, Massachusetts; Monterrey, Mexico; and Pawtucket, Rhode Island for research, administrative, fabrication, and warehousing purposes under leases expiring between July 31, 2026 and April 30, 2034. See “Item 2 — Properties.” We also lease vehicles and equipment under non-cancelable operating leases that expire at various dates.

Thermal Barrier Contract

We are party to production contracts with GM to supply fabricated, multi-part thermal barriers (the Barriers) for use in the battery system of its current and next-generation EVs (the Contracts). Pursuant to the Contracts, we are obligated to supply Barriers at fixed annual prices and at volumes to be specified by the OEM up to a daily maximum quantity through the respective terms of the agreements, which expire at various times from 2030 through 2034 and, in certain cases, may be extended by GM. While the OEM has agreed to purchase its requirement for Barriers for locations to be designated from time to time by the OEM, it has no obligation to purchase any minimum quantity of Barriers under the Contracts. In addition, the OEM may terminate the Contracts any time and for any or no reason. All other terms of the Contracts are generally consistent with the OEM’s standard purchase terms, including quality and warranty provisions customary in the automotive industry.

MidCap Loan Facility

On August 19, 2024, we and Aspen RI entered into the Credit Agreement and the facilities provided thereunder, by and among the Borrowers, the Agent, the Term Loan Servicer, the Lenders, and the other parties party thereto as additional guarantors and/or borrowers from time to time. The proceeds of the MidCap Loan Facility were used to repurchase our outstanding convertible note that was issued to Wood River, an entity affiliated with Koch, the payment of related fees and expenses and for working capital. Loans borrowed under the Amended MidCap Loan Facility mature on August 19, 2029.

On May 6, 2025, the Borrowers and Aspen Georgia entered into Amendment No. 1, by and among the Borrowers, Aspen Georgia, the Agent and the Lenders party thereto, amending the MidCap Loan Facility, and on December 16, 2025, the Loan Parties

entered into Amendment No. 2, by and among the Loan Parties, the Agent, the Term Loan Servicer, and the Lenders party thereto, which amends that certain Credit, Security and Guaranty Agreement, dated as of August 19, 2024, by and among the Credit Parties, the Agent, the Term Loan Servicer, the Lenders, and the other parties party thereto as additional guarantors and/or borrowers from time to time.

The Amended MidCap Loan Facility is guaranteed by Aspen Mexico and Aspen Georgia and is secured by a lien on substantially all existing and after-acquired assets of the Loan Parties, including the equity interest in Aspen RI, Aspen Mexico and Aspen Georgia owned by us, in each case, subject to customary exceptions.

Pursuant to Amendment No. 1, the financial covenants under the MidCap Loan Facility were amended such that (a) the minimum Liquidity (as defined in the Amended MidCap Loan Facility) which must be maintained at all times has changed from $75 million to an amount equal to the greater of (i) $50 million and (ii) 85% of the then aggregate outstanding principal amount of the Term Loan Facility and (b) the minimum EBITDA level to be tested quarterly has changed to reflect a new range from $15 million to $50 million, with the next test set at $15 million with respect to the fiscal quarter ended March 31, 2026 and a $50 million level applicable commencing with the fiscal quarter ended December 31, 2027 and thereafter. The Liquidity amount trigger of a cash dominion event was also reduced from $100 million to an amount equal to the greater of (i) $50 million and (ii) 85% of the then aggregate outstanding principal amount of the Term Loan Facility. In addition, the Amended MidCap Loan Facility includes representations and warranties, affirmative covenants (including reporting obligations), negative covenants and events of default that are usual and customary for facilities of this type, in each case, subject to certain permitted exceptions as set forth therein.

Pursuant to Amendment No. 2, the financial covenants under the MidCap Loan Facility have been amended such that (a) the applicable minimum liquidity threshold (both for (i) the minimum liquidity financial covenant, which must be maintained by the Company at all times and (ii) the "Cash Dominion Event" definition for purposes of triggering cash dominion) has changed from (i) an amount equal to the greater of (x) $50 million and (y) 85% of the then aggregate outstanding principal amount of the Term Loan (as defined in the Amended MidCap Loan Facility) to (ii) an amount equal to the greater of (x) $50 million and (y) 100% of the then aggregate outstanding principal amount of the Term Loan and (b) the minimum EBITDA (as defined in the Amended MidCap Loan Facility) financial maintenance covenant has been removed entirely.

In addition, the mandatory prepayment provisions were revised to make clear that any mandatory prepayment of the loans under the MidCap Loan Facility made with proceeds of an asset sale will be used to reduce the Company's required amortization payments in direct order of maturity, and the basket for making permitted acquisitions under the MidCap Loan Facility was reduced.

Convertible Note - Related Party

On August 19, 2024, we entered into the Note Repurchase Agreement with Wood River, pursuant to which we repurchased from Wood River $123.9 million in aggregate capitalized principal amount of the 2022 Convertible Note, such aggregate amount being the entire outstanding amount of the 2022 Convertible Note, for a total purchase price of $150.0 million in cash, which amount equals to the Redemption Price (as defined in the 2022 Convertible Note). Pursuant to the Note Repurchase Agreement, all rights and obligations, covenants and agreements under the 2022 Convertible Note and the underlying note purchase agreement were satisfied and discharged.

Purchase Commitments

As of December 31, 2025, we had purchase commitments of approximately $36.2 million, which included capital commitments of $12.3 million. Purchase commitments related to capital expenditures are anticipated to be spent over the next three years, while our remaining purchase commitments are anticipated to be spent throughout 2026.

Purchase obligations relate primarily to open purchase orders for capital expenditures, inventories, and goods and services. Purchase obligations are entered into with various vendors in the normal course of business and are consistent with our expected requirements.

Recently Issued Accounting Standards

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board (FASB) or other standard setting bodies. Recently issued standards typically do not require adoption until a future effective date. Prior to their effective date, we evaluate the pronouncements to determine the potential effects of adoption to our consolidated financial statements.

Standards Implemented Since December 31, 2024

In December 2023, the FASB issued ASU 2023-09 Income Taxes (Topic 740) Improvements to Income Tax Disclosures (ASU 2023-09) that requires disclosure of disaggregated income taxes paid, prescribes standard categories for the components of the effective tax rate reconciliation, and modifies other income tax-related disclosures including additional information about income taxes paid. Topic 740 is effective for fiscal year 2025. Effective January 1, 2025, we adopted ASU 2023-09 on a prospective basis. See Note (17) to the consolidated financial statements for more information.

Standards to be Implemented After December 31, 2025

Although there are several other new accounting pronouncements issued by the FASB, we do not believe any of these accounting pronouncements had or will have a material impact on our consolidated financial statements.

We believe that the impact of recently issued accounting standards that are not yet effective will not have a material impact on our consolidated financial statements.

Critical Accounting Policies and Estimates

Our financial statements are prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of our financial statements and related disclosures requires us to make estimates, assumptions and judgments that affect the reported amount of assets, liabilities, revenue, costs and expenses and related disclosures. We believe that the estimates, assumptions and judgments involved in these accounting policies have the greatest potential impact on our financial statements; and therefore, we consider these to be our critical accounting policies. Accordingly, we evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ from these estimates under different assumptions and conditions. See Note (2) to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K for information about these critical accounting policies, as well as a description of our other significant accounting policies.

Stock-based Compensation

We maintain an equity incentive plan pursuant to which our Board of Directors may grant qualified and nonqualified stock options, restricted stock, RSUs and other stock-based awards to board members, officers, key employees and others who provide or have provided service to us.

We measure the costs associated with stock-based awards based on their estimated fair value at date of grant. We recognize the cost of stock-based awards as service, performance or market conditions are met. Future expense amounts for any particular quarterly or annual period could be affected by changes in our assumptions or changes in market conditions.

Stock Options

We use the Black-Scholes option-pricing model to estimate the fair value of stock option awards. The determination of the estimated fair value of stock option awards is based on a number of complex and subjective assumptions. These assumptions include the determination of the estimated fair value of the underlying security, the expected volatility of the underlying security, a risk-free interest rate, the expected term of the option, and the forfeiture rate for the award class. The following assumptions were used to estimate the fair value of the option awards:

	Year Ended December 31,		
	2025	**2024**	**2023**
Weighted-average assumptions:			
Expected term (in years)	5.95	5.99	6.12
Expected volatility	79.77%	75.04%	70.04%
Risk free interest rate	4.03%	4.11%	4.08%
Expected dividend yield	—%	—%	—%

- The expected term represents the period that our stock-based awards are expected to be outstanding and is determined using the simplified method described in ASC Topic 718, *Compensation — Stock Compensation*, for all grants. We believe this is a better representation of the estimated life than our actual limited historical exercise behavior.
- For the years ended December 31, 2025, 2024 and 2023, we used our historical volatility as a basis to estimate expected volatility in the valuation of stock options.

- The risk-free interest rate is based on U.S. Treasury zero-coupon issues with a remaining term equal to the expected life assumed at the date of grant.
- We use an expected dividend yield of zero, since we do not intend to pay cash dividends on our common stock in the foreseeable future, nor have we paid dividends on our common stock in the past.

For stock options that contain a market condition, we use a Monte-Carlo Simulation model to estimate the grant date fair value of awards expected to vest. We based the simulation model on the Black Scholes option-pricing model and a number of other complex assumptions including (i) whether the vesting condition would be satisfied within the time-vesting periods, and (ii) the date the common stock price target would be achieved per the terms of the agreement.

Inventory Valuation

Our inventories are stated at the lower of cost and net realizable value. We write down our inventories for estimated obsolescence equal to the difference between the cost of the inventory and its net realizable value based upon an aging analysis of the inventory on hand utilizing specific reserve percentages, specifically known inventory-related risks (such as technological obsolescence), and assumptions about future demand. Determining net realizable value and establishing reserves for excess and obsolete inventory require management to make estimates about future consumption of our products and how those expectations compare to our historical consumption experience. Because these assumptions may change as customer demand shifts, inventory valuation represents a critical accounting estimate.

In order to determine what costs can be included in the valuation of inventories, we determine normal capacity for our manufacturing facilities based on historical patterns. If our estimates regarding customer demand are inaccurate, or market conditions or technology change in ways that are less favorable than those projected by management, we may be required to take excess capacity charges in accordance with U.S. GAAP, which could have an adverse effect on our operating results.

No significant changes were made to the methodologies used to estimate inventory reserves during the year ended December 31, 2025.

Impairment of the Statesboro Plant

During the three months ended March 31, 2025, we recorded an impairment charge related to construction in progress associated with our Statesboro Plant construction project. The initial impairment was triggered by the decision, as part of a restructuring plan, to cease construction at our previously planned Statesboro Plant and demobilize the site, which required management to reassess the recoverability of the project’s capitalized costs based on updated estimates of future economic benefits. To support this assessment, management engaged an independent third-party valuation specialist to assist in determining fair value. This evaluation involved significant management judgment and resulted in recognition of an impairment charge.

At December 31, 2025, we recorded an additional loss based on updated information indicating that the fair value less cost to sell of the Statesboro Plant assets classified as held for sale were lower than their carrying value. Management again utilized the same independent third-party valuation specialist to update the fair value analysis which reflected changes in expected market conditions, potential buyer interest and estimated disposal costs.

Both the initial impairment and the subsequent loss required management to apply significant judgment in determining fair value. These assessments relied heavily on management’s judgment regarding expected market conditions and disposal costs, and changes in these assumptions could materially affect the valuation.

These charges were specific to events that occurred during the year ended December 31, 2025, and did not result in changes to our overall impairment policies or methodologies for evaluating long-lived assets.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure results primarily from fluctuations in interest rates as well as from inflation. In the normal course of business, we are exposed to market risks, including changes in interest rates which affect our line of credit under our revolving credit facility as well as cash flows. We may also face additional exchange rate risk in the future as we expand our business internationally.

Interest Rate Risk

We are exposed to changes in interest rates in the normal course of our business. At December 31, 2025, we had unrestricted cash and cash equivalents of $156.9 million. These amounts were held for working capital and capital expansion purposes and were invested primarily in deposit accounts, money market accounts, and high-quality debt securities issued by the U.S. government via cash sweep accounts at major financial institutions in North America. Due to the short-term nature of these investments, we believe that our exposure to changes in the fair value of our cash as a result of changes in interest rates is not material.

As of December 31, 2025, we had $1.7 million of restricted cash to support our outstanding letters of credit.

As of December 31, 2025, we had $90.6 million of Term Loan outstanding and $14.3 million of revolving line of credit outstanding. Under the terms of the Credit Agreement, as amended by Amendment No. 1, the Term Loan Facility bears an interest rate equal to Term SOFR (as defined in the Credit Agreement) for a one-month interest period plus 5.00% per year, subject to a Term SOFR floor of 4.50% and a Term SOFR cap of 7.50%. Interest is paid monthly. Our Revolving Facility bears interest at the Term SOFR plus 5.10% per annum. Under the terms of the Credit Agreement, as amended by Amendment No. 1, the Revolving Facility is subject to a Term SOFR floor of 2.50%. Interest is paid monthly. Therefore, fluctuations in interest rates will impact our consolidated financial statements. A rising interest rate environment will increase the amount of interest paid on these loans. A hypothetical 100 basis point increase or decrease in interest rates would not have a material effect on the results of our operations.

Inflation Risk

Although we expect that our operating results will be influenced by general economic conditions, we do not believe that inflation has had a material effect on our results of operations during the periods presented in this report. However, our business may be affected by inflation in the future.

Foreign Currency Exchange Risk

We are subject to inherent risks attributed to operating in a global economy. The majority of our revenue, receivables, purchases and debts are denominated in U.S. dollars. As we expand our presence in international markets, to the extent we are required to enter into agreements denominated in a currency other than the U.S. dollar, our results of operations and cash flows may increasingly be subject to fluctuations due to changes in foreign currency exchange rates and may be adversely affected in the future due to changes in foreign exchange rates.

Certain of our and our subsidiaries’ transactions are denominated in currencies other than the functional currency. During the fiscal year ended December 31, 2025, our largest exposures to foreign exchange rates consisted primarily of the Mexican Peso against the U.S. dollar. For the fiscal years ended December 31, 2025 and 2024, we had foreign exchange losses of $0.5 million and $2.8 million, respectively. For the fiscal year ended December 31, 2023, we had foreign exchange gains of $0.5 million. The foreign currency transaction gains and losses were recorded within operating expenses on the consolidated statements of operations.

Capital Market Risk

We generate our revenue from the sale of our products, but in the future we may raise funds through other sources. One possible source of funding is through further securities offerings. Our ability to raise funds in this manner depends upon capital market forces affecting our stock price among other things.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors
Aspen Aerogels, Inc.:

Opinions on the Consolidated Financial Statements and Internal Control Over Financial Reporting

We have audited the accompanying consolidated balance sheets of Aspen Aerogels, Inc. and subsidiaries (the Company) as of December 31, 2025 and 2024, the related consolidated statements of operations, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2025, and the related notes and financial statement schedule II (collectively, the consolidated financial statements). We also have audited the Company's internal control over financial reporting as of December 31, 2025, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2025 and 2024, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2025, in conformity with U.S. generally accepted accounting principles. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2025 based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's consolidated financial statements and an opinion on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Impairment of the Statesboro Plant

As discussed in Note 2 to the consolidated financial statements, long-lived assets are reviewed for impairment when events or changes in circumstances indicate that the carrying amount of an asset or asset group may not be recoverable. If the carrying amount of an asset or asset group exceeds its estimated undiscounted future cash flows, an impairment charge is recognized for the amount by which the carrying amount of the asset or asset group exceeds the fair value of the asset or asset group. As described in Notes 5 and 19 to the consolidated financial statements, in February 2025 the Company decided to cease construction at its previously planned Statesboro Plant and demobilize the site. As a result, the Company recorded impairment charges of $286.6 million during the year and the Statesboro Plant assets were classified as held for sale as of December 31, 2025.

We identified the evaluation of the impairment assessment of the Statesboro Plant as a critical audit matter. The carrying value of the Statesboro Plant exceeded its estimated fair value, which was calculated based on certain assumptions that were determined to involve a high degree of judgment and estimation by the Company. We performed a sensitivity analysis as a risk assessment procedure over the assumptions used to estimate the fair value of the Statesboro Plant and determined that market rent, discount rate, terminal capitalization rate and remaining construction costs represented the significant assumptions. These assumptions were challenging to test as they represented subjective determinations of future market, economic conditions and remaining construction activity that were sensitive to variation. Minor changes to those assumptions could have had a significant effect on the estimated fair value of the Statesboro Plant. Additionally, the audit effort associated with this estimate required specialized skills and knowledge.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls related to the Company’s impairment assessment of long-lived assets, including controls related to determining the significant assumptions used to estimate the fair value of the Statesboro Plant. We evaluated the reasonableness of the remaining construction costs by comparing them to executed agreements and assessing the remaining construction costs estimated by the Company to bring the property to a condition suitable for general use based on actual costs incurred. In addition, we involved valuation professionals with specialized skills and knowledge, who assisted in:

- evaluating the market rent used by the Company by comparing it against a market rent range that was independently developed using publicly available signed lease data for comparable properties
- evaluating the discount rate used by the Company by comparing it against a market-oriented discount rate range that was independently developed using published investor surveys specific to development property types
- evaluating the terminal capitalization rate used by the Company by comparing it to a terminal capitalization rate range that was independently developed using sales of comparable investment grade real estate assets.

Net realizable value of certain inventories

As discussed in Note 2 to the consolidated financial statements, inventories are stated at the lower of cost and net realizable value. As of December 31, 2025, the Company held inventories of $38.2 million. The excess, obsolete or damaged goods provision recorded for inventories is equal to the difference between the cost of inventory and the estimated net realizable value, which is based upon assumptions about future demand, selling prices, and market conditions.

We identified the evaluation of the estimated net realizable value of certain inventories as a critical audit matter. A high degree of auditor judgment was required to evaluate the Company’s assumption of future demand through future consumption, including

whether past consumption is indicative of future consumption and the related effect on the net realizable value of certain inventories.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls related to the Company’s inventory process. This included a control related to the Company’s process to estimate future consumption. We assessed the Company’s assumption related to future consumption and its correlation to past consumption by inquiring of relevant Company personnel regarding the impact of relevant changes to the overall business environment, including key customers and product lines. We compared the actual quantities of inventory on hand to actual consumption during the current year and subsequent to year-end to evaluate whether the historic and subsequent period consumption supported the Company’s assumption related to future consumption. We recalculated the Company’s estimate of the inventory provision based on the actual quantities of inventory on hand compared to the estimate of future consumption.

/s/ KPMG LLP

We have served as the Company’s auditor since 2002.

Boston, Massachusetts
March 13, 2026

ASPEN AEROGELS, INC.
Consolidated Balance Sheets

	December 31,	
	2025	2024
	(In thousands, except share and per share data)	
Assets		
Current assets:		
Cash and cash equivalents	$ 156,857	$ 220,882
Restricted cash	1,713	394
Accounts receivable, net of allowances of $4,172 and $1,265	35,270	109,104
Inventories	38,249	47,551
Prepaid expenses and other current assets	9,964	31,517
Total current assets	242,053	409,448
Property, plant and equipment, net	98,400	459,276
Assets held for sale	32,712	—
Operating lease right-of-use assets	18,014	20,854
Finance lease right-of-use assets	6,131	—
Other long-term assets	9,369	5,566
Total assets	$ 406,679	$ 895,144
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 13,243	$ 44,361
Accrued expenses	12,952	36,495
Deferred revenue	1,259	2,199
Finance obligation for sale and leaseback transactions	4,443	4,028
Operating lease liabilities	3,245	3,279
Finance lease liabilities	1,768	—
Long term debt - current portion	25,115	19,750
Total current liabilities	62,025	110,112
Revolving line of credit	14,346	42,131
Long term debt	65,455	94,961
Finance obligation for sale and leaseback transactions long-term	4,953	10,087
Operating lease liabilities long-term	21,138	23,148
Finance lease liabilities long-term	3,244	—
Total liabilities	171,161	280,439
Commitments and contingencies (Note 12)		
Stockholders' equity:		
Preferred stock, $0.00001 par value; 5,000,000 shares authorized, no shares issued or outstanding at December 31, 2025 and 2024	—	—
Common stock, $0.00001 par value; 250,000,000 shares authorized, 82,711,351 and 82,040,468 shares issued and outstanding at December 31, 2025 and December 31, 2024, respectively	—	—
Additional paid-in capital	1,285,297	1,274,932
Accumulated deficit	(1,049,779)	(660,227)
Total stockholders' equity	235,518	614,705
Total liabilities and stockholders' equity	$ 406,679	$ 895,144

See accompanying notes to consolidated financial statements.

ASPEN AEROGELS, INC.
Consolidated Statements of Operations

	Year Ended December 31,		
	2025	2024	2023
		(In thousands, except share and per share data)	
Revenue	$ 271,103	$ 452,699	$ 238,718
Cost of revenue	225,105	269,802	181,797
Gross profit	45,998	182,897	56,921
Operating expenses			
Research and development	13,416	18,050	16,356
Sales and marketing	28,200	35,677	33,008
General and administrative	55,774	71,125	56,760
Restructuring and demobilization costs	17,510	—	—
Loss on disposal of property, plant and equipment	18,162	—	—
Impairment of property, plant and equipment	291,164	3,510	—
Total operating expenses	424,226	128,362	106,124
Income (loss) from operations	(378,228)	54,535	(49,203)
Other income (expense)			
Interest expense, convertible note - related party	—	(7,550)	(5,328)
Interest income (expense), net	(10,716)	(4,409)	6,534
Income from Employee Retention Credits	—	—	2,186
Loss on extinguishment of debt	—	(27,487)	—
Other income	1,786	—	—
Total other income (expense)	(8,930)	(39,446)	3,392
Income (loss) before income tax expense	(387,158)	15,089	(45,811)
Income tax expense	(2,394)	(1,714)	—
Net income (loss)	$ (389,552)	$ 13,375	$ (45,811)
Net income (loss) per share:			
Basic	$ (4.73)	$ 0.17	$ (0.66)
Diluted	$ (4.73)	$ 0.17	$ (0.66)
Weighted-average common shares outstanding:			
Basic	82,328,484	77,535,121	69,439,034
Diluted	82,328,484	80,306,690	69,439,034

See accompanying notes to consolidated financial statements.

ASPEN AEROGELS, INC.

Consolidated Statements of Stockholders' Equity
(In thousands, except share and per share data)

	Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Equity
	Shares	Value	Shares	Value			
Balance at December 31, 2022	—	$ —	69,994,963	$ —	$ 1,075,226	$ (627,791)	$ 447,435
Net loss	—	—	—	—	—	(45,811)	(45,811)
Stock-based compensation expense	—	—	—	—	10,954	—	10,954
Issuance of restricted stock	—	—	44,928	—	—	—	—
Vesting of restricted stock units	—	—	79,151	—	(420)	—	(420)
Proceeds from employee stock option exercises	—	—	323,502	—	1,659	—	1,659
Proceeds from registered direct offering of common stock, net of fees and issuance costs of $623	—	—	6,060,607	—	74,377	—	74,377
Issuance costs from underwritten public offering	—	—	—	—	(139)		(139)
Balance at December 31, 2023	—	$ —	76,503,151	$ —	$ 1,161,657	$ (673,602)	$ 488,055
Net income	—	—	—	—	—	13,375	13,375
Stock-based compensation expense	—	—	—	—	10,681	—	10,681
Issuance of restricted stock	—	—	13,264	—	—	—	—
Vesting of restricted stock units	—	—	137,240	—	(1,289)	—	(1,289)
Proceeds from employee stock option exercises	—	—	1,254,994	—	10,364	—	10,364
Proceeds from registered direct offering of common stock, net of fees and issuance costs of $686	—	—	4,887,500	—	93,154	—	93,154
Cancellation of restricted stock	—	—	(679,796)	—	2,174	—	2,174
Employee restricted stock awards withheld for tax	—	—	(75,885)	—	(1,809)	—	(1,809)
Balance at December 31, 2024	—	$ —	82,040,468	$ —	$ 1,274,932	$ (660,227)	$ 614,705
Net loss	—	—	—	—	—	(389,552)	(389,552)
Stock-based compensation expense	—	—	—	—	8,628	—	8,628
Vesting of restricted stock units	—	—	199,297	—	(765)	—	(765)
Proceeds from employee stock option exercises	—	—	407,316	—	1,718	—	1,718
Issuance costs from offering of common stock	—	—	—	—	205	—	205
Acquisition of variable interest entity	—	—	—	—	403	—	403
Proceeds from employee stock purchase plan	—	—	64,270		176		176
Balance at December 31, 2025	—	$ —	82,711,351	$ —	$ 1,285,297	$ (1,049,779)	$ 235,518

See accompanying notes to consolidated financial statements.

ASPEN AEROGELS, INC.

Consolidated Statements of Cash Flows

	Year Ended December 31,		
	2025	2024	2023
		(In thousands)	
Cash flows from operating activities:			
Net income (loss)	$ (389,552)	$ 13,375	$ (45,811)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation	45,157	22,526	15,318
Accretion of interest on convertible note - related party	—	7,083	4,403
Amortization of convertible note issuance costs	—	24	37
Amortization of debt issuance costs	3,637	1,139	—
Amortization of debt discount due to modification of convertible note – related party	—	443	888
Loss on extinguishment of debt	—	27,487	—
Deferred financing costs written off	—	1,829	—
Provision for bad debt	3,538	247	(93)
Stock-based compensation expense	8,628	12,855	10,954
Impairment of property, plant and equipment	291,626	7,613	—
Loss on disposal of property, plant and equipment	18,162	—	—
Deferred taxes	(416)	—	—
Reduction in the carrying amount of operating lease right-of-use assets	3,534	1,886	2,859
Changes in operating assets and liabilities:			
Accounts receivable	70,296	(39,356)	(12,552)
Inventories	9,302	(8,362)	(16,651)
Prepaid expenses and other assets	18,172	(19,835)	(7,401)
Accounts payable	(19,453)	7,341	4,583
Accrued expenses	(23,310)	11,855	6,808
Deferred revenue	(940)	(117)	(3,530)
Operating lease and other liabilities	(5,509)	(2,484)	(2,424)
Net cash provided by (used in) operating activities	32,872	45,549	(42,612)
Cash flows from investing activities:			
Capital expenditures	(37,449)	(86,262)	(175,455)
Net cash used in investing activities	(37,449)	(86,262)	(175,455)
Cash flows from financing activities:			
Proceeds from employee stock option exercises	1,718	10,364	1,659
Payments made for employee restricted stock tax withholdings	(765)	(1,289)	(420)
Proceeds from registered direct offering of common stock	—	93,840	75,000
Fees and issuance costs from registered direct offering of common stock	(28)	(686)	(623)
Proceeds from employee stock purchase plan	176	—	—
Fees and issuance costs from private placement of common stock	—	—	(139)
Repayment of convertible note	—	(150,029)	—
Repayment of term loan	(26,000)	(6,500)	—
Proceeds from term loan	—	125,000	—
Issuance costs from term loan and revolving line of credit	—	(5,797)	—
Proceeds from revolving line of credit	—	43,000	—
Repayment of revolving line of credit	(28,000)	—	—
Proceeds from sale and leaseback transactions	—	14,983	—
Repayment of lease and other finance obligations	(5,230)	(868)	—
Net cash (used in) provided by financing activities	(58,129)	122,018	75,477
Net (decrease) increase in cash, cash equivalents and restricted cash	(62,706)	81,305	(142,590)
Cash, cash equivalents and restricted cash at beginning of period	221,276	139,971	282,561
Cash, cash equivalents and restricted cash at end of period	$ 158,570	$ 221,276	$ 139,971
Supplemental disclosures of cash flow information:			
Interest paid	$ 12,220	$ 7,007	$ 1
Income taxes paid	$ 4,134	$ —	$ —
Supplemental disclosures of non-cash activities:			
Right-of-use assets obtained in exchange for new operating lease liabilities	$ 24	$ 5,131	$ 10,380
Capitalized Interest	$ —	$ —	$ 6,084
Changes in accrued capital expenditures	$ (11,665)	$ (14,074)	$ (8,217)

See accompanying notes to consolidated financial statements.

(1) Description of Business

Nature of Business

Aspen Aerogels, Inc. (the Company) is an aerogel technology company that designs, develops and manufactures innovative, high-performance aerogel materials used primarily in the energy industrial, sustainable insulation materials, and electric vehicle (EV) markets. The Company has provided high-performance aerogel insulation to the energy industrial and sustainable insulation markets for nearly two decades. The Company has developed and commercialized its proprietary line of PyroThin® aerogel thermal barriers for use in battery packs in EVs. The Company's core business is organized into two reportable segments: Thermal Barrier and Energy Industrial.

The Company maintains its corporate offices in Northborough, Massachusetts. The Company has five wholly owned subsidiaries: Aspen Aerogels Rhode Island, LLC (Aspen RI), Aspen Aerogels Germany, GmbH, Aspen Aerogels Georgia, LLC (Aspen Georgia), Aspen Aerogels Mexico Holdings, LLC (Aspen Mexico), and OPE Manufacturer Mexico S de RL de CV (OPE), a maquiladora located in Mexico. OPE was established under an agreement between the Company and Prodensa Servicios de Consultora (Prodensa) during 2022 to assemble thermal barrier PyroThin products and operate an automated fabrication facility for PyroThin. Pursuant to the agreement, Prodensa owned OPE and charged a management fee, and the Company had an option to purchase OPE from Prodensa after a period of 18 months. The Company subsequently purchased OPE for a nominal value in accordance with the terms of the agreement. During the period between inception and the exercise of the option to purchase OPE, OPE operations were consolidated within the Company financial statements as OPE was a variable interest entity (VIE) with the Company as the primary beneficiary. The purchase of OPE was accounted for as an equity transaction.

Liquidity

During the year ended December 31, 2025, the Company incurred a net loss of $389.6 million, generated $32.9 million of cash from operations and used $37.4 million of cash for capital expenditures. The Company had unrestricted cash and cash equivalents of $156.9 million as of December 31, 2025.

In January 2024 and September 2024, the Company entered into sale and leaseback arrangements, pursuant to which the Company sold certain equipment to an equipment leasing company for one-time cash payments of $5.0 million and $10.0 million, respectively, and leased back such equipment from the leasing company. The associated monthly lease rents will be paid over the lease term of three years.

On August 19, 2024, the Company and Aspen RI (each, a Borrower and collectively, the Borrowers) entered into a Credit, Security and Guaranty Agreement (the Credit Agreement and the facilities provided thereunder, collectively, the MidCap Loan Facility) with MidCap Funding IV Trust, as agent (the Agent), MidCap Financial Trust, as term loan servicer (the Term Loan Servicer), and the financial institutions or other entities from time to time party thereto as lenders (the Lenders), with respect to the MidCap Loan Facility, which is comprised of (i) the Term Loan Facility in an aggregate principal amount of $125.0 million (the Term Loan Facility) and (ii) the Revolving Facility in an aggregate principal amount not to exceed the lesser of $100.0 million and the value of the borrowing base (defined as the sum of (x) 85% of certain eligible accounts of the Borrowers and (y) the lesser of 85% of the NOLV (as defined in the Credit Agreement) or 85% of the cost of certain eligible inventory of the Borrowers (the Borrowing Base) (the Revolving Facility). At closing of the transactions contemplated by the Credit Agreement, the Company drew $125.0 million from the Term Loan Facility and $43.0 million from the Revolving Facility. The proceeds of the borrowings at closing, net of fees and costs, were used to repurchase the 2022 Convertible Note (as defined below) for $150.0 million and for general corporate purposes. The amount available to the Company at December 31, 2025 under the Revolving Facility was $9.5 million.

On May 6, 2025, the Credit Agreement was amended to add Aspen Georgia as a Borrower and to amend the minimum Liquidity, the minimum EBITDA and the Liquidity amount trigger for a Cash Dominion Event (each as defined in the Amended MidCap Loan Facility (as defined in Note (7))).

On December 16, 2025, the Credit Agreement was further amended to change the applicable minimum Liquidity threshold and to entirely remove the minimum EBITDA financial maintenance covenant.

As of December 31, 2025, the Company is in compliance with the financial covenants set forth in the Amended MidCap Loan Facility. See Note (7) for further details.

In October 2024, the Company entered into an underwriting agreement with Goldman Sachs & Co. LLC and Morgan Stanley & Co. LLC (collectively, the Underwriters), pursuant to which the Company issued and sold an aggregate of 4,887,500 shares of the Company's common stock, which included 637,500 shares pursuant to the Underwriters' option to purchase additional shares of common stock of the Company, to the Underwriters in a registered underwritten offering (the Offering). The price to the public in the Offering was $20.00 per share. The net proceeds to the Company from the Offering were approximately $93.2 million, after deducting underwriting discounts and commissions and estimated offering expenses payable by the Company.

In November 2022, the Company entered into a loan agreement (the GM Loan Agreement) with General Motors Holdings LLC (GM), an entity affiliated with General Motors LLC, which provided for a multi-draw senior secured term loan (the GM Loan) in an aggregate principal amount of up to $100.0 million, available to the Company on a delayed draw basis beginning January 1, 2023 to September 30, 2023, subject to certain conditions precedent to funding. In September 2023, the Company amended the GM Loan Agreement to (i) extend the draw period for the GM Loan to a period beginning on the date that is 12 months prior to the date agreed upon by the Company and GM for the start of production at an aerogel manufacturing facility in Statesboro, Georgia (the Statesboro Plant), which construction has since been terminated, and ending on March 31, 2024 (or any later date approved in writing by GM at its sole discretion); (ii) extend the maturity date of the GM Loan from March 31, 2025 to September 30, 2025; and (iii) add financial covenants measured starting from the fiscal quarter ending December 31, 2024 and at the end of each fiscal quarter thereafter. The Company has not drawn, and no longer has the ability to draw on the GM Loan. The associated unamortized deferred financing costs of $1.7 million were written off to interest expense during the year ended December 31, 2024, upon the expiration of the draw period. On August 16, 2024, the Company and GM entered into the a termination letter to terminate and pay off in full all obligations outstanding under the GM Loan Agreement.

The Company expects its existing cash balance will be sufficient to support current operating requirements and capital expenditures required to support the Company's existing business in the EV and energy industrial markets for at least 12 months from the date of this Annual Report on Form 10-K. However, the Company expects that it will need to supplement its cash balance with anticipated cash flow from operations, as well as potential equity financings, debt financings, equipment leasing, sale-leaseback transactions, customer prepayments, or government grant and loan programs to provide the additional capital necessary to support the Company's long-term growth strategy.

(2) Summary of Basis of Presentation and Significant Accounting Policies

Principles of Consolidation

The accompanying consolidated financial statements of the Company include the accounts of all its subsidiaries which are majority-owned, controlled by the Company or a VIE where the Company is the primary beneficiary. All significant intercompany accounts and transactions have been eliminated in consolidation.

A VIE is an entity that lacks one or more of the characteristics of a voting interest entity. A VIE is defined as an entity in which equity investors do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support from other parties. The Company consolidates a VIE in accordance with ASC 810, Consolidation when it is the primary beneficiary of such VIE. As primary beneficiary, the Company has both the power to direct the activities that most significantly impact the economic performance of the VIE and a right to receive benefits or absorb losses of the entity that could be potentially significant to the VIE. The Company is required to reconsider its evaluation of whether to consolidate a VIE each reporting period, based upon changes in the facts and circumstances pertaining to the VIE.

The Company evaluates the initial consolidation of each consolidated VIE, which includes a determination of whether the VIE constitutes the definition of a business in accordance with ASC 805, Business Combinations, by considering if substantially all of the fair value of the gross assets within the VIE are concentrated in either a single identifiable asset or group of single identifiable assets. Upon consolidation, the Company recognizes the assets acquired, the liabilities assumed, and any third-party ownership of membership interests as non-controlling interest as of the consolidation or acquisition date, measured at their relative fair values.

Use of Estimates

The preparation of the consolidated financial statements requires the Company to make a number of estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Significant items subject to such estimates and assumptions include allowances for doubtful accounts, sales returns and allowances, assets held for sale, product warranty costs, inventory valuation, the carrying amount of property and equipment, right-of-use assets, lease liabilities, stock-based compensation, and deferred income taxes. The Company evaluates its estimates and assumptions on an on-going basis using historical experience and other factors, including current economic conditions, which are believed to be reasonable under the circumstances. Management adjusts such estimates and assumptions when facts and circumstances warrant. Illiquid credit markets, volatile equity markets, and declines in business investment can increase the uncertainty inherent in such estimates and assumptions. As future events and their effects cannot be determined with precision, actual results could differ significantly from these estimates. Changes in these estimates resulting from continuing changes in the economic environment will be reflected in the financial statements in future periods.

Cash and Cash Equivalents

Cash equivalents include short-term, highly liquid instruments, which consist of money market accounts and high-quality debt securities issued by the U.S. government via cash sweep accounts. All cash and cash equivalents are maintained with major financial institutions in North America. Deposits with these financial institutions may exceed the amount of insurance provided on such deposits; however, these deposits typically may be redeemed upon demand and, therefore, bear minimal risk.

Restricted Cash

As of December 31, 2025, the Company had $1.7 million of restricted cash to support its outstanding letters of credit.

Concentration of Credit Risk

Financial instruments, which potentially expose the Company to concentrations of credit risk, consist principally of accounts receivable. The Company's customers are primarily insulation distributors, insulation contractors, insulation fabricators and select energy and automotive end-users located throughout the world. The Company performs ongoing credit evaluations of its customers' financial condition and generally requires no collateral to secure accounts receivable. The Company maintains an allowance for doubtful accounts based on its assessment of the collectability of accounts receivable. The Company reviews the allowance for doubtful accounts quarterly. During the years ended December 31, 2025, 2024, and 2023, the Company recorded a charge for estimated customer uncollectible accounts receivable of $3.5 million, $0.2 million, and $0.1 million, respectively. Allowance for doubtful accounts was $4.2 million and $1.3 million at December 31, 2025 and 2024, respectively. The Company does not have any off-balance-sheet credit exposure related to its customers.

For the year ended December 31, 2025, two customers represented 59% and 9% of total revenue, respectively. For the year ended December 31, 2024, two customers represented 64% and 6% of total revenue, respectively. For the year ended December 31, 2023, two customers represented 41% and 14% of total revenue, respectively.

At December 31, 2025, the Company had two customers which accounted for 41% and 13% of accounts receivable, respectively. At December 31, 2024, the Company had two customers which accounted for 80% and 5% of accounts receivable, respectively.

Inventories

Inventory consists of finished products, work-in-process, and raw materials. Inventories are carried at lower of cost and net realizable value. The Company utilizes a standard costing system including materials, labor, and manufacturing overhead, capitalizing variances between estimated and actual production costs during periods of normal production. Manufacturing overhead is allocated to the costs of conversion based on normal capacity of the Company's production facility. Abnormal freight, handling costs and material waste are expensed in the period it occurs.

The Company periodically reviews its inventories and makes provisions as necessary for estimated excess, obsolete or damaged goods to ensure values approximate the lower of cost and net realizable value. The amount of any such provision is equal to the difference between the cost of inventory and the estimated net realizable value based upon assumptions about future demand, selling prices and market conditions.

Prepaid expenses and other current assets

Prepaid expenses and other current assets primarily include value added tax and income tax receivables, prepayments of future services, and payments for pre-billed inventories.

Property, Plant and Equipment, Net

Property, plant and equipment are stated at cost. Expenditures for maintenance and repairs are charged to expense as incurred. Expenditures for major betterments are capitalized as additions to property, plant and equipment.

Depreciation on plant and equipment is calculated on the straight-line method over the estimated useful lives of the assets. Assets related to leasehold improvements are amortized on a straight-line basis over the shorter of the lease term or estimated useful life of the asset.

Assets utilized in the Company's operations that are taken out of service with no future use are charged to cost of revenue or operating expenses, depending on the department in which the asset was utilized. Impairments of construction in progress are charged to operating expenses upon the determination of no future use.

Impairment of Long-Lived Assets

Long-lived assets are reviewed for impairment when events or changes in circumstances indicate that the carrying amount of an asset or asset group may not be recoverable. Recognition and measurement of a potential impairment is performed on assets grouped with other assets and liabilities at the lowest level where identifiable cash flows are largely independent of the cash flows of other assets and liabilities. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset or asset group to future undiscounted net cash flows expected to be generated by the asset or asset group. If the carrying amount of an asset or asset group exceeds its estimated undiscounted future cash flows, an impairment charge is recognized for the amount by which the carrying amount of the asset or asset group exceeds the fair value of the asset or asset group. Fair value is determined through various valuation techniques including discounted cash flow models, quoted market values and third-party independent appraisals, as considered necessary.

Assets held for sale

A disposal group is reported as held for sale when management has approved or received approval to sell and is committed to a formal plan, the disposal group is available for immediate sale, the disposal group is being actively marketed, the sale is anticipated to occur during the next 12 months and certain other specified criteria are met. A disposal group classified as held for sale is recorded at the lower of its carrying amount or estimated fair value less cost to sell.

Other Assets

Other assets primarily include long-term deposits and cloud computing costs.

Revenue Recognition

The Company recognizes revenue in accordance with Accounting Standards Codification 606, Revenue from Contracts with Customers (ASC 606). See Note (3) for further details.

Warranty

The Company provides warranties for its products and records the estimated cost within cost of revenue in the period that the related revenue is recorded. The Company's standard warranty period extends to one year from the date of shipment. This standard warranty provides that the Company's products will be free from defects in material and workmanship, and will, under normal use, conform to the specifications for the product.

The Company's products may be utilized in systems that involve new technical demands and new configurations. Accordingly, the Company regularly reviews and assesses whether warranty reserves should be recorded in the period the related revenue is recorded. For an initial shipment of product for use in a system with new technical demands or new configurations and where the Company is unsure of meeting the customer's specifications, the Company will defer the recognition of product revenue and related costs until written customer acceptance is obtained.

Shipping and Handling Costs

Shipping and handling costs are classified as a component of cost of revenue. Customer payments of shipping and handling costs are recorded as product revenue.

Stock-based Compensation

The Company grants share-based awards to its employees and non-employee directors. All share-based awards granted, including grants of stock options, restricted stock and restricted stock units (RSUs), are recognized in the statement of operations based on their fair value as of the date of grant. Expense is recognized on a straight-line basis over the requisite service period for all awards with service conditions. For performance-based awards, the grant date fair value is recognized as expense when the condition is probable of being achieved, and then on a graded basis over the requisite service period.

The Company uses the Black-Scholes option-pricing model to determine the fair value of service-based option awards. The Black-Scholes model requires the use of a number of complex and subjective assumptions including fair value of the underlying security, the expected volatility of the underlying security, a risk-free interest rate and the expected term of the option.

The fair value of restricted stock and RSUs is determined using the closing price of the Company's common stock on the date of grant. All shares of restricted stock are not transferable until vested. Restricted stock, or RSUs, issued to non-employee directors typically vests over a one-year period from the date of issuance. RSUs are issued to employees and typically vest over a three-year period from the date of issuance. The fair value of restricted stock and RSUs upon which vesting is solely service-based is expensed ratably over the vesting period. If the service condition for shares of restricted stock is not met for any reason, the shares of unvested restricted stock will be forfeited and returned to the Company.

For stock awards that contain a market condition, the Company uses the Monte-Carlo simulation model to determine the fair value of the awards. In addition to the input assumptions used in the Black-Scholes model, the Monte-Carlo simulation model factors the probability that the specific market condition may or may not be satisfied into the valuation. Stock-based compensation expense for awards with a market condition is recognized on a straight-line basis over the requisite service period for each such award.

Research and Development

Costs incurred in the Company's research and development activities include compensation and related costs, services provided by third-party contractors, materials and supplies and are classified as research and development expenses as incurred.

Earnings per Share

The Company calculates net income (loss) per common share based on the weighted-average number of common shares outstanding during each period. Potential common stock equivalents are determined using the treasury stock method. The weighted-average number of common shares included in the computation of diluted net income (loss) gives effect to all potentially dilutive common equivalent shares, including outstanding stock options and RSUs. Common equivalent shares are excluded from the computation of diluted net loss per share if their effect is antidilutive.

Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

The Company recognizes the effect of income tax positions only if those positions are more likely than not of being sustained. The Company accounts for uncertain tax positions using a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. Differences between tax positions taken in a tax return and amounts recognized in the financial statements are recorded as adjustments to income taxes payable or receivable, or adjustments to deferred taxes, or both. Changes in recognition or measurement are reflected in the period in which the change in judgment occurs. The Company recognizes penalties and interest related to uncertain tax positions, if any, as a component of income tax expense.

Segments

Operating segments are identified as components of an enterprise about which separate, discrete financial information is available for evaluation by the chief operating decision maker in making decisions on how to allocate resources and assess performance. The Company's chief operating decision maker is the Chief Executive Officer. The Company's chief operating decision maker reviews consolidated operating results to make decisions about allocating resources and assessing performance for the entire Company. The Company presently views its operations and manages its business as two operating segments.

Leases

The Company accounts for leases in accordance with FASB ASC Topic 842, Leases. The Company determines whether an arrangement is a lease at inception. For leases where the Company is the lessee, a lease liability and a right-of-use (ROU) asset is recognized for all leases, with the exception of short-term leases with terms of 12 months or less. ROU assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent the Company's payment obligations under the lease.

Operating lease ROU assets and liabilities are recognized based on the present value of lease payments over the lease term. For finance leases, the lease liability is initially measured in the same manner and date as for operating leases and is subsequently presented at amortized cost using the effective interest method. To measure its lease liabilities, the Company uses its incremental borrowing rate or the rate implicit in the lease, if available. The Company calculates its incremental borrowing rate using a synthetic credit rating analysis based on Moody's Building Materials Industry Rating Methodology. ROU assets also include any direct costs and prepaid lease payments but exclude any lease incentives received. The Company's lease terms may include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option.

Finance lease ROU assets are generally amortized on a straight-line basis over the lease term with the interest expense on the lease liability recorded using the interest method. The amortization and interest expense are recorded separately in the Consolidated Statement of Operations. For operating leases, the amortization of the ROU asset and the interest expense on the lease liability are not separately recorded; rather, the lease cost is recognized on a straight-line basis over the lease term as a single-line item in the Consolidated Statement of Operations.

The Company elected the short-term lease recognition exemption for all leases that qualify. For leases that qualify for this exemption, the Company does not recognize ROU assets or lease liabilities. For lease agreements with lease and non-lease components, the Company accounts for each component separately. However, in the case of equipment leases, the Company accounts for lease and non-lease components as a single component. See Note (11) for further details.

Sale and Leaseback Accounting

The Company has entered into sale and leaseback transactions for certain equipment within its plants. Due to the Company not meeting criteria to account for the transfer of the assets as a sale, sale accounting is precluded. Accordingly, the Company uses the financing method to account for these transactions.

Under the financing method of accounting for a sale and leaseback, the Company does not derecognize the assets and does not recognize as revenue any of the sale proceeds received from the lessor that contractually constitutes payment to acquire the assets subject to these arrangements. Instead, the sale proceeds received are accounted for as finance obligations and leaseback payments made by the Company are allocated between interest expense and a reduction to the finance obligation. Interest on the finance obligation is calculated using the Company's incremental borrowing rate at the inception of the arrangement on the outstanding finance obligation.

Foreign Currency Transactions

The Company converts foreign currency transactions recognized in the Consolidated Statements of Operations to U.S. dollars by applying the exchange rate prevailing on the date of the transaction. Gains and losses arising from foreign currency transactions and the effects of remeasuring monetary assets and liabilities are recorded in general and administrative expenses, net in the Consolidated Statements of Operations. The Company had foreign exchange losses of $0.5 million and $2.8 million for the fiscal years ended December 31, 2025 and 2024, respectively. For the fiscal year ended December 31, 2023, the Company had foreign exchange gains of $0.5 million.

Recently Issued Accounting Standards

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board (FASB) or other standard setting bodies. Recently issued standards typically do not require adoption until a future effective date. Prior to their effective date, the Company evaluates the pronouncements to determine the potential effects of adoption to its consolidated financial statements.

Standards Implemented Since December 31, 2024

In December 2023, the FASB issued ASU 2023-09 Income Taxes (Topic 740) Improvements to Income Tax Disclosures (ASU 2023-09) that requires disclosure of disaggregated income taxes paid, prescribes standard categories for the components of the effective tax rate reconciliation, and modifies other income tax-related disclosures including additional information about income taxes paid. Effective January 1, 2025, the Company adopted ASU 2023-09 on a prospective basis. See Note (17) for more information.

Standards to be Implemented After December 31, 2025

Although there are several other new accounting pronouncements issued by the FASB, the Company does not believe any of these accounting pronouncements had or will have a material impact on its Consolidated Financial Statements.

The Company believes that the impact of recently issued accounting standards that are not yet effective will not have a material impact on its consolidated financial statements.

(3) Revenue from Contracts with Customers

Revenue Recognition

Revenue is recognized when a customer obtains control of promised goods or services in an amount that reflects the consideration which the entity expects to receive in exchange for those goods or services. To determine revenue recognition for arrangements within the scope of ASC 606, the Company performs the following five steps: (i) identification of the contract with a customer; (ii) identification of the performance obligations in the contract; (iii) determination of the transaction price; (iv) allocation of the transaction price to the separate performance obligations in the contract; and (v) recognition of the revenue associated with performance obligations as they are satisfied. The Company applies the five-step model to contracts when it is probable that the Company will collect the consideration it is entitled to in exchange for the goods or services it transfers to the customer. At contract inception, once the contract is determined to be within the scope of ASC 606, the Company assesses the goods or services promised within each contract and determines those that are performance obligations and assesses whether each promised good or service is distinct. If the contract contains a single performance obligation, the entire transaction price is allocated to the single performance obligation. Contracts that contain multiple performance obligations require an allocation of the transaction price based on the estimated relative standalone-selling prices of the promised products or services underlying each performance obligation. The Company determines standalone-selling prices based on the price at which the performance obligation is sold separately. If the standalone-selling price is not observable through past transactions, the Company estimates the standalone-selling price considering available information such as market conditions and internally approved pricing guidelines related to the performance obligations. The Company then recognizes as revenue the amount of the transaction price that is allocated to the respective performance obligation when (or as) the performance obligation is satisfied.

When determining the transaction price of a contract, an adjustment is made if payment from a customer occurs either significantly before or significantly after performance, resulting in a significant financing component. Applying the practical expedient in paragraph ASC 606-10-32-18, the Company does not assess whether a significant financing component exists if the period between when the Company performs its obligations under the contract and when the customer pays is one year or less. The Company did not have any contracts outstanding at either December 31, 2025 or December 31, 2024 and did not enter into any contracts during each of the years ended December 31, 2025 and 2024 that contained a significant financing component.

The Company records deferred revenue for product sales when (i) the Company has delivered products, but other revenue recognition criteria have not been satisfied, or (ii) payments have been received in advance of the completion of required performance obligations.

Thermal Barriers

The Company supplies fabricated, multi-part thermal barriers for use in battery packs in the EV market. These thermal barriers are customized to meet customer specifications. Although thermal barrier products are customized with no alternative use to the Company, the Company does not always have an enforceable right to payment. Under the provisions of ASC 606, the Company recognizes revenue at a point in time when transfer of the control of the products is passed to the customer according to the terms of the contract, including under bill and hold arrangements. The timing of revenue recognition is assessed on a contract-by-contract basis.

Energy Industrial

The Company generally enters into contracts containing one type of performance obligation. For a majority of the contracts, the Company recognizes revenue at a point in time when transfer of control of the products is passed to the customer, which is generally upon delivery according to contractual shipping terms within customer purchase orders. For a limited number of customer arrangements for customized products with no alternative use to the Company and an enforceable right to payment for progress completed to date, the Company recognizes revenue over time using units of production to measure progress toward satisfying the performance obligations. Units of production represent work performed as we do not generate significant work in process and thereby best depicts the transfer of control to the customer. Customer invoicing terms for contracts for which revenue is recognized under the over time methodology are typically based on certain milestones within the production and delivery schedule. The timing of revenue recognition is assessed on a contract-by-contract basis.

The Company also enters into rebate agreements with certain customers. These agreements may be considered an additional performance obligation of the Company or variable consideration within a contract. Rebates are recorded as a reduction of revenue in the period the related revenue is recognized. A corresponding liability is recorded as a component of deferred revenue on the consolidated balance sheets. These arrangements are primarily based on the customer attaining contractually specified sales volumes.

The Company estimates the amount of its sales that may be returned by its customers and records this estimate as a reduction of revenue in the period the related revenue is recognized. The Company currently estimates return liabilities using historical rates of return, current quarter credit sales, and specific items of exposure on a contract-by-contract basis. Sales return reserves were approximately $0.3 million at both December 31, 2025 and December 31, 2024.

Shipping and Handling Costs

Shipping and handling costs associated with outbound freight after control over a product has transferred to a customer are accounted for as fulfillment costs and are included in the cost of product revenue. The associated amount of revenue recognized includes the consideration to which the Company expects to be entitled to receive in exchange for incurring these shipping and handling costs.

Disaggregation of Revenue

In the following tables, revenue is disaggregated by primary geographical region and source of revenue:

	December 31, 2025		
	U.S.	**International**	**Total**
		(In thousands)	
Geographical region			
Asia	$ —	$ 31,129	$ 31,129
Canada	—	2,466	2,466
Europe	—	17,870	17,870
Latin America	—	47,556	47,556
United States	172,082	—	172,082
Total revenue	$ 172,082	$ 99,021	$ 271,103
Source of revenue			
Energy industrial	$ 54,637	$ 47,561	$ 102,198
Thermal barrier	117,445	51,460	168,905
Total revenue	$ 172,082	$ 99,021	$ 271,103

	December 31, 2024		
	U.S.	International	Total
		(In thousands)	
Geographical region			
Asia	$ —	$ 29,321	$ 29,321
Canada	—	19,265	19,265
Europe	—	45,027	45,027
Latin America	—	100,568	100,568
United States	258,518	—	258,518
Total revenue	$ 258,518	$ 194,181	$ 452,699
Source of revenue			
Energy industrial	$ 63,761	$ 82,106	$ 145,867
Thermal barrier	194,757	112,075	306,832
Total revenue	$ 258,518	$ 194,181	$ 452,699

	December 31, 2023		
	U.S.	International	Total
		(In thousands)	
Geographical region			
Asia	$ —	$ 35,698	$ 35,698
Canada	—	2,033	2,033
Europe	—	42,731	42,731
Latin America	—	7,219	7,219
United States	151,037	—	151,037
Total revenue	$ 151,037	$ 87,681	$ 238,718
Source of revenue			
Energy industrial	$ 52,838	$ 75,801	$ 128,639
Thermal barrier	98,199	11,880	110,079
Total revenue	$ 151,037	$ 87,681	$ 238,718

Contract Balances

The following table presents changes in the Company’s contract liabilities during the year ended December 31, 2025:

	Balance at December 31, 2024	Additions	Deductions	Balance at December 31, 2025
		(In thousands)		
Contract liabilities				
Deferred revenue				
Energy industrial	$ 2,199	$ 1,942	$ (2,882)	$ 1,259
Total contract liabilities	$ 2,199	$ 1,942	$ (2,882)	$ 1,259

During the year ended December 31, 2025, the Company recognized $2.2 million of revenue that was included in deferred revenue at December 31, 2024.

A contract asset is recorded when the Company satisfies a performance obligation by transferring a promised good or service and has earned the right to consideration from its customer. When there is a conditional right to consideration, these items are included within other assets on the consolidated balance sheets. When there is an unconditional right to consideration, these items are included within accounts receivable on the consolidated balance sheets.

A contract liability is recorded when consideration is received, or such consideration is unconditionally due, from a customer prior to transferring goods or services under the terms of the contract. Contract liabilities are recognized as revenue after control of the products or services is transferred to the customer and all revenue recognition criteria have been met.

(4) Inventories

Inventories consist of the following:

	December 31,	
	2025	2024
	(In thousands)	
Raw material	$ 8,179	$ 13,671
Work in process	5,522	9,664
Finished goods	24,548	24,216
Total	$ 38,249	$ 47,551

(5) Property, Plant and Equipment, Net

Property, plant and equipment consist of the following:

	December 31,		
	2025	2024	Useful life
	(In thousands)		
Construction in progress	$ 9,258	$ 352,567	—
Buildings	27,045	27,032	30 years
Machinery and equipment	224,619	201,789	3 — 10 years
Computer equipment and software	7,760	9,794	3 years
Leasehold improvements	25,561	24,843	Shorter of useful life or lease term
Total	294,243	616,025	
Accumulated depreciation and amortization	(195,843)	(156,749)	
Property, plant and equipment, net	$ 98,400	$ 459,276	

Depreciation expense was $45.2 million, $22.5 million and $15.3 million for the years ended December 31, 2025, 2024 and 2023, respectively.

In February 2025, as part of a restructuring plan, the Company decided to cease construction at its previously planned Statesboro Plant and demobilize the site. In connection with the same, the Company adjusted the construction in progress balance to its fair value and recorded impairment charges of $286.6 million during the three months ended March 31, 2025. The Company plans to divest the assets of the Statesboro Plant through broker-assisted sales. At June 30, 2025, certain of the assets of the Statesboro Plant met the criteria to be classified as held for sale and are separately classified on the balance sheet. At December 31, 2025, the remaining assets of the Statesboro Plant met the criteria to be classified as held for sale. At December 31, 2025, the carrying value of assets classified as held for sale is $32.7 million and a loss of $18.2 million was recorded to reflect the remeasured fair value and cost to sell, which is included in loss on disposal of property, plant and equipment in the consolidated statement of operations. The construction in progress balance at December 31, 2025 and December 31, 2024 included $0.0 million and $323.6 million, respectively, for the Statesboro Plant.

During the second quarter of fiscal year 2025, the Company implemented additional actions under the restructuring plan, which included headcount reduction and rationalizing research and development programs. As a result of the restructuring plan, the Company recorded impairment charges of $1.0 million during the year ended December 31, 2025, which are included in impairment of property, plant and equipment in the consolidated statement of operations.

During the fourth quarter of fiscal year 2025, a large Thermal Barrier customer notified the Company of its lower forecasted long-term demand requirements and requested the Company submit a claim for certain losses incurred. Further, EV adoption rates are expected to be lower following the termination in the United States of certain consumer tax incentives for EV purchases. These developments have caused the Company to reassess its capacity requirements. In connection with the same, the Company revised the useful lives of certain assets to align utilization with the revised expected demand and recognized accelerated depreciation of $22.2 million. Additionally, the Company recognized $3.6 million of impairment related to construction in progress assets that are no longer needed due to the lower forecasted demand. The Company submitted the claim with the Thermal Barrier customer in November 2025. See Note (20) for further details.

The Company recorded impairment charges of approximately $7.6 million during the year ended December 31, 2024, for equipment that will no longer be needed in manufacturing following customer directed engineering changes to a part it manufactures and for other property, plant and equipment that have become obsolete following development of new and more efficient equipment. The impairment charges of $7.6 million during the year ended December 31, 2024 consist of $4.1 million impairment included in cost of revenue and $3.5 million included in impairment of equipment under development on the Company's consolidated statement of operations. The Company received reimbursement for the losses incurred in connection with the customer-directed engineering changes which was recorded as an offset to the impairment loss recognized in cost of revenue.

Fair value of long-lived assets is determined primarily using the anticipated cash flows discounted at a rate commensurate with the risk involved and a review of appraisals or other market indicators and management estimates. As such, the Company has determined that the fair value measurements of long-lived assets principally fall in Level 3 of the fair value hierarchy.

(6) Accrued Expenses

Accrued expenses consist of the following:

	December 31,	
	2025	2024
	(In thousands)	
Employee compensation	$ 2,929	$ 19,371
Other accrued expenses	10,023	17,124
Total	$ 12,952	$ 36,495

(7) Debt

On August 19, 2024, the Borrowers entered into the Credit Agreement, by and among the Borrowers, the Agent, the Lenders and the other parties party thereto as additional guarantors and/or borrowers from time to time. Loans borrowed under the MidCap Loan Facility mature on August 19, 2029.

The MidCap Loan Facility is comprised of (i) the Term Loan Facility in an aggregate principal amount of $125 million and (ii) the Revolving Facility in an aggregate principal amount not to exceed the lesser of (A) $100 million and (B) the value of the Borrowing Base.

Loans borrowed under the Term Loan Facility bear interest rate equal to Term SOFR (as defined in the Credit Agreement) for a one-month interest period plus 4.50% per year, subject to a Term SOFR floor of 4.50% and a Term SOFR cap of 7.50%. The Term Loan Facility is subject to amortization of principal, payable quarterly on the last day of each quarter, commencing September 30, 2024, in an amount as set forth in the Credit Agreement with the remaining aggregate principal amount payable on the maturity date. The Borrowers are required to pay the Lenders an exit fee of $2.5 million on the maturity date. Additionally, the Borrowers are required to pay an origination fee of $1.3 million annually on the anniversary of the closing date.

Loans borrowed under the Revolving Facility bear an interest rate equal to Term SOFR plus 4.60% per year, subject to a Term SOFR floor of 2.50%. The Revolving Facility has a required minimum balance set at 30% of the average Borrowing Base during the immediate preceding month. The Borrowers are required to pay the Lenders under the Revolving Facility an unused line fee of 0.30% of the average unused availability under the Revolving Facility, subject to the aforementioned minimum balance.

The MidCap Loan Facility is guaranteed by Aspen Mexico and is secured by a lien on substantially all existing and after-acquired assets of the Loan Parties, including the equity interest in Aspen RI, Aspen Mexico and Aspen Georgia owned by the Company, in each case, subject to customary exceptions. At the entrance into the Credit Agreement in August 2024, Aspen Georgia was not a guarantor (and thus not a Loan Party) and its assets were excluded from the collateral under the MidCap Loan Facility. However, as further described below, on May 6, 2025, Aspen Georgia became a Loan Party under the MidCap Loan Facility.

The Credit Agreement includes representations and warranties, affirmative covenants (including reporting obligations), negative covenants and events of default that are usual and customary for facilities of this type, in each case, subject to certain permitted exceptions as set forth therein. The Credit Agreement includes financial covenants for the benefit of the Lenders, including (i) a covenant to maintain Liquidity (as defined therein) equal to or greater than $75.0 million at all times and (ii) a covenant to maintain EBITDA (as defined therein) equal to or greater than the specified applicable amount set forth in the Credit Agreement, tested quarterly with the first test set at $45.0 million commencing with the fiscal quarter ended September 30, 2024.

The Borrowers have the right to prepay the loans outstanding under the MidCap Loan Facility (or, with respect to the Revolving Facility, terminate the commitments thereunder), subject to a premium equal to 3.0% of the amount prepaid or terminated, as applicable, during the first year after the closing date, which premium will be decreased to 2.0% during the second year after the closing date and to 1.0% thereafter. The Borrowers are required to mandatorily prepay the loans outstanding under the Term Loan Facility with, among other things, certain casualty insurance proceeds or proceeds from non-ordinary course assets sales (which will also be subject to the aforementioned premium). The Borrowers are required to mandatorily prepay the balance outstanding under the Revolving Facility (i) if the outstandings exceed the Borrowing Base in an aggregate amount equal to that excess or (ii) upon a cash dominion event of all the funds deposited in the lockbox account during the cash dominion period. A cash dominion event is triggered (x) upon the occurrence of any Specified Event of Default (as defined in the Credit Agreement to include payment default, failure to deliver monthly or annual financials, financial covenant breach or bankruptcy) or any event of default arising from the failure to comply with the requirement to deliver a monthly Borrowing Base certificate, in each case, after any applicable grace period set forth in the Credit Agreement and/or cure rights applicable thereto or (y) if the Liquidity is less than $100 million.

First Amendment to MidCap Loan Facility

On May 6, 2025, the Company, Aspen RI, Aspen Mexico and Aspen Georgia entered into that certain Amendment No. 1 and Joinder to Credit, Security and Guaranty Agreement (Amendment No. 1), by and among the Company, Aspen RI, Aspen Mexico, Aspen Georgia, the Agent, the Term Loan Servicer, and the Lenders party thereto, amending the MidCap Loan Facility.

Under Amendment No. 1, Aspen Georgia became a borrower under the Amended MidCap Loan Facility and has (a) guaranteed the obligations of the Credit Parties (as defined in the Amended MidCap Loan Facility (defined below)) and (b) granted Agent for the benefits of the Lenders a lien on substantially all of its existing and after-acquired assets, in each case, subject to customary exceptions.

As a result of Amendment No. 1, the applicable margin under the MidCap Loan Facility was amended such that upon the effectiveness of Amendment No. 1, (a) (i) Loans borrowed under the Term Loan Facility will bear an interest rate equal to Term SOFR for one-month interest period plus 5.00% per year, subject to a Term SOFR floor of 4.50% and a Term SOFR cap of 7.50% and (ii) Loans borrowed under the Revolving Facility will bear an interest rate equal to Term SOFR for one-month interest period plus 5.10% per year, subject to a Term SOFR floor of 2.50%, in each case of (i) and (ii), until the first Pricing Date (as defined in the Amended MidCap Loan Facility as the date five business days after the delivery of a compliance certificate to the Agent for the most recently ended fiscal quarter) after December 31, 2025 and (b) on such first Pricing Date and as thereafter adjusted on each Pricing Date (i) Loans borrowed under the Term Loan Facility will bear interest equal to Term SOFR for one-month interest period plus a margin equal to (x) if the recently reported EBITDA (as defined in the Amended MidCap Loan Facility) is equal to or above $50 million, 4.50% or (y) if the recently reported EBITDA is below $50 million, 5.00%, in each case of (x) and (y), subject to a Term SOFR floor of 4.50% and a Term SOFR cap of 7.50%, and (ii) Loans borrowed under the Revolving Facility will bear an interest rate equal to Term SOFR for one-month interest period plus a margin equal to (x) if the recently reported EBITDA is equal to or above $50 million, 4.60% or (y) if the recently reported EBITDA is below $50 million, 5.10%, in each case of (x) and (y), subject to a Term SOFR floor of 2.50%. The schedule for amortization of principal of the Term Loan Facility (which remains payable on the last day of each fiscal quarter with remaining principal amount payable on the maturity date) was also updated with new amounts as set forth in the Amended MidCap Loan Facility.

Pursuant to Amendment No. 1, the financial covenants under the MidCap Loan Facility were amended such that (a) the minimum Liquidity which must be maintained at all times has changed from $75 million to an amount equal to the greater of (i) $50 million and (ii) 85% of the then aggregate outstanding principal amount of the Term Loan Facility and (b) the minimum EBITDA level to be tested quarterly was changed to reflect a new range from $15 million to $50 million, with the next test set at $15 million with respect to the fiscal quarter ended March 31, 2026 and a $50 million level applicable commencing with the fiscal quarter ended December 31, 2027 and thereafter. The Liquidity amount trigger of a cash dominion event was also reduced from $100 million to an amount equal to the greater of (i) $50 million and (ii) 85% of the then aggregate outstanding principal amount of the Term Loan Facility.

Second Amendment to MidCap Loan Facility

On December 16, 2025, the Company, Aspen RI, Aspen Mexico and Aspen Georgia (together with the Company, Aspen RI and Aspen Mexico, collectively, the Credit Parties) entered into that certain Amendment No. 2 to Credit, Security and Guaranty Agreement (Amendment No. 2), by and among the Credit Parties, the Agent, the Term Loan Servicer, and the Lenders party thereto, which amends the Credit Agreement and the facilities provided thereunder, (the MidCap Loan Facility, as amended by Amendment No. 1 and Amendment No. 2, the Amended MidCap Loan Facility), by and among the Credit Parties, the Agent, the Term Loan Servicer, the Lenders, and the other parties party thereto as additional guarantors and/or borrowers from time to time.

Pursuant to Amendment No. 2, the financial covenants under the MidCap Loan Facility have been amended such that (a) the applicable minimum liquidity threshold (both for (i) the minimum liquidity financial covenant, which must be maintained by the Company at all times and (ii) the "Cash Dominion Event" definition for purposes of triggering cash dominion) has changed from (i) an amount equal to the greater of (x) $50 million and (y) 85% of the then aggregate outstanding principal amount of the Term Loan (as defined in the Amended MidCap Loan Facility) to (ii) an amount equal to the greater of (x) $50 million and (y) 100% of the then aggregate outstanding principal amount of the Term Loan and (b) the minimum EBITDA (as defined in the Amended MidCap Loan Facility) financial maintenance covenant has been removed entirely.

In addition, the mandatory prepayment provisions were revised to make clear that any mandatory prepayment of the loans under the Amended MidCap Loan Facility made with proceeds of an asset sale will be used to reduce the Company's required amortization payments in direct order of maturity, and the basket for making permitted acquisitions under the Amended MidCap Loan Facility was reduced.

MidCap term loan consists of the following:

	December 31, 2025	December 31, 2024
	(In thousands)	
Term loan	92,500	118,500
Exit fee	1,152	264
Term loan issuance costs	(3,082)	(4,053)
Total debt	90,570	114,711
Current portion	25,115	19,750
Long term portion	65,455	94,961

MidCap revolving line of credit consists of the following:

	December 31, 2025	December 31, 2024
	(In thousands)	
Revolving line of credit	15,000	43,000
Exit fee	45	-
Revolving line of credit issuance costs	(699)	(869)
Total debt	14,346	42,131

During the year ended December 31, 2025, the Company repaid $28.0 million of the revolving line of credit. The amount available to the Company at December 31, 2025 under the Revolving Facility was $9.5 million.

(8) Convertible Note - Related Party

2022 Convertible Note

On February 15, 2022, the Company entered into a note purchase agreement (the Note Purchase Agreement) with Wood River Capital LLC (Wood River), an entity affiliated with Koch Strategic Platforms, LLC (Koch), relating to the issuance and sale to Wood River of convertible note (the 2022 Convertible Note) in the aggregate principal amount of $100.0 million. The transactions contemplated by the Note Purchase Agreement closed on February 18, 2022. The maturity date of the 2022 Convertible Note was February 18, 2027, subject to earlier conversion, redemption, or repurchase.

The 2022 Convertible Note was a senior unsecured obligation of the Company and ranked equal in right of payment to all senior unsecured indebtedness of the Company and would rank senior in right of payment to any indebtedness that was contractually subordinated to the 2022 Convertible Note.

On August 19, 2024, the Company entered into a note purchase and sale agreement with Wood River (the Note Repurchase Agreement), pursuant to which the Company repurchased from Wood River $123.9 million in aggregate capitalized principal amount (inclusive of PIK interest paid through June 30, 2024) of the 2022 Convertible Note, such aggregate amount being the entire outstanding amount of the 2022 Convertible Note, for a total purchase price of $150.0 million in cash, which amount equals to the Redemption Price (as defined in the 2022 Convertible Note). Pursuant to the Note Repurchase Agreement, all rights and obligations, covenants and agreements under the 2022 Convertible Note and the Note Purchase Agreement were satisfied and discharged. The Redemption Price less capitalized principal amount and accrued interest to redemption date, of $24.6 million along with unamortized deferred issuance costs was classified in the income statement as Loss on Extinguishment of Debt.

(9) Related Party Transactions

2022 Convertible Note

During the year ended December 31, 2022, the Company issued the 2022 Convertible Note to Wood River, an entity affiliated with Koch. The Company repurchased the 2022 Convertible Note on August 19, 2024. See Note (8) for additional details. For the years ended December 31, 2024 and 2023 interest expense on the related party convertible note was $7.5 million and $5.3 million, respectively.

Other

The Company had $2.8 million in accounts payable as of December 31, 2023, due to Wood River for project management service. On March 27, 2024, the Company entered into a Settlement and Release Agreement with Wood River to settle the accounts payable for $1.2 million, which was paid during the three months ended June 30, 2024.

(10) Other Income (Expense)

Interest income (expense), net

For the years ended December 31, 2025, 2024, and 2023 interest income (expense), net, included interest income of $7.5 million, $5.7 million, and $8.7 million, respectively, primarily related to interest earned on unrestricted cash and cash equivalents.

For the years ended December 31, 2025 and 2024, interest income (expense), net included interest expense related to the Amended MidCap Loan Facility of $15.9 million and $6.9 million, respectively.

Employee Retention Credits

In March 2020, the Coronavirus Aid, Relief, and Economic Security Act (the CARES Act) was signed into law, providing numerous tax provisions and other stimulus measures, including the Employee Retention Credit: a refundable tax credit against certain employment taxes. The Taxpayer Certainty and Disaster Tax Relief Act of 2020 and the American Rescue Plan Act of 2021 extended and expanded the availability of the Employee Retention Credits. The CARES Act provides an employee retention credit (CARES Employee Retention Credit), which is a refundable tax credit against certain employment taxes of up to $5,000 per employee for eligible employers. The tax credit is equal to 50% of qualified wages paid to employees during a quarter, capped at $10,000 of qualified wages per employee through December 31, 2020. Additional relief provisions were passed by the United States government, which extend and slightly expand the qualified wage caps on these credits through December 31, 2021. Based on these additional provisions, the tax credit is now equal to 70% of qualified wages paid to employees during a quarter, and the limit on qualified wages per employee has been increased to $10,000 of qualified wages per quarter. The Company qualified for the tax credit under the CARES Act for qualified wages for the years ended December 31, 2020 and 2021. In September 2023, the Company submitted filings for CARES Employee Retention Credits totaling $2.2 million that are reported in the accompanying condensed consolidated balance sheet within prepaid expenses and other current assets as of December 31, 2023 and 2024, and in the accompanying statement of operations for the year ended December 31, 2023, which amounts were collected during the year ended December 31, 2025.

(11) Leases & Sale and Leaseback

The Company leases office, laboratory, warehouse and fabrication space in Massachusetts, Rhode Island and Monterrey, Mexico under operating leases. Under these agreements, the Company is obligated to pay annual rent, real estate taxes, and certain other operating expenses. The Company also leases equipment under operating and finance leases. The Company’s leases expire at various dates through 2034.

Maturities of operating lease liabilities at December 31, 2025 are as follows:

Year	Operating Leases	Finance Leases
	(In thousands)	
2026	5,912	2,177
2027	5,071	2,881
2028	4,984	370
2029	4,540	152
2030	4,486	105
Thereafter	11,108	-
Total lease payments	36,101	5,685
Less imputed interest	(11,718)	(673)
Total lease liabilities	$ 24,383	$ 5,012

The Company incurred operating lease costs of $6.4 million and $5.9 million during the years ended December 31, 2025 and 2024, respectively. Cash payments related to operating lease liabilities were $6.2 million and $5.6 million during the years ended December 31, 2025 and 2024, respectively. At December 31, 2025, the weighted average remaining lease term for operating leases was 6.9 years. At December 31, 2025, the weighted average discount rate for operating leases was 12.1%.

The Company incurred finance lease costs of $1.1 million during the year ended December 31, 2025. Cash payments related to finance lease liabilities were $2.0 million during the year ended December 31, 2025. The Company did not incur any finance lease costs or make any cash payments during the comparable 2024 period. As of December 31, 2025, the weighted average remaining lease term for finance leases was 2.5 years and the weighted average discount rate for finance leases was 10.1%.

Sale and leaseback transaction

In January and September 2024, the Company entered into sale and leaseback arrangements, pursuant to which the Company sold certain equipment to an equipment leasing company for one-time cash payments of $5.0 million and $10.0 million, respectively, leased back such equipment from the leasing company. The transactions were considered as failed sale and leaseback transactions and accordingly, were accounted as financing transactions. The sale proceeds received were accounted for as finance obligations. The monthly lease rents will be paid over the term of three years and will be allocated between interest expense and principal repayment of the financial liability.

The outstanding finance obligation balance as of December 31, 2025 was $9.4 million. Maturities of finance obligations for sale and leaseback at December 31, 2025 are as follows:

Year	Finance Obligation
	(In thousands)
2026	5,601
2027	5,279
Total lease payments	10,880
Less imputed interest	(1,484)
Total lease liabilities	$ 9,396

(12) Commitments and Contingencies

Cloud Computing Agreement

The Company is party to multiple cloud computing agreements that are service contracts for enterprise resource planning (ERP) software programs and payroll services. The amortization period of the cloud computing agreement for the existing ERP software program was adjusted during the year ended December 31, 2024, to align with implementation of a new ERP software and is now fully amortized. During the year ended December 31, 2025, the Company updated the implementation date of the new ERP software to January 2026, which will begin to amortize thereafter.

The amortization associated with the payroll services agreement began during the year ended December 31, 2024 and is being

amortized over a period of five years.

The capitalized implementation costs are classified on the consolidated balance sheets as follows:

	December 31, 2025	December 31, 2024
	(In thousands)	
Cloud computing costs included in other current assets	$ 37	$ 637
Cloud computing costs included in other assets	8,709	4,299
Amortization of cloud computing costs	(1,621)	(1,053)
Total capitalized cloud computing costs	$ 7,125	$ 3,883

Thermal Barrier Contract

The Company is party to production contracts with GM to supply fabricated, multi-part thermal barriers (Barriers) for use in the battery system of its current and next-generation EVs (Contracts). Pursuant to the Contracts, the Company is obligated to supply Barriers at fixed periodic prices and at volumes to be specified by the OEM up to a daily maximum quantity through the respective terms of the agreements, which expire at various times from 2030 through 2034 and, in certain cases, may be extended by GM. While the OEM has agreed to purchase its requirement for Barriers from the Company for locations to be designated from time to time by the OEM, it has no obligation to purchase any minimum quantity of Barriers under the Contracts. In addition, the OEM may terminate the Contracts any time and for any or no reason. All other terms of the Contracts are generally consistent with the OEM's standard purchase terms, including quality and warranty provisions that are customary in the automotive industry.

Charges for Engineering Change

In January 2024, the Company was notified by a customer of an engineering change to one of the parts the Company manufactures for that customer to enable incremental productivity and support a set of broader system level changes that could drive higher demand for its parts. The Company submitted claims to the customer for reimbursement for estimated inventory and equipment losses incurred by the Company and its vendors due to potential obsolescence. In connection with the same, during the three months ended March 31, 2024, the Company recognized a charge of $6.8 million, net of contractual recoverable of $1.9 million, in cost of revenues for inventory obsolescence and impairment of equipment. The claims were fully approved and recovered by December 31, 2024, and the reimbursements were recognized as an offset to the charge the Company recognized in cost of revenues.

Letters of Credit

The Company has provided certain customers with letters of credit securing obligations under commercial contracts. As of December 31, 2025, the Company had $1.7 million of restricted cash to support our outstanding letters of credit. The Company had letters of credit outstanding of $0.4 million at December 31, 2024 and these letters of credit were secured by the Company's restricted cash.

Federal, State and Local Environmental Regulations

The Company is subject to federal, state and local environmental laws and regulations. These laws generally provide for control of pollutants released into the environment and require responsible parties to undertake remediation. Penalties may be imposed for noncompliance.

Litigation

The Company is, from time to time, a party to litigation that arises in the normal course of its business operations. See Part I, Item 3 ("Legal Proceedings") of this Annual Report on Form 10-K for a description of certain of the Company's current legal proceedings. The Company is not presently a party to any litigation for which it believes a loss is probable requiring an amount to be accrued or a possible loss contingency requiring disclosure.

Purchase Commitments

As of December 31, 2025, the Company had purchase commitments of approximately $36.2 million, which included capital commitments of $12.3 million. Purchase commitments related to capital expenditures are anticipated to be spent over the next three years, while the Company's remaining purchase commitments are anticipated to be spent throughout 2026.

Purchase obligations relate primarily to open purchase orders for capital expenditures, inventories, and goods and services. Purchase obligations are entered into with various vendors in the normal course of business and are consistent with the Company's expected requirements.

Warranty

The Company offers warranties to its customers depending upon the specific product.

The Company's standard warranty period for energy industrial products extends to one year from the date of shipment. This standard warranty provides that the Company's products will be free from defects in material and workmanship, and will, under normal use, conform to the specifications for the product.

The Company's thermal barrier products provide quality and warranty provisions customary in the automotive industry.

The Company recorded warranty expense of $0.8 million, $1.4 million, and $0.5 million during the years ended December 31, 2025, 2024, and 2023, respectively.

(13) Stockholders' Equity

At December 31, 2025 and 2024, the Company was authorized to issue 255,000,000 shares of stock, of which 250,000,000 shares were designated as common stock and 5,000,000 shares were designated as preferred stock.

(14) Employee Benefit Plan

The Company sponsors the Aspen Aerogels, Inc. 401(k) Plan. Under the terms of the plan, the Company's employees may contribute a percentage of their pretax earnings. During the years ended December 31, 2025, 2024, and 2023, the Company provided matching contributions of $1.4 million, $1.6 million, and $1.5 million, respectively.

(15) Stock Based Compensation

Effective June 12, 2014, the Company adopted the 2014 Employee, Director and Consultant Equity Incentive Plan (the 2014 Equity Plan). Under the 2014 Equity Plan, the Company was authorized to grant incentive stock options (ISOs), non-qualified stock options (NSOs), restricted stock, RSUs and other stock-based awards. Stock options under the 2014 Equity Plan were granted with an exercise price not less than the fair market value of the Company's common stock at the date of grant.

The Aspen Aerogels 2023 Equity Incentive Plan (the 2023 Equity Plan) was approved by stockholders at the Company's annual meeting of stockholders held on June 1, 2023 as the successor to the 2014 Equity Plan, and no further awards may be made under the 2014 Equity Plan after that date. Under the 2023 Equity Plan, the Company may grant ISOs, NSOs, restricted stock, RSUs and other stock-based awards. Stock options under the 2023 Equity Plan are to be granted with an exercise price not less than the fair market value of the Company's common stock at the date of grant. Equity awards granted to employees generally vest over a service period of three to four years. Restricted stock, RSUs and stock options granted to nonemployee directors generally vest over a one-year service period.

The Company's stockholders approved the Aspen Aerogels Amended and Restated 2023 Equity Incentive Plan (the Restated 2023 Equity Plan) at the Company's annual meeting of stockholders held on April 30, 2025 (the 2025 Annual Meeting). The Restated 2023 Equity Plan was previously approved by the Company's Board of Directors (the Board). As amended and restated, the number of shares of the Company's common stock reserved for issuance under the Restated 2023 Equity Plan has been increased by 3,850,000 shares to 16,971,994 shares and the term of the 2023 Restated Equity Plan has been extended until April 29, 2035. As of December 31, 2025, 4,356,250 shares of common stock were reserved for issuance upon the exercise or vesting of outstanding stock-based awards granted under the Company's equity incentive plans. Any cancellations or forfeitures of awards outstanding under the Restated 2023 Equity Plan, the 2014 Equity Plan or the 2001 Equity Incentive Plan, as amended, will result in the shares reserved for issuance pursuant to such awards becoming available for grant under the Restated 2023 Equity Plan. As of December 31, 2025, the

Company has either reserved in connection with statutory tax withholdings or issued a total of 6,689,149 shares under the Company's equity incentive plans. As of December 31, 2025, there were 5,926,595 shares of common stock available for future grant under the Restated 2023 Equity Plan.

At the 2025 Annual Meeting, the Company's stockholders also approved the Aspen Aerogels Employee Stock Purchase Plan (the ESPP). The ESPP was previously approved by the Board. The objective of the ESPP is to offer eligible employees of the Company and its designated subsidiaries the ability to purchase shares of the Company's common stock at a 15% discount from the fair market value of the stock as determined on specific dates at six-month intervals, subject to various limitations under the ESPP. 4,000,000 shares of the Company's common stock are authorized for issuance under the ESPP. The offering periods for the ESPP generally start on the first trading day on or after June 1st and December 1st of each year. The first offering period for the ESPP commenced on the first trading day after June 1, 2025 and ended on November 30, 2025, with the second offering period commencing on the first trading day after December 1, 2025 and ending on May 31, 2026. During the year ended December 31, 2025, $0.1 million of stock-based compensation was recognized for the ESPP.

Stock-based compensation is included in cost of sales or operating expenses, as applicable, and consists of the following:

	Year Ended December 31,		
	2025	2024	2023
		(In thousands)	
Cost of product revenue	$ 451	$ 773	$ 583
Research and development expenses	269	1,140	799
Sales and marketing expenses	1,545	1,692	1,484
General and administrative expenses	6,908	9,250	8,088
Total stock-based compensation	$ 9,173	$ 12,855	$ 10,954

The Company recognizes forfeitures on stock-based payments as they occur. During the years ended December 31, 2025, 2024 and 2023, stock-based compensation includes $(3.8) million, $(0.1) million and $(0.2) million, respectively, for forfeitures recorded during the period.

Stock Options Valuation and Amortization Method

During the year ended December 31, 2025, the Company granted NSOs to purchase 461,154 shares of common stock with a grant date fair value of $2.5 million to its employees and granted NSOs to purchase 45,525 shares of common stock with a grant date fair value of $0.2 million to its non-employee directors under the Restated 2023 Equity Plan. The NSOs granted to employees will vest over a three-year period from the applicable vesting commencement date and is amortized on a straight-line basis over the requisite service period of the options. The NSOs granted to non-employee directors vest upon the earlier of the date that is the one-year anniversary of the grant date or the day prior to the Company's annual meeting of stockholders to be held in 2026.

The fair value of each stock option is estimated as of the date of grant using the Black-Scholes option-pricing model. Key inputs into this formula included expected term, expected volatility, expected dividend yield and the risk-free rate. Each assumption is set forth and discussed below.

Expected Term

The expected term represents the period that the Company's stock-based awards are expected to be outstanding. The Company does not have sufficient historical exercise data to provide a reasonable basis upon which to estimate the expected term. Accordingly, the Company uses the simplified method to calculate the expected term for options granted.

Expected Volatility

In 2025, 2024 and 2023, the Company used its historical volatility as a basis to estimate expected volatility in the valuation of stock options.

Expected Dividend

The Company uses an expected dividend yield of zero. The Company does not intend to pay cash dividends on its common stock in the foreseeable future, nor has it paid dividends on its common stock in the past.

Risk-free Interest Rate

The Company uses a risk-free interest rate based on U.S. Treasury zero-coupon issues with a remaining term equal to the expected life assumed at the date of grant.

Estimated Forfeitures

Estimated forfeitures are excluded from the calculation of fair value of stock options as the Company records the impact of forfeitures of service-based awards under the provisions of ASU 2016-09 at the time an award is forfeited.

Assumptions Utilized

The following information relates to the fair value of the option awards estimated by use of the Black-Scholes option-pricing model:

	Year Ended December 31,		
	2025	2024	2023
Weighted average assumptions:			
Expected term (in years)	5.95	5.99	6.12
Expected volatility	79.77%	75.04%	70.04%
Risk free interest rate	4.03%	4.11%	4.08%
Expected dividend yield	0.00%	0.00%	0.00%
Weighted average fair value:			
Grant-date fair value of options granted	$ 5.36	$ 11.36	$ 4.91
Grant-date fair value of options vested	$ 7.75	$ 7.59	$ 9.63
Aggregate intrinsic value of options exercised	$ 1,270,187	$ 22,805,464	$ 1,652,567

Outstanding Options

The following table summarizes information about stock options outstanding:

	Number of Shares	Weighted Average Grant Date Fair Value Per Share	Weighted Average Exercise Price Per Share	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
	($ in thousands, except share and per share data)				
Options outstanding at December 31, 2024	4,394,619	$ 6.00	$ 9.88	6.56	$ 18,259,582
Granted	506,679	$ 5.36	$ 7.58		
Forfeited	(672,414)	$ 6.28	$ 9.23		
Expired	(228,202)	$ 6.92	$ 11.94		
Exercised	(407,316)	$ 2.15	$ 4.22		$ 1,270,187
Options outstanding at December 31, 2025	3,593,366	$ 6.22	$ 10.17	4.96	$ —
Exercisable at December 31, 2025	2,543,973	$ 6.24	$ 10.63	3.62	$ —
Expected to vest after December 31, 2025	1,049,393	$ 6.17	$ 9.06	8.17	$ —

As of December 31, 2025, total unrecognized compensation cost related to non-vested service-based options granted under the Company's equity incentive plans was $3.2 million. The unrecognized compensation cost for the service-based options is expected to be recognized over a weighted average period of 1.07 years.

Restricted Stock Awards and Restricted Stock Units

During the year ended December 31, 2025, the Company granted 327,104 RSUs with a grant date fair value of $2.5 million to its employees and granted 51,850 shares of restricted common stock with a grant date fair value of $0.3 million to its non-employee directors under the Restated 2023 Equity Plan. The RSUs granted to employees will vest over a three-year period from the applicable vesting commencement date. The restricted common stock granted to non-employee directors vest upon the earlier of the date that is the one-year anniversary of the grant date or the day prior to the Company's annual meeting of stockholders to be held in 2026.

The Company values restricted stock awards and RSUs based on the closing price of its common stock on the date of grant.

The following table provides detail of grants, vesting, and forfeitures of RSUs during 2025:

	Restricted Stock Units	Weighted Average Grant Date Fair Value
Balance at December 31, 2024	560,630	$ 12.95
Granted	378,954	7.46
Vested	(299,918)	12.23
Forfeited	(228,070)	10.62
Balance at December 31, 2025	411,596	$ 9.72

Restricted stock awards granted during 2025 are considered issued and outstanding common stock and are excluded from the table above.

The total intrinsic value of restricted stock and RSUs that vested in 2025 and 2024 was $2.3 million and $3.7 million, respectively. As of December 31, 2025, 411,596 of the total shares of RSUs outstanding will vest upon the fulfillment of service conditions.

As of December 31, 2025, total unrecognized compensation cost related to RSUs of $2.3 million is expected to be recognized over a weighted average period of 1.72 years.

Performance Stock Units

During the year ended December 31, 2025, the Company issued an aggregate of 654,217 performance share units (the PSU Awards) to certain employees. Each PSU Award provides the grantee with the opportunity to earn between 0% and 200% of the target number of performance share units, based on the Company's total stockholder return for a three-year performance period (January 1, 2025 through December 31, 2027) relative to the total stockholder return of the components of the Russell 2000 Index. Vesting of any performance share units so earned generally is also contingent upon the grantee's continued employment (or other service) with the Company through the third anniversary of the date of grant, and any vested performance share units will be settled in shares of the Company's common stock at (or shortly after) vesting. The PSU Awards had a total aggregate fair value of $7.4 million at the time of grant.

The Company uses the Monte-Carlo simulation model to determine the grant date fair value of the PSU Awards. In addition to the input assumptions used in the Black-Scholes model, the Monte-Carlo simulation model factors into the valuation the probability that the specific market condition may or may not be satisfied. Stock-based compensation expense for awards with a market condition is recognized on a straight-line basis over the requisite service period for each such award.

The following table provides detail of grants, vesting, and forfeitures of PSUs during 2025:

	Performance Stock Units	Weighted Average Grant Date Fair Value
Balance at December 31, 2024	—	$ —
Granted	654,217	11.31
Vested	—	—
Forfeited	(302,929)	11.49
Balance at December 31, 2025	351,288	$ 11.15

As of December 31, 2025, total unrecognized compensation cost related to PSUs of $2.9 million is expected to be recognized over a weighted average period of 2.18 years.

On March 5, 2024, the Compensation and Leadership Development Committee of the Board (the Committee) approved the cancellation of the outstanding, unearned portion of the performance-based restricted shares granted to certain employees pursuant to the 2014 Equity Plan on June 29, 2021 (to Chief Executive Officer) and June 2, 2022 (to certain other employees). The Committee determined that based on current market conditions, the likelihood of achievement of any of the remaining performance hurdles applicable to the unearned restricted shares is remote, and that the unearned restricted shares therefore had ceased to have incentive

value for the grantees. On March 6, 2024, the Company entered into cancellation agreements, pursuant to which the applicable employees agreed to such cancellation.

The cancelled unearned restricted shares were added to the number of shares available for awards under the Restated 2023 Equity Plan. For financial accounting purposes, the cancellation of the unearned restricted shares resulted in the immediate charge of approximately $2.2 million of unamortized stock compensation costs of which $2.0 million is included in the general and administrative expenses and $0.2 million is included in research and development expenses in the accompanying consolidated statement of operations.

Cash-settled Awards

During the year ended December 31, 2025, the Company granted RSUs that vest over a period of three years which are settled in cash. The Company has accounted for these as liability-classified awards and accordingly changes in the market value of the instruments will be recorded to costs of revenue or operating expense, as applicable, over the vesting period of the award. The fair value of a liability-classified award is determined on a quarterly basis beginning at the grant date until final vesting. These awards will be settled on the vesting dates and the maximum liability is capped at 200% of the fair value of the award at the grant date. At December 31, 2025, the fair value of these awards were $0.5 million.

(16) Net Income (Loss) Per Share

The computation of basic and diluted net income (loss) per share consists of the following:

	Year ended December 31,		
	2025	2024	2023
	(In thousands, except share and per share data)		
Numerator:			
Net income (loss)	$ (389,552)	$ 13,375	$ (45,811)
Denominator:			
Weighted average shares outstanding, basic	82,328,484	77,535,121	69,439,034
Weighted average shares outstanding, diluted	82,328,484	80,306,690	69,439,034
Net income (loss) per share, basic	$ (4.73)	$ 0.17	$ (0.66)
Net income (loss) per share, diluted	$ (4.73)	$ 0.17	$ (0.66)

Potentially dilutive common shares that were excluded from the computation of diluted net income (loss) per share because they were anti-dilutive consist of the following:

	Year ended December 31,		
	2025	2024	2023
Common stock options	3,593,366	141,134	5,234,194
Restricted common stock units	411,596	2,979	574,247
Restricted common stock awards	—	218	881,674
Convertible note, if converted	—	—	3,951,833
Total	4,004,962	144,331	10,641,948

The potential dilutive shares from common stock options, restricted common stock units, restricted common stock awards, and the 2022 Convertible Note were excluded from the calculation of diluted net income (loss) per share because their effect would have been anti-dilutive for the periods presented. The Company excludes the shares issued in connection with restricted stock awards from the calculation of basic weighted average common shares outstanding until the restrictions lapse.

For each of the years ended December 31, 2025 and 2023, there was no dilutive impact of the common stock options, RSUs, or restricted stock awards.

(17) Income Taxes

The Company incurred net operating losses for the years ended December 31, 2025 and 2023, and net operating income for the year ended December 31, 2024. The Company incurred net operating losses and recorded a full valuation allowance against net

deferred tax assets for all prior periods. Accordingly, the Company has not recorded a provision for federal income taxes for the years ended December 31, 2025 or 2024.

The following table summarizes the (loss) income before the (benefit) provision:

	Year Ended December 31, 2025
U.S.	$ (389,309)
Foreign	2,151
Loss before income tax expense	$ (387,158)

The Company has recorded a provision for state income taxes of $0.3 million during the year ended December 31, 2025. The Company has incurred $2.1 million and $1.7 million of income tax expense related to its foreign operations, primarily its Mexican maquiladora operations for the years ended December 31, 2025 and 2024, respectively. There was no respective income tax for the year ended December 31, 2023.

Income taxes included in the Consolidated Statement of Operations are as follows:

	Year ended December 31, 2025 (In thousands)
Current income tax expense	
Federal	$ —
State	323
Foreign	2,487
Deferred income tax (benefit)	
Federal	—
State	—
Foreign	(416)
Total income tax (benefit)	$ 2,394

The table below represents cash paid (refunds received) for income taxes.

	For the Year Ended December 31, 2025 (In thousands)
Federal	$ —
Aggregated state and local jurisdictions	391
Foreign	
Other	139
Mexico	3,604
Net cash paid (refunds received) for income taxes	$ 4,134

The tables below represent a reconciliation of the U.S. federal statutory income tax rate to effective tax rate. The Company has adopted the guidance in ASU 2023-09 on a prospective basis. The following table reflects the reconciliation rate for 2025 under the new guidance.

	December 31,	
	2025	2025
	Tax Expense	Effective Rate
	(In thousands)	
U.S. federal income tax at statutory rate	$ (81,303)	21.00%
State and local income taxes, net of federal income tax effect	251	(0.06)%
Foreign tax effects		
Other	58	(0.01)%
Mexico		
Other	(31)	0.01%
Safe Harbor	1,874	(0.48)%
Tax credits	935	(0.24)%
Changes in valuation allowances	78,726	(20.33)%
Nontaxable or nondeductible items		
Other	73	(0.02)%
Stock-based compensation	2,672	(0.69)%
Other reconciling items	(861)	0.22%
Effective income tax rate	$ 2,394	(0.62)%

The table below represents a reconciliation of the U.S. federal statutory tax rate to effective tax rate for the years ended December 31, 2024 and 2023 under the disclosure requirements prior to the adoption of ASU 2023-09.

	Year Ended December 31,	
	2024	2023
U.S. federal income tax statutory rate	21%	21%
Permanent differences	12%	—
State tax, net of federal benefit	3%	7%
Changes in valuation allowance for deferred tax assets	9%	(17)%
Stock-based compensation	(29)%	(7)%
Research credits	(8)%	—%
Other	(5)%	2%
State rate change	(3)%	(6)%
Foreign	11%	—%
Effective tax rate	11%	—

The tax effects of temporary differences between financial statement and tax accounting that gave rise to significant portions of the Company's deferred tax assets and deferred tax liabilities at December 31, 2025 and 2024 are presented below:

	December 31,	
	2025	2024
	(In thousands)	
Deferred tax assets:		
Net operating loss carryforwards	$ 81,875	$ 71,026
Stock-based compensation	3,072	4,197
Operating lease liabilities	5,696	6,732
Capitalized research and development	9,152	12,250
Tax credit carryforwards	4,717	6,358
Depreciation	76,569	—
Reserves and accruals	4,273	7,491
Interest expense limitation	8,311	6,354
Total gross deferred tax assets	193,665	114,408
Deferred tax liabilities:		
Depreciation	—	(2,715)
Operating lease right-of-use assets	(4,209)	(5,061)
Total deferred tax liabilities	(4,209)	(7,776)
Total deferred tax assets and liabilities	189,456	106,632
Valuation allowance	(188,637)	(106,632)
Net deferred tax asset	$ 819	$ —

The net change in the valuation allowance for the year ended December 31, 2025, was an increase of $82.0 million. The Company has recorded a full valuation allowance against its federal and state net deferred tax assets due to the uncertainty associated with the utilization of the net operating loss carryforwards and other future deductible items. In assessing the realizability of deferred tax assets, the Company considers all available evidence, historical and prospective, with greater weight given to historical evidence, in determining whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of the Company's deferred tax assets generally is dependent upon generation of future taxable income.

At December 31, 2025, the Company had $372.3 million of net operating losses available to offset future federal income, if any, of which $145.0 million expire on various dates through December 31, 2037. Net operating losses of $227.3 million generated from 2018 through 2025 have an unlimited carryforward.

At December 31, 2025, the Company had $258.0 million of apportioned net operating losses available to offset future state taxable income, if any, and which begin to expire at various dates between 2026 and 2044.

For each of the years ended December 31, 2025, 2024 and 2023, the Company did not have any material unrecognized tax benefits and thus no interest and penalties related to unrecognized tax benefits were recorded.

The Company files a federal income tax return in the United States and income tax returns in various state and foreign jurisdictions. All tax years are open for examination by the taxing authorities for both federal and state purposes.

The Tax Cuts and Jobs Act requires taxpayers to capitalize and amortize research and development (R&D) expenditures under Section 174 of the Internal Revenue Code for tax years beginning after December 31, 2021. R&D costs performed in the United States are amortized over 5 years and over 15 years for R&D performed outside the United States. This rule became effective for the Company during 2022 and resulted in the net capitalization of R&D expenses of $51.4 million as of December 31, 2024. All costs were incurred in the United States.

On July 4, 2025, the One Big Beautiful Bill Act ("OBBBA") was enacted, which allows for immediate deduction of R&D costs performed in the United States. Expenses related to R&D performed outside the United States will continue to be capitalized and amortized over 15 years. This is applicable for tax years beginning after December 31, 2024. OBBBA also provides certain eligible taxpayers with the option to accelerate the deduction of the remaining unamortized domestic R&D costs incurred during taxable years ending after December 31, 2021 and before January 1, 2025 over one or two years or continue to amortize the remaining unamortized cost over the remaining 5 year lives. The Company intends to continue amortizing the domestic R&D costs over the remaining 5 year lives. Previously unamortized Capitalized R&D costs is $37.4 million as of December 31, 2025.

(18) Segment Information

Operating segments are identified as components of an enterprise about which separate, discrete financial information is available for evaluation by the chief operating decision maker in making decisions on how to allocate resources and assess performance. The Company's chief operating decision maker is the Chief Executive Officer. The Company's chief operating decision maker reviews consolidated operating results to make decisions about allocating resources and assessing performance for the entire Company. The Company reports two segments: Thermal Barrier and Energy Industrial. The Company evaluates segment performance based on the segment profit (loss) before corporate expenses.

Summarized below are the Revenue, Cost of Goods Sold, and Segment Operating Profit for each reporting segment:

	Year Ended Revenue December 31			Year Ended Cost of Goods Sold December 31		
	2025	2024	2023	2025	2024	2023
	(In thousands)					
Energy industrial	$ 102,198	$ 145,867	$ 128,639	$ 64,992	$ 87,425	$ 94,477
Thermal barrier	168,905	306,832	110,079	160,113	182,377	87,320
Total	$ 271,103	$ 452,699	$ 238,718	$ 225,105	$ 269,802	$ 181,797

	Year Ended Segment Operating Profit (Loss) December 31		
	2025	2024	2023
	(In thousands)		
Energy industrial	$ 37,206	$ 58,442	$ 34,162
Thermal barrier	8,792	124,455	22,759
Total gross profit	$ 45,998	$ 182,897	$ 56,921
Corporate expenses	97,390	128,362	106,124
Restructuring and demobilization costs	17,510	—	—
Loss on disposal of property, plant and equipment	18,162	—	—
Impairment of property, plant and equipment	291,164	—	—
Operating profit (loss)	(378,228)	54,535	(49,203)
Other (expense) income, net	(8,930)	(39,446)	3,392
Income tax expense	(2,394)	(1,714)	—
Net income (loss)	$ (389,552)	$ 13,375	$ (45,811)

	Year Ended Depreciation Expense December 31,		
	2025	2024	2023
	(In thousands)		
Energy industrial	$ 10,633	$ 11,685	$ 10,720
Thermal barrier	34,524	10,841	4,598
Consolidated depreciation expense	$ 45,157	$ 22,526	$ 15,318

	Total Assets December 31,	
	2025	2024
	(In thousands)	
Energy industrial	$ 93,111	$ 103,453
Thermal barrier	69,550	159,934
Total assets of reportable segments	162,661	263,387
Construction in progress and held for sale	41,970	352,567
All other corporate assets	202,048	279,190
	$ 406,679	$ 895,144

Information about the Company's total revenues, based on shipment destination or services location, is presented in the following table:

	Year Ended December 31,		
	2025	2024	2023
	($ in thousands)		
Revenue:			
U.S.	$ 172,082	$ 258,518	$ 151,037
International	99,021	194,181	87,681
Total	$ 271,103	$ 452,699	$ 238,718

(19) Restructuring and Demobilization Costs

In February 2025, the Company announced and began implementing a restructuring plan to realign the Company's operational focus to improve costs and align capital expenditure to anticipated long-term demand. The plan included reducing the Company's headcount and ceasing construction of the Company's previously planned Statesboro Plant. In connection with the demobilization, the Company is no longer pursuing its application for a loan from the Department of Energy's Loan Programs Office and has withdrawn from the loan application process.

During each of the three months ended June 30, 2025, September 30, 2025 and December 31, 2025, the Company announced further headcount reductions to realign the Company's operation and to improve costs.

As a result of the restructurings and the demobilization, the Company incurred the charges shown in the following table. Property, plant and equipment write-downs are included within impairment expenses in the consolidated statements of operations.

	Year Ended December 31, 2025
	(In thousands)
Severance and other personnel costs	$ 8,270
Demobilization costs	3,067
Deferred financing costs write-off	6,173
Total	$ 17,510

(20) Subsequent Events

The Company has evaluated subsequent events through March 13, 2026, the date of issuance of the consolidated financial statements for the year ended December 31, 2025.

As discussed in Note (5), during the fourth quarter of 2025, a large Thermal Barrier customer notified the Company of its lower forecasted long-term demand requirements and requested the Company submit a claim for certain losses incurred. The Company submitted the claim with the customer in November 2025. On January 27, 2026, the Company accepted a settlement of $37.6 million to cover the Company's claims and expects to receive the funds later in the first quarter of 2026.

Schedule II
VALUATION AND QUALIFYING ACCOUNTS
(in thousands)

Description	Balance at Beginning of Year	Charges to Costs and Expenses (a)	Recoveries of Costs and Expenses (b)	Deductions to Allowances for Uncollectible Accounts (c)	Charges to (Deductions from) Other Accounts (d)	Balance at End of Year
Year Ended December 31, 2025:						
Allowances for uncollectible accounts and sales returns and allowances	$ 1,265	3,538.00	—	—	(631)	$ 4,172
Year Ended December 31, 2024:						
Allowances for uncollectible accounts and sales returns and allowances	$ 230	247	—	—	788	$ 1,265
Year Ended December 31, 2023:						
Allowances for uncollectible accounts and sales returns and allowances	$ 255	(93)	—	—	68	$ 230

(a) Represents allowances for uncollectible accounts established through general and administrative expenses.

(b) Represents recoveries of allowances for uncollectible accounts established through general and administrative expenses.

(c) Represents actual write-offs of uncollectible accounts.

(d) Represents net change in allowances for sales returns, recorded as contra-revenue.

Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

Item 9A. CONTROLS AND PROCEDURES

(a) *Evaluation of Disclosure Controls and Procedures*. We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and is accumulated and communicated to our management, including our principal executive officer and principal financial officer, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

As of December 31, 2025, our management, with the participation of our principal executive officer and principal financial officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act). Our management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on such evaluation, our principal executive officer and principal financial officer have concluded, that, as of December 31, 2025, our disclosure controls and procedures were effective to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and is accumulated and communicated to our management, including our principal executive officer and principal financial officer, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

(b) *Management's Report on Internal Control over Financial Reporting*. The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act, as a process designed by, or under the supervision of, the Company's principal executive and principal financial officers and effected by the Company's Board of Directors, management and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. The Company's internal control over financial reporting includes those policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

The Company's management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2025. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control-Integrated Framework (2013).

Based on our assessment, management believes that, as of December 31, 2025, the Company's internal control over financial reporting is effective based on those criteria.

Our independent registered public accounting firm has issued an attestation report on our assessment of our internal control over financial reporting. This report appears further below in this Item 9A.

(c) *Changes in Internal Controls*. There were no changes in our internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15(d)-15(f) promulgated under the Exchange Act, identified in connection with the evaluation of such internal control that occurred during the fourth quarter of the last fiscal year that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. OTHER INFORMATION

10b5-1 Trading Arrangements

From time to time, our officers (as defined in Rule 16a-1(f) of the Exchange Act) and directors may enter into Rule 10b5-1 or non-Rule 10b5-1 trading arrangements (as each such term is defined in Item 408 of Regulation S-K). During the three months ended December 31, 2025, none of our officers or directors adopted, modified or terminated any such trading arrangements.

Item 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The response to this item will be incorporated by reference from the discussion responsive thereto under the captions "Management and Corporate Governance," "Delinquent Section 16(a) Reports," and "Code of Business Conduct and Ethics" in the Company's Proxy Statement for the 2026 Annual Meeting of Stockholders.

Item 11. EXECUTIVE COMPENSATION

The response to this item will be incorporated by reference from the discussion responsive thereto under the caption "Executive Compensation," "Compensation Discussion and Analysis," "Director Compensation," "Management and Corporate Governance – Compensation Committee Interlocks and Insider Participation," "Compensation Committee Report" and "Risks Related to Compensation Practices and Policies" in the Company's Proxy Statement for the 2026 Annual Meeting of Stockholders. The section titled "Pay Versus Performance" in the Proxy Statement is not incorporated by reference herein.

Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The response to this item will be incorporated by reference from the discussion responsive thereto under the captions "Security Ownership of Certain Beneficial Owners and Management" and "Equity Compensation Plan Information" in the Company's Proxy Statement for the 2026 Annual Meeting of Stockholders.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The response to this item will be incorporated by reference from the discussion responsive thereto under the captions "Certain Relationships and Related Person Transactions" and "Management and Corporate Governance" in the Company's Proxy Statement for the 2026 Annual Meeting of Stockholders.

Item 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The response to this item will be incorporated by reference from the discussion responsive thereto under the caption "Independent Registered Public Accounting Firm" in the Company's Proxy Statement for the 2026 Annual Meeting of Stockholders.

PART IV

Item 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

Item 15(a). The following documents are filed as part of this Annual Report on Form 10-K:

Item 15(a)(1). The following consolidated financial statements of the Company are included in Part II, Item 8 of this Annual Report on Form 10-K:

Report of Independent Registered Public Accounting Firm
Consolidated Balance Sheets as of December 31, 2025 and 2024
Consolidated Statements of Operations for the Years Ended December 31, 2025, 2024, and 2023
Consolidated Statements of Stockholders' Equity for the Years Ended December 31, 2025, 2024 and 2023
Consolidated Statements of Cash Flows for the Years Ended December 31, 2025, 2024 and 2023
Notes to Consolidated Financial Statements

Item 15(a)(2). The following financial statements schedule is included in Part II, Item 8:

Schedule II – Valuation and Qualifying Accounts

All other financial statement schedules have not been included because they are not applicable or the information is included in the financial statements or notes thereto.

Item 15(a)(3). Exhibits:

The following is a list of exhibits filed as part of this Annual Report on Form 10-K.

Exhibit Number	Exhibit Description	Filed with this Report	Incorporated by Reference herein from Form or Schedule	Filing Date	SEC File/Reg. Number
3.1	Restated Certificate of Incorporation of the Registrant, as filed with the Secretary of State of the State of Delaware on June 18, 2014.		Form 8-K (Exhibit 3.2)	6/19/14	001-36481
3.1.1	Certificate of Amendment to Restated Certificate of Incorporation of Aspen Aerogels, Inc., dated June 1, 2023.		Form 8-K (Exhibit 3.1)	6/1/23	001-36481
3.2	Amended and Restated Bylaws of Aspen Aerogels, Inc.		Form 10-K (Exhibit 3.2)	3/7/24	001-36481
4.1	Form of Common Stock Certificate.		Amendment No. 1 to Form S-1 (Exhibit 4.1)	5/14/14	333-195523
4.2	Description of Securities.		Form 10-K (Exhibit 4.3)	3/6/20	001-36481
10.1+	2014 Employee, Director and Consultant Equity Incentive Plan.		Form S-8 (Exhibit 99.10)	8/13/14	333-198124
10.1.1+	Form of Stock Option Agreement Granted under 2014 Employee, Director and Consultant Equity Incentive Plan.		Amendment No. 1 to Form S-1 (Exhibit 10.2.2)	5/14/14	333-195523
10.1.2+	Form of Restricted Stock Unit Agreement for Executive Officers under 2014 Employee, Director and Consultant Equity Incentive Plan.		Form 10-Q (Exhibit 10.3)	11/7/14	001-36481

Exhibit Number	Exhibit Description	Filed with this Report	Incorporated by Reference herein from Form or Schedule	Filing Date	SEC File/Reg. Number
10.1.3+	Form of Restricted Stock Agreement for Directors under 2014 Employee, Director and Consultant Equity Incentive Plan.		Amendment No. 1 to Form S-1 (Exhibit 10.2.3)	5/14/14	333-195523
10.1.4+	Form of Performance-Based Restricted Stock Agreement for Certain Employees under 2014 Employee, Director and Consultant Equity Incentive Plan.		Form 10-Q (Exhibit 10.2)	8/4/22	001-36481
10.2+	Aspen Aerogels 2023 Equity Incentive Plan.		Form 8-K (Exhibit 10.1)	5/1/25	001-36481
10.2.1+	Form of Stock Option Agreement under the Aspen Aerogels 2023 Equity Incentive Plan.		Form 8-K (Exhibit 10.2)	6/1/23	001-36481
10.2.2+	Form of Restricted Stock Unit Agreement for Executive Officers under the Aspen Aerogels 2023 Equity Incentive Plan.		Form 8-K (Exhibit 10.3)	6/1/23	001-36481
10.2.3+	Form of Restricted Stock Agreement for Directors under the Aspen Aerogels 2023 Equity Incentive Plan.		Form 8-K (Exhibit 10.4)	6/1/23	001-36481
10.2.4+	Form of Director Stock Option Agreement under the Aspen Aerogels 2023 Equity Incentive Plan.		Form 8-K (Exhibit 10.5)	6/1/23	001-36481
10.2.5+	Form of Performance Share Unit Agreement under the Aspen Aerogels 2023 Equity Incentive Plan.		Form 8-K (Exhibit 10.1)	3/7/25	001-36481
10.2.6+	Aspen Aerogels Employee Stock Purchase Plan.		Form 8-K (Exhibit 10.2)	5/1/25	001-36481
10.3	Multi-Tenant Industrial Net Lease, dated August 20, 2001, by and between the Registrant and Cabot II — MA1M03, LLC (as successor landlord to TMT290 Industrial Park, Inc.), as amended.		Form S-1 (Exhibit 10.3)	4/28/14	333-195523
10.3.1	First Amendment to Lease, dated December 22, 2021, by and between the Registrant and G&I IX Forbes Whitney, LLC.		Form 10-K (Exhibit 10.14.1)	3/1/22	001-36481
10.4	Loan Agreement, dated November 28, 2022, by and between the Registrant, Aspen Aerogels Georgia LLC, Aspen Aerogels Rhode Island, LLC and General Motors Holdings LLC.		Form 8-K (Exhibit 10.1)	11/29/22	001-36481
10.4.1	First Amendment, dated September 28, 2023, to the Loan Agreement, dated November 28, 2022, by and among the Company, Aspen Aerogels Georgia, LLC, Aspen Aerogels Rhode Island, LLC and General Motors Holdings LLC.		Form 10-Q (Exhibit 10.2)	11/2/23	001-36481
10.5+	Amended and Restated Executive Employment Agreement, dated November 4, 2025, by and between the Company and Gregg Landes.		Form 10-K (Exhibit 10.5)	3/13/26	001-36481
10.5.1+	Executive Employment Agreement, dated January 1, 2023, by and between the Company and Keith Schilling.		Form 10-K (Exhibit 10.18(7))	3/16/23	001-36481
10.5.2+	Amended and Restated Executive Employment Agreement, dated November 4, 2025, by and between the Company and Corby Whitaker.		Form 10-K (Exhibit 10.5.1)	3/13/26	001-36481
10.5.3+	Executive Employment Agreement, dated September 14, 2023, by and between the Company and Santhosh Daniel.		Form 10-Q (Exhibit 10.1)	11/2/23	001-36481

Exhibit Number	Exhibit Description	Filed with this Report	Incorporated by Reference herein from Form or Schedule	Filing Date	SEC File/Reg. Number
10.5.4+	Executive Employment Agreement, effective as of October 1, 2025, by and between the Company and Grant Thoele.		Form 8-K (Exhibit 10.1)	9/11/25	001-36481
10.5.5+	Executive Employment Agreement, effective as of September 22, 2025, by and between the Company and Glenn Deegan.		Form 10-Q (Exhibit 10.2)	11/6/25	001-36481
10.5.6+	Amended and Restated Executive Employment Agreement, dated as of August 30, 2024, by and between the Company and Donald R. Young.		Form 8-K (Exhibit 10.1)	9/3/24	001-36481
10.5.7+	Confidential Separation and Release Agreement, dated October 1, 2025, by and between the Company and Stephanie Pittman.		Form 10-Q (Exhibit 10.3)	11/6/25	001-36481
10.6+	Aspen Aerogels, Inc. Bonus Plan (Amended and Restated Effective as of January 1, 2024).		Form 10-Q (Exhibit 10.3)	11/2/23	001-36481
10.7+	Form of Participation Letter of Executive Officers under Aspen Aerogels, Inc. Bonus Plan.		Form 10-K (Exhibit 10.23)	3/2/17	001-36481
10.8+	Non-Employee Director Compensation Policy.		Form 10-Q (Exhibit 10.1)	8/8/24	001-36481
10.9*	Cross License Agreement, dated as of April 1, 2006, by and between Cabot Corporation and the Company, as amended.		Form S-1 (Exhibit 10.17)	4/28/14	333-195523
10.10+	Form of Indemnification Agreement with Directors and Certain Officers.		Amendment No. 1 to Form S-1 (Exhibit 10.18)	5/14/14	333-195523
10.11	Inducement Agreement, dated as of February 17, 2022, by and among Aspen Aerogels Georgia, LLC, the Development Authority of Bulloch County, the City of Statesboro, and Bulloch County, Georgia.		Form 10-Q (Exhibit 10.1)	5/10/22	001-36481
10.12	PILOT Agreement, dated as of February 17, 2022, by and among Aspen Aerogels Georgia, LLC and the Development Authority of Bulloch County.		Form 10-Q (Exhibit 10.3)	5/10/22	001-36481
10.13	Performance and Accountability Agreement, dated as of February 17, 2022, by and among Aspen Aerogels Georgia, LLC, the Development Authority of Bulloch County, and the Georgia Department of Community Affairs.		Form 10-Q (Exhibit 10.4)	5/10/22	001-36481
10.14	Memorandum of Understanding, dated as of February 17, 2022, by and between Aspen Aerogels Georgia, LLC, the Development Authority of Bulloch County and the Georgia Department of Economic Development.		Form 10-Q (Exhibit 10.2)	5/10/22	001-36481
10.15+	SEIG Award Cancellation Agreement, dated March 6, 2024 (Donald R. Young)		Form 8-K (Exhibit 10.1+)	3/7/24	001-36481
10.16	Form of SEIG Award Cancellation Agreement, dated March 6, 2024 (Other Employees)		Form 8-K (Exhibit 10.2+)	3/7/24	001-36481
10.17**	Supply Agreement, dated February 3, 2021, by and between the registrant and Silbond Corporation.		Form 10-Q (Exhibit 10.1)	5/4/21	001-36481

Exhibit Number	Exhibit Description	Filed with this Report	Incorporated by Reference herein from Form or Schedule	Filing Date	SEC File/Reg. Number
10.18+	Performance-Based Restricted Stock Agreement, dated as of June 29, 2021, by and between the Registrant and Donald R. Young.		Form 10-Q (Exhibit 10.3)	8/4/21	001-36481
10.19†	Credit, Security and Guaranty Agreement, dated as of August 19, 2024, by and among Aspen Aerogels, Inc., Aspen Aerogels Rhode Island, LLC, MidCap Fund IV Trust and MidCap Financial Trust.		Form 8-K (Exhibit 10.2)	8/19/24	001-36481
10.19.1†	Amendment No. 1 and Joinder, dated May 6, 2025, to the Credit, Security and Guaranty Agreement, dated August 19, 2024, by and among Aspen Aerogels, Inc., Aspen Aerogels Rhode Island, LLC, Aspen Aerogels Georgia, LLC, Aspen Aerogels Mexico Holdings, LLC, MidCap Fund IV Trust and MidCap Financial Trust.		Form 10-Q (Exhibit 10.2)	5/8/25	001-36481
10.19.2†	Amendment No. 2, dated December 16, 2025, to the Credit, Security and Guaranty Agreement, dated August 19, 2024, by and among Aspen Aerogels, Inc., Aspen Aerogels Rhode Island, LLC, Aspen Aerogels Mexico Holdings, LLC, Aspen Aerogels Georgia, LLC, MidCap Funding IV Trust and MidCap Financial Trust.		Form 8-K (Exhibit 10.1)	12/18/25	001-36481
14.1	Code of Business Conduct and Ethics.		Form 10-K (Exhibit 14.1)	2/27/25	001-36481
19.1	Insider Trading Policy of Aspen Aerogels, Inc.		Form 10-K (Exhibit 19.1)	2/27/25	001-36481
21.1	Subsidiaries of the Registrant.		Form 10-K (Exhibit 21.1)	3/13/26	001-36481
23.1	Consent of KPMG LLP.	X			
31.1	Certification of principal executive officer under Section 302(a) of the Sarbanes-Oxley Act of 2002.	X			
31.2	Certification of principal financial officer under Section 302(a) of the Sarbanes-Oxley Act of 2002.	X			
32#	Certifications of the principal executive officer and the principal financial officer under Section 906 of the Sarbanes-Oxley Act of 2002.	X			
97	Compensation Recoupment Policy (Amended and Restated Effective June 1, 2023).		Form 10-K (Exhibit 97)	3/7/24	001-36481
101.INS	XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.	X			
101.SCH	Inline XBRL Taxonomy Extension Schema Document.	X			
104	Cover Page Interactive Data File (embedded within the Inline XBRL document).	X			

+ Management contract or compensatory plan or arrangement.

* Confidential treatment has been granted with respect to certain portions of this Exhibit, which portions have been omitted and filed separately with the Securities and Exchange Commission as part of an application for confidential treatment pursuant to the Securities Act of 1933, as amended.

** Certain confidential portions of this Exhibit were omitted by means of marking such portions with brackets (“[***]”) because the identified confidential portions (i) are not material and (ii) would be competitively harmful if publicly disclosed.

† Certain exhibits and schedules have been omitted in accordance with Item 601(a)(5) of Regulation S-K. The registrant agrees to furnish supplementally a copy of any omitted exhibit or schedule to the Securities and Exchange Commission upon its request.

The certification attached as Exhibit 32 that accompanies this Annual Report on Form 10-K is not deemed filed with the SEC and is not to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Annual Report on Form 10-K, irrespective of any general incorporation language contained in such filing.

Item 16. FORM 10-K SUMMARY

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ASPEN AEROGELS, INC.

Date: March 23, 2026

By: /s/ Donald R. Young
Donald R. Young
President and Chief Executive Officer
(principal executive officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities indicated below and on the dates indicated.

Signature	Title	Date
/s/ Donald R. Young Donald R. Young	President, Chief Executive Officer and Director (principal executive officer)	March 13, 2026
/s/ Grant Thoele Grant Thoele	Chief Financial Officer and Treasurer (principal financial officer)	March 13, 2026
/s/ Santhosh P. Daniel Santhosh P. Daniel	Chief Accounting Officer (principal accounting officer)	March 13, 2026
/s/ William P. Noglows William P. Noglows	Chairperson of the Board	March 13, 2026
/s/ James E. Sweetnam James E. Sweetnam	Director	March 13, 2026
/s/ Kathleen M. Kool Kathleen M. Kool	Director	March 13, 2026
/s/ Steven R. Mitchell Steven R. Mitchell	Director	March 13, 2026
/s/ Cari Robinson Cari Robinson	Director	March 13, 2026

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the registration statements (Nos. 333-221403, 333-259449, 333-264672, 333-279072, and 333-282751) on Form S-3 and registration statements (Nos. 333-287098, 333-287096, 333-272346, 333-270615, 333-263124, 333-254247, 333-236955, 333-230165, 333-223380, 333-216434, 333-209995, and 333-198124) on Form S-8 of our report dated March 13, 2026, with respect to the consolidated financial statements of Aspen Aerogels, Inc. and the effectiveness of internal control over financial reporting.

/s/ KPMG LLP

Boston, Massachusetts
March 23, 2026

Exhibit 31.1

CERTIFICATIONS UNDER SECTION 302

I, Donald R. Young, certify that:

1. I have reviewed this annual report on Form 10-K/A of Aspen Aerogels, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 23, 2026

/s/ Donald R. Young
Donald R. Young
President and Chief Executive Officer
(principal executive officer)

Exhibit 31.2

CERTIFICATIONS UNDER SECTION 302

I, Grant Thoele, certify that:

1. I have reviewed this annual report on Form 10-K/A of Aspen Aerogels, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 23, 2026

/s/ Grant Thoele
Grant Thoele
Chief Financial Officer and Treasurer
(principal financial officer)

Exhibit 32

CERTIFICATIONS UNDER SECTION 906

Pursuant to section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of section 1350, chapter 63 of title 18, United States Code), each of the undersigned officers of Aspen Aerogels, Inc., a Delaware corporation (the "Company"), does hereby certify, to such officer's knowledge, that:

The Amendment no.1 to Annual Report for the year ended December 31, 2025 (the "Form 10-K") of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and the information contained in the Form 10-K fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: March 23, 2026

/s/ Donald R. Young
Donald R. Young
President and Chief Executive Officer
(principal executive officer)

Dated: March 23, 2026

/s/ Grant Thoele
Grant Thoele
Chief Financial Officer and Treasurer
(principal financial officer)

Corporate Information

Directors

William P. Noglows, Chairperson
Former President and CEO and Former Chairperson of the Board of CMC Materials, Inc., formerly known as Cabot Microelectronics Corporation

Donald R. Young
President, Chief Executive Officer of Aspen Aerogels, Inc.

Kathleen M. Kool
Former Chief Executive Officer of Tide Cleaners, a wholly owned subsidiary of Procter & Gamble

Steven R. Mitchell
Chief Executive Officer of Argonaut Private Capital L.P.

Cari Robinson
Senior Managing Director of August Strategic Communications

James E. Sweetnam
Former President and CEO, and a member of the board, of Dana Corporation

Executive Officers

Donald R. Young
President and Chief Executive Officer

Glenn E. Deegan
Chief Administrative Officer, General Counsel and Corporate Secretary

Gregg R. Landes
Chief Operating Officer

Grant D. Thoele
Chief Financial Officer and Treasurer

Corby C. Whitaker
Chief Commercial Officer

Stockholders and Stock Listing
Our common stock is traded on the New York Stock Exchange under the symbol ASPN. On March 16, 2026, the closing price of our common stock was $3.39 per share and our common stock was held by 16 stockholders of record.

Investor Information
You may obtain a copy of any of the exhibits to our Annual Report on Form 10-K free of charge. These documents are available on our website at www.aerogel.com or by contacting Investor Relations team at 508-691-1111.

Requests for information about Aspen Aerogels, Inc. should be directed to our Investor Relations team.

Annual Meeting
Our 2026 annual meeting of stockholders will be held at 9:30 a.m. Eastern Time on Wednesday, May 13, 2026, via live audio webcast on the Internet at the following URL: www.virtualshareholdermeeting.com/ASPN2026

Internet Website
www.aerogel.com

Independent Registered Public Accounting Firm
KPMG LLP
Boston, Massachusetts

Transfer Agent and Registrar
Computershare Trust Company, N.A.
Meidinger Tower, 462 S. 4th Street
Louisville, KY 40202

ENABLING A MORE **SUSTAINABLE** FUTURE

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