

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-K

(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, 2024
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 001-39345

QUANTUMSCAPE CORPORATION
(Exact name of registrant as specified in its Charter)

Delaware
(State or Other Jurisdiction of
Incorporation or Organization)
1730 Technology Drive
San Jose, California
(Address of Principal Executive Offices)

85-0796578
(I.R.S. Employer
Identification No.)

95110
(Zip Code)

Registrant's telephone number, including area code: (408) 452-2000

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Class A Common Stock, par value \$0.0001 per share	QS	The New York Stock Exchange

Securities registered pursuant to Section 12(g) of the 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 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, 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	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

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, indicate 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 ☒

As of June 30, 2024, the last day of the registrant's most recently completed second fiscal quarter, the aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant, based on the closing price of the shares of common stock on The New York Stock Exchange, was approximately \$1.8 billion. Shares of common stock held by each executive officer and director and by each person who owns 10% or more of the outstanding common stock have been excluded from the foregoing calculation in that such persons may be deemed affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

The number of shares of the registrant's Class A Common Stock, par value \$0.0001 per share outstanding was 503,667,649, and the number of shares of the registrant's Class B Common Stock, par value \$0.0001 per share outstanding was 43,241,267, as of February 19, 2025.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement relating to its annual meeting of stockholders to be held in 2025, to be filed with the Securities and Exchange Commission within 120 days after the end of the fiscal year to which this Annual Report on Form 10-K relates, are incorporated herein by reference in Part III where indicated. Except with respect to information specifically incorporated by reference in this Annual Report on Form 10-K, such proxy statement is not deemed to be filed as part hereof.

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Unless the context otherwise requires, all references to “QuantumScape,” “we,” “us,” “our,” or the “Company” in this Annual Report on Form 10-K (this “Report”) refer to QuantumScape Corporation and its subsidiaries.

The Company makes forward-looking statements in this Report and in documents incorporated herein by reference. All statements, other than statements of present or historical fact included in or incorporated by reference in this Report, regarding the Company’s future financial performance, the development of the Company’s battery technology, as well as the Company’s strategy, future operations, financial position, estimated revenues and losses, projected costs, prospects, plans and objectives of management are forward-looking statements. When used in this Report, the words “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intends,” “may,” “might,” “plan,” “possible,” “potential,” “predict,” “project,” “prospective,” “should,” “will,” “would,” the negative of such terms, and other similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain such identifying words. These forward-looking statements are based on management’s current expectations, assumptions, hopes, beliefs, intentions and strategies regarding future events and are based on currently available information as to the outcome and timing of future events. The Company cautions you that these forward-looking statements are subject to risks and uncertainties, including those described in Part I, Item 1A, “Risk Factors” in this Annual Report on Form 10-K, most of which are difficult to predict and many of which are beyond the control of the Company and incident to its business. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make.

In addition, forward-looking statements in this Report and in any document incorporated herein by reference should not be relied upon as representing the Company’s views as of any subsequent date, and the Company does not undertake any obligation to update forward-looking statements to reflect events or circumstances after the date they were made, whether as a result of new information, future events or otherwise, except as may be required under applicable laws.

As a result of a number of known and unknown risks and uncertainties, the Company’s actual results or performance may be materially different from those expressed or implied by these forward-looking statements. Some factors that could cause actual results to differ include those discussed in the section titled “Risk Factors” in this Report and in our other filings with the Securities and Exchange Commission (“SEC”).

TECHNICAL GLOSSARY

Throughout this Annual Report on Form 10-K, we use several technical terms which are explained as follows:

A, B and C samples	The designation of progressive prototype maturity during the battery cell development process for automotive qualification by OEMs. Delivery of an A sample marks the beginning of the qualification process. Each successive alphabetic designation (e.g., B, C) represents advancement to the next development stage, while each numerical increment (e.g., B0, B1) signifies progress within that stage. The specifications for each sample designation are determined jointly with the OEM.
Anode	The negative electrode in a battery
Anode-free cells	A battery cell that is manufactured without a host material for the anode or excess lithium
Battery cycle life	The number of times a battery can be charged and discharged until its capacity is significantly reduced (e.g. to 70% or 80% of the initial capacity)
Capacity (battery)	The amount of energy a battery can store. May be measured in amp-hours (Ah)
Cathode	The positive electrode in a battery
Catholyte	The lithium-ion conductor in the cathode compartment of a battery
Dendrites	Growths of lithium metal that can pass through a separator and short circuit the cell
EV	Electric vehicle
Energy density	The amount of energy stored in a battery per unit volume (volumetric energy density which may be measured in Wh/L) or unit mass (specific energy, also known as gravimetric energy density which may be measured in Wh/kg)
ICE	Internal combustion engines
LFP	Lithium-iron-phosphate, a cathode active material
Lithium-ion battery	A conventional battery which uses liquid electrolyte to transport lithium ions between the cathode and anode to charge and discharge the battery
Lithium-metal battery	Advanced battery technology that uses lithium metal as the anode
NMC	Nickel-manganese-cobalt, a cathode active material
OEM(s)	Original Equipment Manufacturer(s), which in the context of this Annual Report on Form 10-K, are companies that design, produce and sell vehicles under their own brand names
Power (battery)	The rate at which a battery can be discharged or charged
QSE-5	Our first planned product, a ~5 Amp hour solid-state lithium-metal battery cell
QSE-5 Technology	The solid-state lithium-metal battery technology we intend to use in QSE-5
Separator	A material in between the cathode and anode that prevents physical contact between the positive and negative electrodes. Our cell design includes a separator that consists of an inorganic solid ceramic film that has characteristics of both a separator and an electrolyte, and we sometimes refer to it as “electrolyte-separator”.
Solid-state battery	Next-generation battery technology that comprises a solid separator

PART I

Item 1. Business.

Overview

QuantumScape is a leader in developing next-generation solid-state lithium-metal battery technology for electric vehicles (“EVs”) and other applications. QuantumScape Battery Inc. was founded in 2010 with the mission to revolutionize energy storage to enable a sustainable future.

We are at the beginning of a forecasted once-in-a-century shift in automotive powertrains, from internal combustion engines (“ICE”) to clean EVs. After 30 years of gradual improvements in conventional lithium-ion batteries, the benefits of EVs have been demonstrated, principally in the premium passenger car market. However, there are fundamental limitations inhibiting widespread adoption of battery technology, and we believe the automotive market needs a step change in battery technology to make mass market EVs competitive with the fossil fuel alternative.

We have spent over a decade developing a proprietary solid-state battery technology to meet this challenge. QuantumScape’s solid-state lithium-metal battery technology is designed to offer greater energy density, faster charging, and enhanced safety when compared to today’s conventional lithium-ion batteries. We believe no other lithium-metal battery technology has demonstrated the capability of achieving automotive rates of power (power is the rate at which a battery can be charged and discharged) with acceptable battery cycle life at modest levels of pressure (approximately 3 to 4 atmospheres (“atm”).

Since 2012, we have developed a strong partnership with Volkswagen Group of America Investments, LLC (“VGA”) and certain of its affiliates (together with VGA, “Volkswagen”). Volkswagen is one of the largest car companies in the world and intends to be a leader in EVs. Over the last ten years Volkswagen has invested approximately \$380 million in us. Over the course of our relationship, Volkswagen has successfully tested multiple generations of certain of our single-layer and multilayer prototype cells at automotive rates of power. In July 2024, we entered into a Collaboration Agreement (the “PowerCo Collaboration Agreement”) with PowerCo SE (“PowerCo”), a battery cell company wholly owned by Volkswagen, with the goal of industrializing the solid-state lithium-metal battery technology we intend to use in our first planned product—the QSE-5 (the “QSE-5 Technology”)—and concurrently entered into a Joint Venture Termination and Release Agreement (the “JV Termination Agreement”) and terminated the Joint Venture Agreement (as amended, the “JVA”) that VWGoA, VGA and QuantumScape originally executed in 2018.

While we signed an agreement with PowerCo with the goal of commercializing our battery technology, we intend to continue working closely with automotive Original Equipment Manufacturers (“OEMs”) to make our solid-state battery cells widely available over time. In addition, we have signed customer sampling agreements with a number of OEMs, ranging from leading manufacturers by global revenue to premium performance and luxury carmakers, to collaborate with us in the testing and validating of our solid-state battery cells with the goal to include such cells into pre-production prototype vehicles and ultimately into serial production vehicles. We are currently focused on automotive EV applications, which have among the most stringent sets of requirements for batteries. However, we recognize that our solid-state battery technology has applicability in other large and growing markets, including stationary storage and consumer electronics, and intend to explore opportunities in those areas as appropriate.

We are focusing on a technology licensing business model. Nevertheless, we believe that our technology may be utilized under a variety of business models and presents opportunities with a variety of potential customers, such as automotive OEMs, end-users, and licensees, as applicable. In addition to the collaboration with PowerCo, which contemplates a licensing arrangement, we may operate solely-owned manufacturing facilities, license technology to other manufacturers, or enter into joint venture arrangements, among other approaches. We intend to continue to invest in research and development to improve battery cell performance, improve manufacturing processes, and reduce cost.

Industry Background

Shift to EVs

We believe that evolving consumer preferences coupled with relevant government incentives and regulations are driving a once-in-a-century shift to EVs.

Countries around the world are promoting EVs. The dependence on gasoline-powered “ICE” vehicles has heightened environmental concerns, created reliance among industrialized and developing nations on large oil imports, and exposed consumers to unstable fuel prices and health concerns related to heightened emissions. Many national and regional regulatory bodies have adopted legislation to incentivize or require a shift to lower-emission and zero-emission vehicles. For example, over a dozen countries including the United Kingdom, the Netherlands, Sweden, Germany, France and Norway have announced intentions to either increase applicable environmental targets or outright ban the sale of new ICE vehicles in the next two decades. In 2023, the European Union approved a ban on the sale of new petrol and diesel cars beginning in 2035, other than ICE vehicles operating on carbon-neutral fuels.

Furthermore, consumers are increasingly considering EVs for a variety of reasons including better performance, growing EV charging infrastructure, significantly lighter environmental impact, and lower maintenance and operating costs. Automakers such as Tesla, Inc. have demonstrated that premium EVs can deliver a compelling alternative to fossil fuels. As EVs become more competitive and more affordable, we believe that they will continue to take market share from ICE vehicles. We believe that this shift will occur across vehicle types and market segments. However, the inherent limitations of lithium-ion battery technology continue to impede improvements in EV competitiveness on range and charging times compared with ICE vehicles.

Current Battery Technology Will Not Meet the Requirements for Broad Adoption of EVs

Despite the significant progress in the global shift to EVs, in the U.S. the market remains dominated by ICE vehicles. According to Bloomberg, approximately 17% of global car sales in 2023 were electric including plug-in hybrids. For EVs to be adopted globally at scale across market segments, batteries need to improve. In particular, we believe there are five key requirements to drive broad adoption of EVs:

- **Battery capacity (energy density).** EVs need to be able to drive over 300 miles on a single charge to be competitive with ICE vehicles and achieve broad market adoption. The space required for conventional lithium-ion battery technology limits the range of many EVs. Higher energy density will enable automotive OEMs to increase battery pack energy without increasing the size and weight of the vehicle’s battery pack.
- **Fast charging capability.** EV batteries need to be fast charging to replicate the speed and ease with which a gasoline car can be refueled. We believe this objective is achieved with the ability to charge from 10% to 80% capacity in approximately 15 minutes or less, faster than today’s conventional batteries can deliver without materially degrading battery cycle life.
- **Safety (nonflammable).** EV batteries need to replace as many of the flammable components in the battery as possible with non-flammable equivalents to reduce the extent of damage caused by a fire. With current batteries, many failure conditions can result in fires, for example malfunctions that can result in short-circuits and battery damage from accidents.
- **Battery cycle life.** Batteries need to be usable for the life of the vehicle, typically 12 years or 150,000 miles. If the battery fades prematurely, EVs will not be an economically practical alternative.
- **Cost.** Mass market adoption of EVs requires a battery that is capable of high performance while remaining cost competitive.

Since these requirements have complex interlinkages, most manufacturers of conventional lithium-ion batteries used in today’s cars are forced to make trade-offs. For example, conventional batteries can be fast charged, but at the cost of adversely impacting their battery cycle life.

We believe that a battery technology that can meet these requirements will enable an EV solution that is much more broadly competitive with ICE vehicles. According to the Organisation Internationale des Constructeurs d’Automobiles, approximately 93 million vehicles were produced in 2023 across the auto industry, representing a significant untapped demand for a battery that meets these requirements.

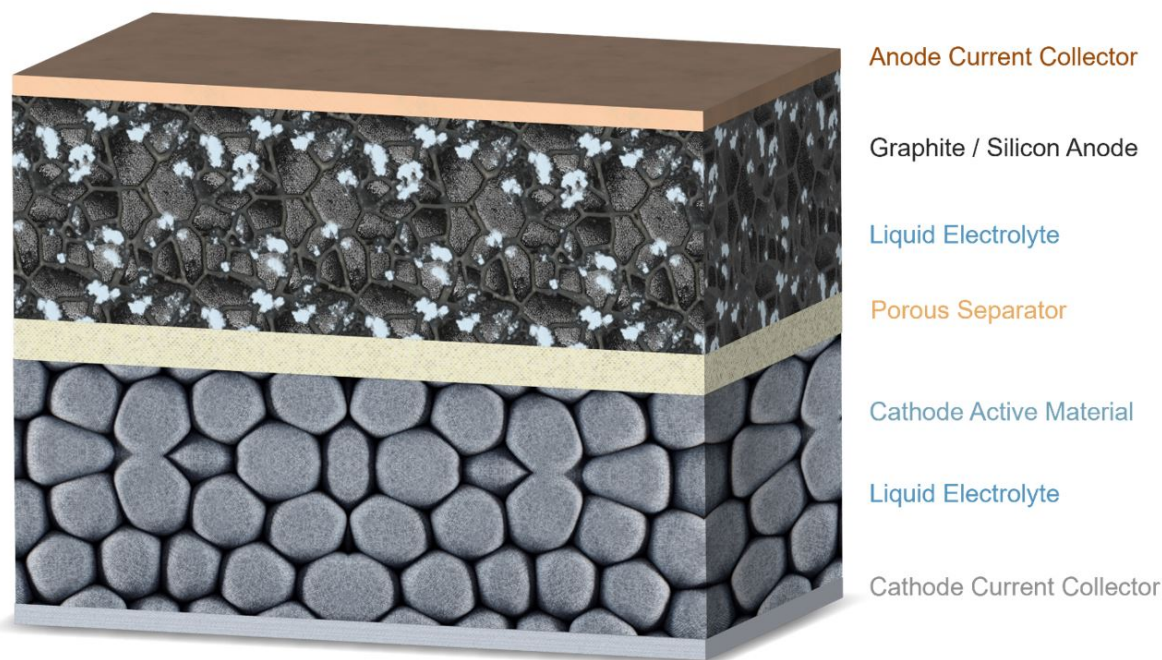
Limitations of Conventional Lithium-ion Battery Technologies

The last significant development in battery technology was the commercialization of lithium-ion batteries in the early 1990s which created a new class of batteries with higher energy density. Lithium-ion batteries have enabled a new generation of mobile electronics, efficient renewable energy storage, and the start of the transition to electrified mobility.

Since the 1990s, conventional lithium-ion batteries have gradually improved in energy density. Most increases in energy density have come from improved cell design and incremental improvements in cathode and anode technology. However, there is no Moore’s law in batteries—it has taken conventional lithium-ion batteries at least 10 years to double in energy density and it has been approximately 30 years since the introduction of a major new high-energy chemistry. As the industry approaches the theoretical limit of achievable energy density for lithium-ion batteries, we believe a new architecture is required to deliver meaningful gains in energy density.

Batteries have a cathode (the positive electrode), an anode (the negative electrode), a separator that prevents contact between the anode and cathode, and an electrolyte that transports ions but not electrons. A conventional lithium-ion battery (as shown in the figure below) uses a liquid electrolyte, a polymer separator, and an anode made principally of carbon (graphite) or a carbon/silicon composite. Lithium ions move from the cathode to the anode when the battery is charged and vice versa during discharge.

Conventional Lithium-Ion Battery Architecture



In a fully discharged lithium-ion cell, the lithium in the cell resides in the cathode. When the cell is charged, lithium ions move from the cathode to the anode, where they diffuse into the carbon particles that make up the anode. In the fully charged state, the lithium ions sit in the anode. When the battery is discharged, these lithium ions are allowed to move back from the anode to the cathode, and in the process, energy can be extracted from the system.

One limit to the energy density of conventional lithium-ion batteries is imposed by the anode, which provides a host material made of carbon (graphite) and/or silicon to hold the lithium ions, preventing them from binding together into pure metallic lithium. Metallic lithium, when used with conventional liquid electrolytes and porous separators, can form growths of lithium known as dendrites, which can penetrate through the separator and short-circuit the cell.

While using a host material in the anode is an effective way to prevent dendrites, this host material adds volume and mass to the cell, adds cost to the battery, and limits the battery cycle life due to side reactions at the interface with the liquid electrolyte. The rate at which lithium diffuses through the anode also limits the maximum cell power.

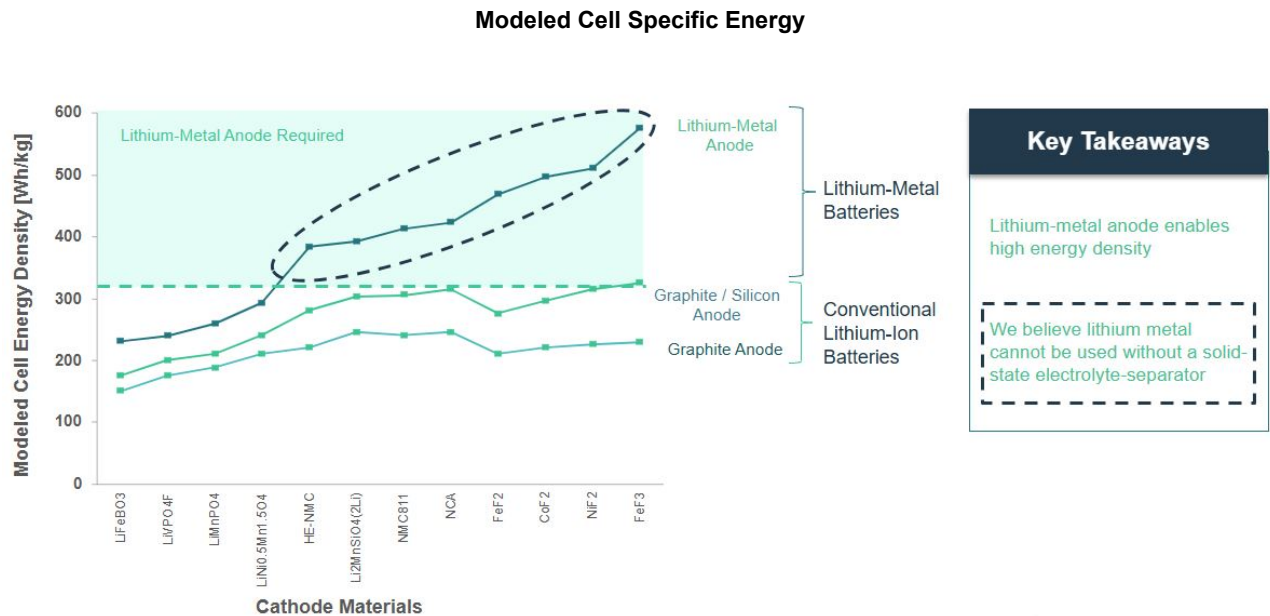
The addition of silicon to a carbon anode provides a boost to energy density relative to a pure carbon anode. However, silicon is a host material that not only suffers from the limitations of carbon as discussed above, but also introduces cycle life challenges as a result of the repeated expansion and contraction of the silicon particles, since silicon undergoes significantly more expansion than carbon when hosting lithium ions. Furthermore, the voltage of the lithium-silicon reaction subtracts from the overall cell voltage, reducing cell energy.

Lithium-Metal Anode Required to Unlock Highest Energy Density

We believe that an anode-free lithium-metal cell is the most promising approach that can break out of the constraints inherent in conventional lithium-ion batteries and enable significant improvements in energy density.

Our battery cells have none of the host materials used in conventional anodes. Our cells are “anode-free” in that they are manufactured without anodes in a discharged state. When the cell is first charged, lithium moves out of the cathode, diffuses through our solid-state electrolyte-separator and plates in a thin metallic layer directly on the anode current collector, forming an anode. When the battery cell is discharged, the lithium diffuses back into the cathode. Eliminating the host material reduces the size and weight of the battery cell and eliminates the associated materials and manufacturing costs. This results in the highest theoretical gravimetric energy density for a lithium-based battery system if the system can be manufactured without excess lithium on the anode.

Lithium-metal anodes are generally compatible with conventional cathode materials, and lithium-metal batteries will derive some benefit from continued improvement in conventional cathode materials. Moreover, lithium-metal anodes may enable future generations of higher energy cathodes, such as the metal fluorides, that may not achieve significant energy density gains when used with lithium-ion anodes, as shown in the figure below.



Source : Andre et al, J Mater Chem A. (2015) 6709
Note: Modeled cell specific energy is based on traditional cell designs and architectures

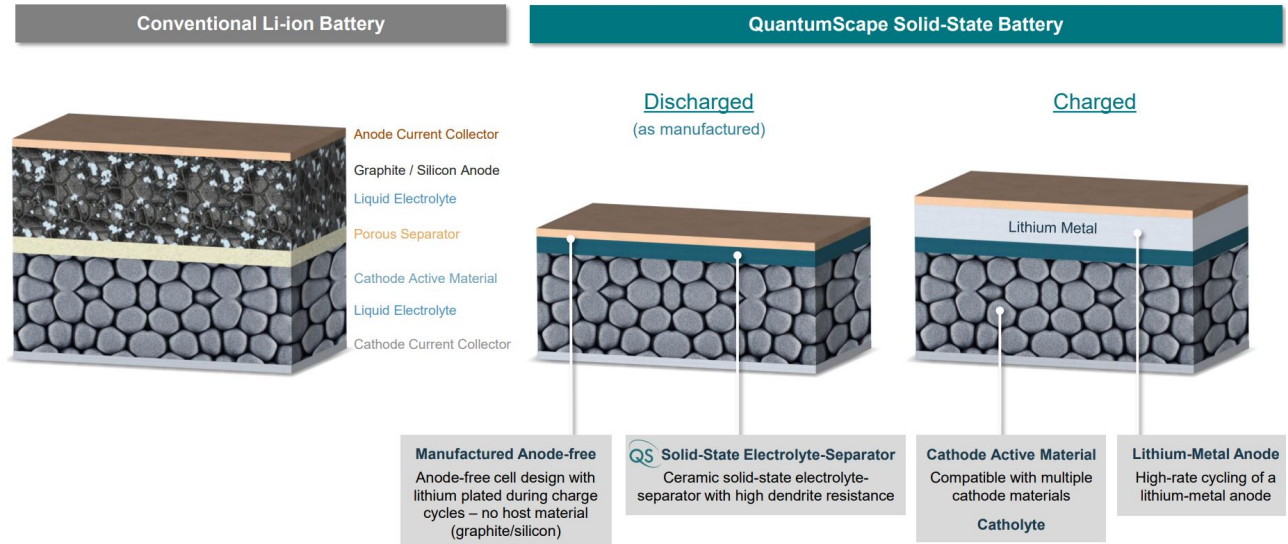
Although the industry has understood for over 40 years the potential benefits of lithium-metal anodes, the industry has not been able to develop a separator that makes a lithium-metal anode practical for rechargeable applications.

Solid-State Electrolyte-Separator Required to Enable Lithium-Metal Anode

We believe that a lithium-metal battery requires that the porous separators used in conventional lithium-ion batteries be replaced with a solid-state electrolyte-separator capable of conducting lithium ions between the cathode and anode at rates comparable to conventional liquid electrolyte while also suppressing the formation of lithium dendrites, which are growths of lithium metal which can grow across the separator and short-circuit the cell. While various solid-state separators have been shown to operate at low power densities, such low power densities are not useful for most practical applications. To our best knowledge, we are the only company that has been able to demonstrate a solid-state separator for lithium-metal batteries capable of resisting dendrite formation at higher power densities such as those required for automotive applications, and fast charging, for at least 800 cycles at around 25 °C.

We believe that our ability to develop this proprietary solid-state electrolyte-separator will enable the shift from lithium-ion to lithium-metal batteries.

Our Technology



Our proprietary solid-state lithium-metal cell represents the next-generation of battery technology.

Eliminating the anode host material found in conventional lithium-ion cells increases the volumetric energy density. A pure lithium-metal anode also enables the theoretically highest gravimetric energy density for a lithium battery system, if the system can be manufactured without excess lithium on the anode.

Our cell design includes an inorganic solid ceramic film that has characteristics of both a separator and an electrolyte. This ceramic solid-state electrolyte-separator is our core technology breakthrough that enables reliable cycling of the lithium-metal anode battery. A working solid-state electrolyte-separator is needed to prevent the formation of dendrites that would normally grow through a traditional porous separator and short circuit the cell. An effective solid-state electrolyte-separator requires a solid material that has ionic conductivity in a range similar to liquid electrolytes, chemically stable next to lithium — one of the most reactive elements in the periodic table — and able to resist the formation of dendrites. Our team has worked over ten years to develop a composition that meets these requirements and to develop techniques necessary to manufacture the electrolyte-separator material at scale using a continuous process. We have a number of patents covering both the composition of this material and key steps of its manufacturing process. While current generations of our prototype battery cells contain our proprietary solid-state electrolyte-separator and an organic liquid cathode electrolyte (i.e. catholyte), solid catholyte materials are part of our ongoing research and development investigations.

Our Cells and Separator



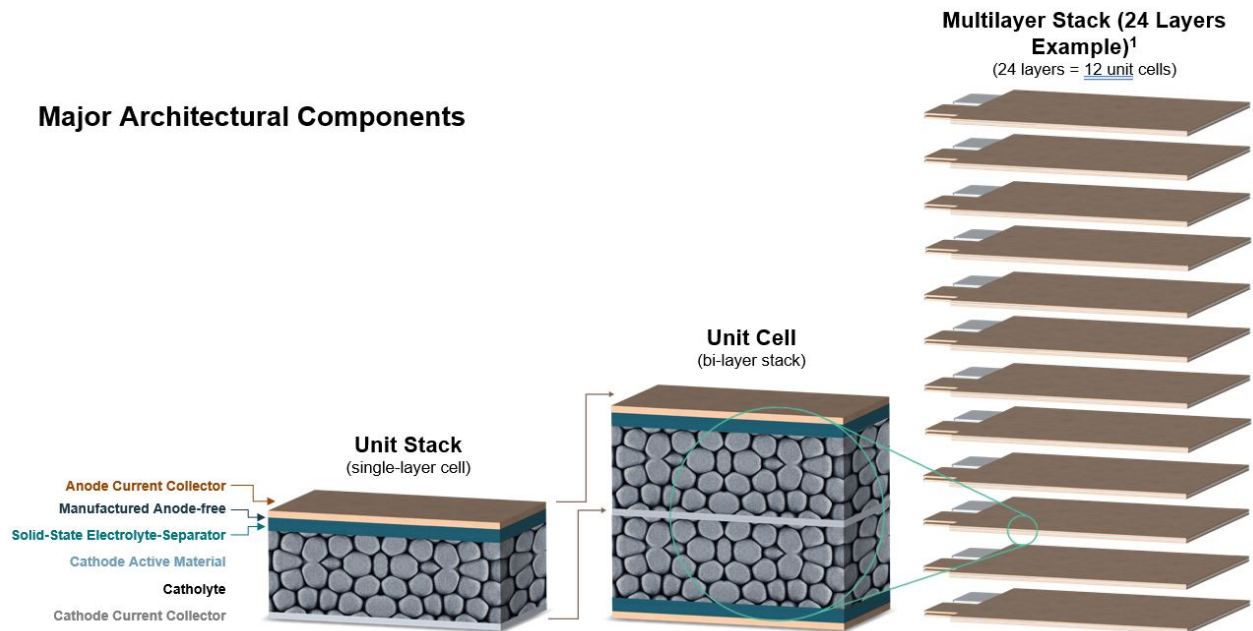
Note: Cell dimensions: approximately 85mm x 66mm x 5mm

All references to our “separator,” “electrolyte-separator,” “solid-state separator,” “solid-state electrolyte-separator,” in this Report refer to our proprietary solid-state electrolyte-separator.

Our solid-state electrolyte-separator is a dense, entirely inorganic ceramic. As shown in the figure above, it is made into a film that is thinner than a human hair and then cut into pieces. Our separator is flexible because it has a low defect density and is thin. In contrast, typical household ceramics are less flexible and can break due to defects which can reduce structural integrity.

The basic building block of our designed battery package is the unit cell, consisting of a double-sided cathode with a solid-state electrolyte-separator on either side. We stack these unit cells together to form multilayer cells. We first demonstrate new functionality using these unit cells.

Major Architectural Components



(1) For illustrative purposes only. Designs vary based on customer specifications.

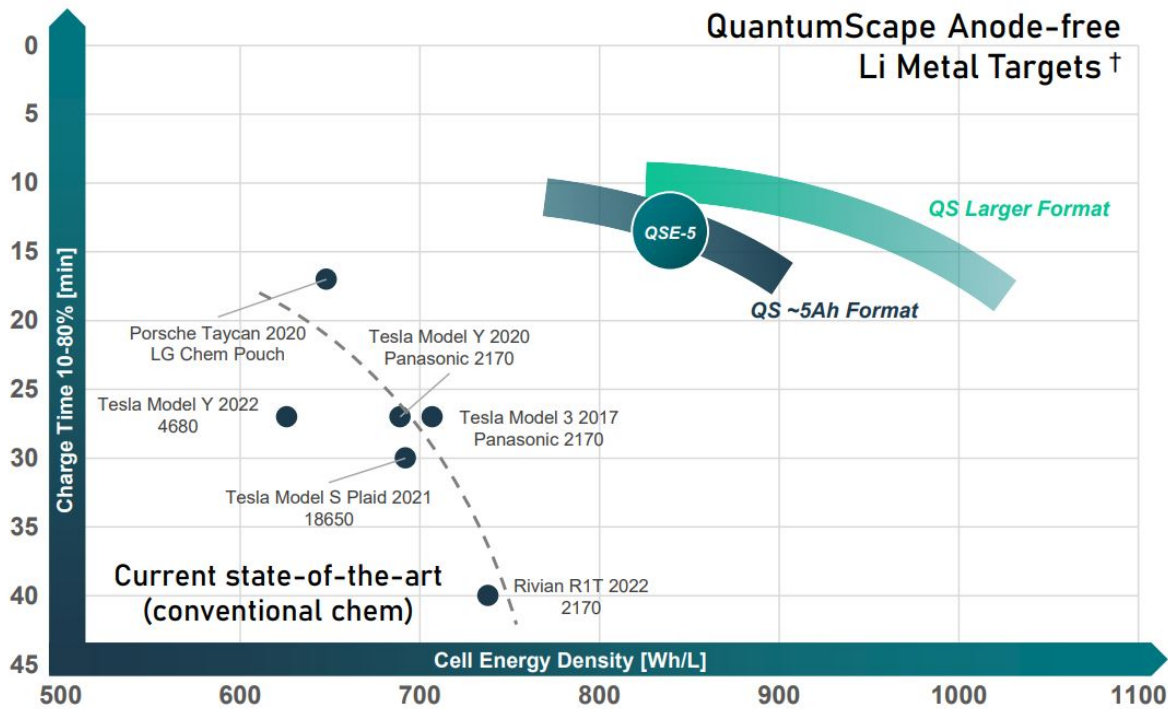
In 2022, we shipped A0 prototype battery cells to multiple automotive OEMs for testing. In 2024, we began producing low volumes of our first B-sample cells, and we began shipping these cells for automotive customer testing. These are B-samples of our first product, QSE-5 a ~5 amp-hour cell with measured performance of over 800 Wh/L, and < 15 minute fast charge from 10% to 80% of capacity. However, our potential customers may require the development of cells with different capacity, layer count or dimensions.

As we move from prototypes to commercial products, we will need to continue improving the quality and consistency of materials and processes for higher volume manufacturing. We need more production capacity to make the large number of multilayer cells needed for testing and for process optimization, including yield improvement and reliability. We have been designing and procuring new automation and higher-volume pre-pilot equipment that we expect will increase both output and reliability.

Our cathodes use a combination of conventional cathode active materials such as nickel-manganese-cobalt (“NMC”) or a cobalt-free, nickel-free composition like lithium-iron-phosphate (“LFP”) with a catholyte made of an organic liquid. In the future, we may use other compositions of cathode active materials. Over the years, we have developed catholytes made of differing mixtures of organic liquid electrolyte to optimize performance across multiple metrics such as voltage, temperature, power, and safety, among others. We continue to test solid, gel and liquid catholytes from time to time in our cells. The solid catholyte is part of our ongoing research and development investigation into inorganic catholytes. Our separator platform is being designed to enable faster charge rates for thicker cathode electrodes, which, when combined with a lithium-metal anode, may further increase cell energy densities.

We have developed a new cell format that combines features of a conventional pouch cell and a prismatic cell to address the challenges of lithium-metal expansion. This cell architecture is designed to accommodate expansion as the cell charges and the anodes of each layer are plated with lithium metal, and conversely, the contraction as the cell discharges. Additionally, the format is designed to allow the cell to simultaneously dissipate excess heat during fast charging, function with or without externally applied pressure, enable high-volume manufacturing and pack integration, and offer good packaging efficiency to achieve our cell-level energy density targets.

We believe our battery technology may provide significant improvements in energy density compared to today’s conventional lithium-ion batteries, as shown in the figure below.



† QS projections and targets based on existing estimates and model assumptions Sources: Li-ion cell energy density from batemo.com database, charge times from ev-database.org and insideevs.com (for Rivian R1T)

Benefits of Our Technology

We believe our battery technology will enable significant benefits across battery capacity, charging rate, safety, and cycle life while minimizing cost. We believe these benefits will provide significant value to automotive OEMs by enabling greater customer adoption of their EVs. By solving key pain-points such as 15-minute fast charging from 10% to 80% of capacity, we believe our battery technology will enable the delivery of an EV experience that is significantly more competitive with fossil fuel vehicles than what today's EVs can achieve with conventional lithium-ion batteries.

Our battery technology is intended to meet the five key requirements we believe will enable mass market adoption of EVs:

- ***Energy density.*** Our battery design is intended to increase volumetric and gravimetric energy density by eliminating the carbon/silicon anode host material found in conventional lithium-ion cells. This increased energy density will enable EV manufacturers to increase range without increasing the size and weight of the battery pack, or to reduce the size and weight of the battery pack which will reduce the cost of the battery pack and other parts of the vehicle.
- ***Fast charging capability.*** Our battery technology containing our solid-state separator material has been tested to demonstrate the ability to charge from 10% to 80% capacity in approximately 15 minutes or less, which is generally faster than today's conventional batteries can deliver without materially degrading battery cycle life. In these conventional batteries, the limiting factor for charge rate is the rate of diffusion of lithium ions into the anode. If a conventional battery is charged at high rate, especially at high state-of-charge or low temperature, lithium can start plating on carbon particles of the anode rather than diffuse into the carbon particles. This causes a reaction between the plated lithium and liquid electrolyte which reduces cell capacity and increases the risk of dendrites that can short circuit the cell. With a lithium-metal anode, using our solid-state separator, we expect the lithium to be plated as fast as the cathode can deliver it. Nonetheless, repeated fast-charging of battery cells may result in cycle life degradation, as is the case in conventional lithium-ion batteries.
- ***Enhanced safety.*** Our solid-state battery cell uses a ceramic separator which is not combustible and we believe is therefore safer than conventional polymer separators. This ceramic separator is also capable of withstanding temperatures considerably higher than those that would melt conventional polymer separators, providing an additional measure of safety. Although additional safety tests need to be performed as our materials and processes evolve, in 2023 we ran a suite of safety tests on a limited number of our A0 prototype cells, including nail penetration, overcharge, external short circuit, and thermal stability testing up to 300°C (higher than the 180°C melting point of lithium). The A0 prototype cells successfully passed these automotive safety tests according to the specification set by a leading OEM, with hazard levels of 3 or lower as defined by EUCAR and SAE J2464 standards. One noteworthy result from prototype cell testing was demonstrating thermal stability up to 300°C; for reference, we tested conventional high-energy lithium-ion cells, which burst into flames between 174°C and 185°C. In 2024, we again performed nail penetration, overcharge, external short circuit, and thermal stability testing up to 300°C and our B0 samples passed these tests with hazard levels of 3 or lower as defined by EUCAR and SAE J2464 standards. Notwithstanding the foregoing, we note that although the A0 and B0 prototype cells have passed these automotive safety tests performed in our laboratories, we have been able to test these cells to the point of failure under additional modified test conditions. Moreover, these safety test results for the A0 and B0 prototype cells are not necessarily representative of those of subsequent generations of our cells since safety is a function of a cell's materials composition, which changes from one generation of cells to the another. We will continue safety testing under different conditions, including on aged cells. We also need to test a much larger sampling of cells to ensure statistical significance.
- ***Battery cycle life.*** We are designing our technology to enable increased battery cycle life relative to conventional lithium-ion batteries. In a conventional cell, a reason that battery capacity fades over time is the gradual irreversible loss of lithium due to side reactions between the liquid electrolyte and the anode. By eliminating the anode host material, we expect to eliminate those anode side reactions to enable longer battery cycle life. Our top-performing A0 prototype cell in one prospective customer's battery testing labs achieved over 1,000 full cycle equivalents with over 95% discharge energy retention, using customer-specified test conditions of C/3 charge and C/2 discharge with our standard temperature and pressure conditions, and 100% depth of discharge. This performance exceeds the cycle life and capacity retention in battery warranties for some of the best-selling EVs in the U.S. market today, which require that cells retain at least 70% of the rated capacity for 150,000 miles.
- ***Cost.*** Our battery technology eliminates the anode host material and the associated manufacturing costs, providing a structural cost advantage compared to traditional lithium-ion batteries. When comparing manufacturing facilities of similar scale and upon achieving process maturity, we estimate that eliminating these costs has the potential to provide cost savings compared to the costs of building traditional lithium-ion batteries.

Our Competitive Strengths

Only lithium-metal battery technology showing capability to meet automotive requirements for power, cycle life, and temperature range to our knowledge. We have built and tested single-layer and multilayer solid-state cells and have demonstrated that our technology shows the capability to meet automotive requirements for power, cycle life, temperature range, and safety. Since 2018 Volkswagen has tested multiple generations of our prototype cells, including single-layer and multilayer prototype cells. In 2024, Volkswagen announced it had successfully tested our A0 prototype cells at automotive rates of power, noting that the A0 prototype cell was also able to meet the requirements for other test criteria such as fast charging capability, safety and self-discharge. While we signed an agreement with PowerCo with the goal of commercializing our battery technology, we intend to continue working closely with automotive OEMs to make our solid-state battery cells widely available over time. In addition, we have signed customer sampling agreements with a number of OEMs, ranging from leading manufacturers by global revenue to premium performance and luxury carmakers, to collaborate with us in the testing and validating of our solid-state battery cells with the goal to include such cells into pre-production prototype vehicles and ultimately into serial production vehicles.

Partnership with one of the world's largest automotive OEMs. We are partnered with Volkswagen, one of the largest automakers in the world. Volkswagen has been a major investor since 2012 and has invested approximately \$380 million in us. In addition, in July 2024, we entered into the PowerCo Collaboration Agreement, a battery cell company wholly owned by the Volkswagen Group, with the goal of industrializing the solid-state lithium-metal battery technology we intend to use in our first planned product—the QSE-5.

High barriers to entry and extensive patent and intellectual property portfolio. As of December 31, 2024, we owned, or licensed on an exclusive basis, approximately 350 U.S. and foreign patents and patent applications – including broad fundamental patents around our core technology. Our proprietary solid-state separator uses the only material we know of that can cycle lithium at automotive-level current densities and room temperature without forming dendrites. We have a range of patents, including patents that cover:

- Material compositions, including the optimal compositions as well as wide-ranging coverage of a number of variations for the separator and other battery components;
- Enabling battery technology and methods required to incorporate a separator into a battery;
- Manufacturing technology, protecting the way to make the separator at scale without semiconductor-style vacuum production or batch processes used in traditional ceramics; and
- Material dimensions, including our proprietary separator, covering any separator with commercially practical thicknesses for a solid-state battery.

Significant development focused on next-gen technology for automotive applications. We have spent over a decade developing our battery technology. Many of our technical team members have worked at large battery manufacturers and automotive OEMs. Through its experience, our team has significant technical know-how and is supported by extensive facilities and equipment, development infrastructure, and data analytics.

Designed for volume production. Our battery cells are designed to use earth-abundant materials and processes suitable for higher volume production. Our earlier-generation manufacturing process for our proprietary solid-state separator used equipment that was already available at scale in the battery or ceramics industries. We are developing subsequent, proprietary higher-volume separator manufacturing processes that seek to further reduce cost, increase throughput, and improve quality. While preparing for scale production, we have purchased or tested production-intent equipment from the world's leading vendors. In particular, we expect to produce our proprietary solid-state separator using scalable continuous-flow heat treatment to process separator films more rapidly while applying less total heat energy per film. Although our separator material is proprietary, the inputs are readily available and can be sourced from multiple suppliers across different geographies.

Structural cost advantage leveraging industry cost trends. Aside from the solid-state separator, our battery is being designed to use many generally available materials and processes that are standard across today's battery manufacturers. As a result, we expect to benefit from the projected industry-wide cost declines for these materials that result from process improvements and economies of scale. We believe that the manufacturing of our solid-state battery cells at scale provides us with a structural cost advantage because our battery cells are manufactured without an anode.

Our Growth Strategy

Continue to develop our commercial battery technology and manufacturing capabilities. We will continue developing our battery technology with the goal of enabling commercial production subsequent to the automotive qualification process, which generally involves several major delivery milestones of A, B and C samples. We have demonstrated capabilities of our solid-state separator and battery technology in single-layer and multilayer cell cycling data. In 2022, we shipped our first A0 prototype battery cells to multiple OEMs for testing. In 2024, we shipped B0 samples of our first commercial product, the QSE-5. As we move from prototypes to commercial products, we will need to continue improving the quality and consistency of materials and processes for higher volume manufacturing, including increased precision through automation and process control, quality of material inputs, and particle reduction across our process flow. We will continue to work to further develop and validate the volume manufacturing processes to enable higher volume manufacturing by us or our licensing partners and minimize manufacturing costs. We will continue to work on increasing the yield of our solid-state separator to reduce scrappage and to increase utilization of manufacturing equipment.

Expand relationships with other automotive OEMs. While we expect Volkswagen will be the first to commercialize vehicles using our battery technology, we are, and over the next few years intend to continue, working closely with other automotive OEMs to make our solid-state battery cells widely available over time. Subject to the terms of the PowerCo Collaboration Agreement, we are not prohibited from working in parallel with other automotive OEMs or other non-automotive companies to commercialize our technology. We have signed customer sampling agreements with a number of OEMs, ranging from leading manufacturers by global revenue to premium performance and luxury carmakers, to collaborate with us in the testing and validation of our solid-state battery cells with the goal to include such cells into pre-production prototype vehicles and ultimately into serial production vehicles.

Expand target markets. We are currently focused on automotive EV applications, which have the most stringent set of requirements for batteries. However, we recognize that our solid-state battery technology has applicability in other large and growing markets including stationary storage and consumer electronics such as smartphones and wearables. For example, we have signed agreements with companies to evaluate our batteries for inclusion in their stationary energy storage and consumer electronics applications.

Expand commercialization models. Our technology is being designed to enable a variety of business models. In addition to collaboration with PowerCo, which contemplates a licensing arrangement, we may operate solely-owned manufacturing facilities, license technology to other manufacturers, or enter into joint venture arrangements, among other approaches. We intend to continue to invest in research and development to improve battery cells performance, improve manufacturing process and reduce cost. Where appropriate, we may build and sell solid-state separators or cell layers rather than complete battery cells.

Manufacturing Process Development

We are building a battery development pilot line at our facilities in San Jose, California to provide a sufficient quantity of separators and cells for internal development, customer sampling, and higher volumes of QSE-5 cells. Our pilot line is intended to consist of a continuous flow, automated line with sufficient capacity and process maturity to engage in automotive qualification. Ultimately, our pilot line is intended to serve as the basis for continued manufacturing process development for the subsequent scale up of our manufacturing capabilities, including to support collaboration and future technology transfer activities as part of the collaboration and licensing arrangements with PowerCo as well as potential future commercial arrangements.

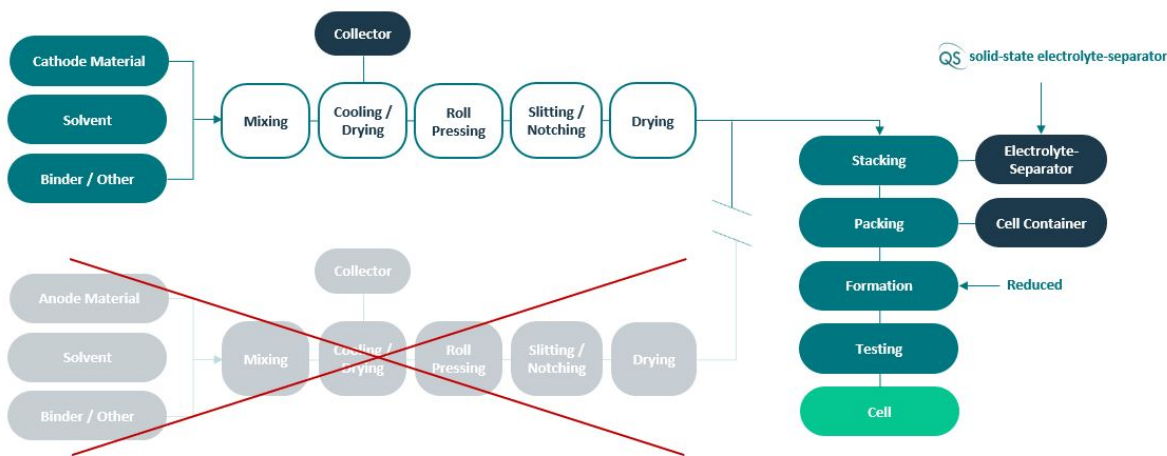
Our battery manufacturing process is being designed to be very similar to that of conventional lithium-ion battery manufacturing, with a few exceptions:

- We use a proprietary separator material instead of the porous polyolefin separator used in lithium-ion cells.
- We assemble our cell by stacking these separators together with cathodes and current collectors using proprietary joining methods.
- Our architecture eliminates the need for anode manufacturing, reducing capital investment and lowering operating costs.
- Our cell design allows us to shorten the weeks-long aging process required for conventional lithium-ion cells, thus decreasing manufacturing cycle time and reducing working capital needs.

Our architecture depends on our proprietary solid-state separator. Though our separator design is unique, our manufacturing process leverages established or similar high-volume production processes already deployed in other industries. We are developing subsequent, proprietary higher-volume separator manufacturing processes that seek to further reduce cost, increase throughput, and improve quality.

We plan to source many input materials from industry leading suppliers to the lithium-ion battery industry, and we already have strategic relationships in place with the industry’s leading vendors of cathode material, the most critical purchased input to our cell, along with leading vendors of other less critical inputs. Our solid-state separator is made from abundant materials produced at industrial scale in multiple geographies.

Relative to conventional lithium-ion cells, our technology eliminates the anode material cost (e.g., carbon/silicon host material, electrolyte in the anode) and reduces manufacturing costs (e.g., no anode related manufacturing costs, reduced formation costs). This enables savings in materials, capital equipment and manufacturing time, as illustrated in the graphic below.



Partnerships

Volkswagen Collaboration

QuantumScape has had a strong collaborative relationship with Volkswagen since 2012. Our collaboration initially focused on the testing and evaluation of our battery technology with Volkswagen engineers working closely with our engineering team on our technology development efforts and battery testing. Volkswagen has made several rounds of equity investments in QuantumScape, and senior executives of Volkswagen joined our board of directors (the “Board”). During the early part of this collaboration we worked closely with members of Volkswagen’s global research and development team and then with Volkswagen's Center of Excellence for Battery Cells, which was tasked with commercializing battery technologies within Volkswagen. Currently, Dr. Günther Mendl, Head of Battery Center of Excellence, Volkswagen AG, and Sebastian Schebera, Head of Strategic Partnerships, Volkswagen AG, are members of the Board.

PowerCo Collaboration and Joint Venture Termination

QSV Operations LLC (“QSV”) was incorporated as a limited liability company in 2018. VWGoA, VGA and QuantumScape executed the JVA, effective September 2018, with the goal of jointly establishing a manufacturing facility to produce the pilot line of the Company’s product through QSV. In connection with this agreement, the parties also entered into two operating agreements: (i) the Limited Liability Company Agreement of QSV to govern the respective rights and obligations as members of QSV and (ii) the Common IP License Agreement for the Company to license certain intellectual property pertaining to automotive battery cells as defined in the JVA to VWGoA, VGA and QSV.

On July 5, 2024, we entered into the PowerCo Collaboration Agreement with the goal of industrializing the solid-state lithium-metal battery technology we intend to use in our first planned product—the QSE-5 Technology. PowerCo was formed by Volkswagen in 2022 as a company intended to consolidate Volkswagen’s activities in the development and production of battery cells. In connection with the PowerCo Collaboration Agreement and subject to the completion of certain milestones, we and PowerCo intend to enter into a license agreement (the “PowerCo IP License Agreement”) under which we will grant PowerCo a non-exclusive, limited, royalty-bearing license to use the QSE-5 Technology for the purpose of manufacturing and selling batteries primarily for automotive applications, and PowerCo will pre-pay an initial royalty fee of \$130 million, against which any future royalties due will be credited. The initial royalty is subject to a time-based diminishing clawback if the PowerCo IP License Agreement is terminated early by PowerCo under certain conditions. The PowerCo Collaboration Agreement supersedes the JVA, which was terminated concurrently. As compared to a joint venture arrangement of similar output volumes, we expect the licensing arrangement to result in less revenue, as well as lower costs and capital requirements.

Research and Development

We conduct research and development at our headquarters facility in San Jose, California. Research and development activities concentrate on making further improvements to our battery technology including subsequent generations of prototype samples incorporating advances in cell functionality, process and reliability, and on improving the maturity of our production processes and pilot line.

Our research and development currently includes programs for the following areas:

- *Continued improvement of the cathode.* Our cathodes use a conventional cathode active material such as NMC mixed with a catholyte. We plan to benefit from industry cathode chemistry improvements and/or cost reduction, which in the future may include use of other cathode active materials, including cobalt-free compositions, including LFP, as well as cathode processing advances such as dry electrode processing. Over the years, we have developed catholytes made of differing mixtures of organic liquid electrolyte in an effort to optimize performance across multiple metrics such as voltage, temperature, power, and safety, among others. We have tested solid, gel and liquid catholytes in our cells. The solid catholyte is part of our ongoing research and development investigation into inorganic catholytes. Our solid-state cathode platform is being designed to enable high rates of charge and discharge for even thicker cathode electrodes, which, when combined with a lithium-metal anode, may further increase cell energy densities.
- *Continued improvement in quality, consistency and reliability.* We are working to improve the quality and uniformity of our cells, including our separators, to further improve, among other things, the cycling behavior, power, operating conditions, and reliability of our cells. For some of our early-generation processes, we used methods of continuous processing found at scale in both the battery and ceramic industries and we are working on continuous improvement of these processes, including better quality, consistency, and higher throughput through automation and process control (including specification tightening and adding or improving inspection points along the manufacturing process flow), quality of material inputs, and particle reduction across our process. We are also developing subsequent methods not typically used in ceramics that offer significant potential cost savings. Regarding consistency, we believe tightening the variability of separator quality will result in better yield. We plan to implement process improvements and controls necessary to manufacture higher quality, more consistent materials; we believe these activities will ultimately lead to higher reliability.
- *Continued improvement in throughput.* Increasing the volume of separator production results in the increased quantities required for prototypes and delivery of more test cells to prospective customers. We continue to invest and deploy resources to automate our manufacturing process, including purchasing larger-scale manufacturing equipment, that we expect will substantially improve our manufacturing processes and, as a result, increase throughput required for product qualification and to achieve the cost, performance and volume levels required for commercial shipments.
- *Cell design.* We have demonstrated capabilities of our solid-state separator and battery technology in single-layer and multilayer solid-state cells in commercially relevant areas (ranging from approximately 60x75mm to 70x85mm). In order to advance the maturity of our prototype cells and produce commercially viable solid-state battery cells, we must produce battery cells that achieve target cell design and capacities set by our customers and we may have to vary cell layer count and dimensions; while we target our first commercial product, the QSE-5, to have approximately 5 amp-hours of capacity, the exact number of layers and dimensions will vary and depend upon customer specifications, cell design considerations, and other factors. We will need to overcome production challenges to produce sufficient volumes of our separators and prototype battery cells to complete development of our first commercial product and for customer evaluation and product qualification purposes, as well as subsequent cell designs that may require different capacity, layer counts and dimensions.

Intellectual Property

The success of our business and technology leadership is supported by our proprietary battery technology. We rely upon a combination of patents, trademarks and trade secrets in the United States and other jurisdictions, as well as license agreements and other contractual protections, to establish, maintain and enforce rights in our proprietary technologies. In addition, we seek to protect our intellectual property through nondisclosure and invention assignment agreements with our employees and consultants and through non-disclosure agreements with business partners and other third parties. We regularly file applications for patents and have a significant number of patents in the United States and other countries where we expect to do business. Our patent portfolio is deepest in the area of solid-state separators with additional areas of strength in anodes, next-generation cathode materials, and cell, module, and pack design specific to lithium-metal batteries. Our trade secrets primarily cover manufacturing methods.

As of December 31, 2024, we owned, or licensed on an exclusive basis, more than 160 issued U.S. patents and patent applications, and more than 190 granted foreign patents and patent applications. Patents issued to us start expiring in 2033.

Competition

The EV market, and the battery segment in particular, is rapidly evolving and highly competitive. With the introduction of new technologies and the potential entry of new competitors into the market, we expect competition to increase in the future, which could harm our business, results of operations, or financial condition.

Our prospective competitors include major manufacturers currently supplying the industry, automotive OEMs and potential new entrants to the industry. Major companies now supplying batteries for the EV industry include Panasonic Corporation, Samsung SDI, Contemporary Amperex Technology Co. Limited, LG Energy Solutions, BYD Co. Limited, SK Innovation Co. Limited and E-One Moli Energy Corporation. They supply conventional lithium-ion batteries and in many cases are seeking to develop solid-state batteries, including potentially lithium-metal batteries. In addition, because of the importance of electrification, many automotive OEMs are researching and investing in solid-state battery efforts and, in some cases, in battery development and production. For example, Tesla, Inc. is building multiple battery gigafactories and potentially could supply batteries to other automotive OEMs, and Toyota Motors and a Japanese consortium have a multi-year initiative pursuing solid-state batteries. Additionally, in 2024, China announced the China All-Solid-State Battery Collaborative Innovation Platform, which brings together government, academia and industry to develop and manufacture solid-state batteries that can compete globally.

A number of development-stage companies such as SES, Solid Power, Factorial, ION, Sakuu, ONE, Enovix, and Sila Nanotechnologies are also seeking to improve conventional lithium-ion batteries or to develop new technologies for solid-state and/or lithium-metal batteries. Potential new entrants are seeking to develop new technologies for cathodes, anodes, electrolytes and additives. Some of these companies have established relationships with automotive OEMs and are in varying stages of development.

We believe our ability to compete successfully with lithium-ion battery manufacturers and with other companies seeking to develop solid-state batteries will depend on a number of factors including battery price, safety, energy density, charge rate and cycle life, and on non-technical factors such as brand, established customer relationships and financial and manufacturing resources.

Many of the incumbents have, and future entrants may have, greater resources than we have and may also be able to devote greater resources to the development of their current and future technologies. They may also have greater access to larger potential customer bases and have and may continue to establish cooperative or strategic relationships amongst themselves or with third parties (including automotive OEMs) that may further enhance their resources and offerings.

Government Regulation and Compliance

There are government regulations pertaining to battery safety, transportation of batteries, use of batteries in cars, factory safety, and disposal of hazardous materials. We will ultimately have to comply with these regulations to sell our batteries into the market. The license and commercialization of our battery technologies abroad is likely to be subject to more stringent export controls in the future.

Employees and Human Capital

We pride ourselves on the quality of our world-class team and seek to hire only employees dedicated to our strategic mission. Many of our employees have significant experience working with large battery manufacturers and automotive OEMs. As of December 31, 2024, we employed approximately 800 employees, based primarily in our headquarters in San Jose, California. Many of our employees in our research and development and related functions hold engineering and scientific degrees, including many from the world's top universities. In order to align our work force with our operational focus, in January 2025 we had a reduction in force impacting approximately 7% of the Company's full-time employees at the time.

To date, we have not experienced any work stoppages and we consider our relationship with our employees to be good. None of our employees are either represented by a labor union or are subject to a collective bargaining agreement.

People and Culture

We seek team members who want to help solve a significant problem that will positively impact the world. We value diversity and recognize the importance of fostering a positive, inclusive culture. We seek to promote fair and equitable hiring and promotion processes and year-over-year improvements in diverse representation. Some of our actions to achieve this included delivering management training for our senior leaders, implementing a job leveling framework to ensure candidates are assessed against a consistent set of criteria, and making certain that our commitment to equal hiring and promotion opportunities is substantiated with equal pay for equal work by conducting an annual internal pay equity analysis.

Attraction and Retention

We are committed to maintaining equitable compensation programs including equity participation. We offer market-competitive salaries and strong equity compensation aimed at attracting and retaining team members capable of making exceptional contributions to our success. Our full-time regular employees hold equity in our company and are generally eligible for the employee stock purchase plan. Our compensation decisions are guided by the external market, role criticality, and the contributions of each team member. Our job-leveling framework and associated pay ranges allow us to maintain pay equity while offering the attractive and effective compensation needed as we grow and compete for talent.

Health and Safety

The health and safety of our employees is mission critical. We emphasize a proactive safety culture and maintain a supportive organization and work culture that encourages personal health and work-life balance for our employees. Our Environmental, Health and Safety (EHS) department leads the programs that address workplace health and safety concerns through engineering controls, policies, procedures, training, monitoring and audits, and reports directly to our board of directors on a quarterly basis on such matters.

Available Information

Our investor relations website is located at <https://ir.quantumscape.com>, our X account handle is @QuantumScapeCo, our investor relations X account handle is @QuantumScapeIR, our Chief Executive Officer's LinkedIn account is located at www.linkedin.com/in/siva-sivaram-1394ab5b/, our Chief Technology Officer's X account handle is @ironmantimholme, our Chief Marketing Officer's X account handle is @HussainAsim, and our corporate LinkedIn account is located at www.linkedin.com/company/quantumscape. We use our investor relations website, aforementioned X accounts and LinkedIn account to post important information for investors, including news releases, analyst presentations, and supplemental financial information, and as a means of disclosing material non-public information and for complying with our disclosure obligations under Regulation FD. Accordingly, investors should monitor our investor relations website, aforementioned X accounts, and LinkedIn account in addition to following press releases, filings with the SEC and public conference calls and webcasts. We also make freely available, on our investor relations website under "SEC Filings," our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and any amendments to these reports as soon as reasonably practicable after electronically filing or furnishing those reports to the SEC.

Item 1A. Risk Factors.

The following summary risk factors and other information included in this Report should be carefully considered. The summary risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not currently known to us or that we currently deem less significant may also affect our business operations or financial results. If any of the following risks actually materializes, our stock price, business, operating results and financial condition could be materially adversely affected. For more information, see below for more detailed descriptions of each risk factor.

Risk Factor Summary

Risks Related to Our Technology Development, Manufacturing and Performance

- Challenges involving our development of solid-state battery cells.
- Challenges related to manufacturing and scale-up of our separator and solid-state battery cells.
- Any failure to meet targets around cost, performance characteristics or other specifications as set out by us or our customers.
- Reliance on third-party suppliers for necessary materials, components or equipment.
- An inability to control the costs associated with our operations and the price of raw materials.
- Any risk and uncertainty around the use of complex machinery for our operations and production.
- An inability to attract and retain customers during the development stage or for higher volume production.
- Any loss or early obsolescence of our manufacturing equipment.

Customer Risks and Risks Related to Our Relationship with Volkswagen

- Any failure to meet requirements or achieve milestones under our collaboration with PowerCo.
- Increased reliance on PowerCo to scale up and commercialize our technology.
- Concentration of agreements and relationships that can restrict our business operations, commercialization opportunities and revenue generation.
- Challenges to accurately estimate the future supply and demand for our batteries.

Our Intellectual Property Risks

- Any failure to protect or assert our intellectual property rights.
- Any intellectual property infringement claims or other litigation that we need to defend ourselves against.
- Adverse decisions related to our patent applications and contests to our patent rights.

Other Business Risks

- Challenges to successfully compete in an evolving and highly competitive battery market.

- Dependence on consumer adoption of EVs for future growth and success.
- Historical and continuing financial losses as an early-stage company.
- Risks and tradeoffs related to pursuing a variety of business models and arrangements.
- Changes to our objectives and targets due to unfavorable changes to our initial assumptions and analyses.
- Any issues with operations of or disruptions to our information technology and communications systems.
- Increased exposure to artificial intelligence related risks and challenges.
- Evolving scrutiny over our ESG practices and value propositions.
- Involvement in litigation, regulatory actions or government investigations and inquiries.
- Exposure to product liability claims due to third-party use of our batteries.
- Exposure to risks and regulations in various jurisdictions where we conduct activities.
- Adverse effects of inflation and increased interest rates.
- Challenges arising from management's limited experience in operating a public company.
- Any negative impacts from epidemics, pandemics, and other outbreaks.

Our Regulatory Risks

- Evolving or unfavorable global trade policies and export/import regulations related to the battery and EV industry.
- Environmental and safety risks related to battery technology development and manufacturing.

Risks Related to Ownership of Our Common Stock and Our Certificate of Incorporation and Bylaws Provisions

- Volatility of our Class A Common Stock.
- Dilution to stockholders in the event of sales of substantial amounts of our Class A Common Stock in the capital markets.
- Any failure to raise additional capital on attractive terms.
- Manipulative activity by short sellers.
- Changes to our reasonable estimates and probability-based assumptions that can affect our results of operations.
- Concentration of capital stock ownership among certain insiders.
- The dual class structure of our Common Stock.
- Provisions in our Certificate of Incorporation, Bylaws and Delaware law that can limit stockholders' ability to change management.
- Limits to our stockholders' ability to obtain a chosen judicial forum for disputes.
- No cash dividends to stockholders in the foreseeable future.

General Risk Factors

- Challenges attracting and retaining key employees and qualified personnel.
- Natural disasters and other catastrophic events outside of our control.
- Volatile global economic conditions due to real or perceived financial crises.
- Changes in U.S. or foreign tax policies.
- Limitations to our use of deferred tax assets to offset future taxable income.
- Insufficient insurance coverage for future losses or claims against us.
- Any inability to comply with NYSE continued listing standards.
- Significant expenses and administrative burdens as a public company.
- Any failure to maintain an effective system of internal controls which may lead to a material weakness.
- Limitations in our disclosure controls and procedures that may not prevent or detect all errors or acts of fraud.
- Any changes to analyst publications about us, our business, or the market.

The following risk factors apply to our business and operations. These risk factors are not exhaustive, and investors are encouraged to perform their own investigation with respect to our business, financial condition, and prospects. We may face additional risks and uncertainties that are not presently known to us, or that we currently deem immaterial, which may also impair our business. The following discussion should be read in conjunction with the financial statements and notes to the financial statements included elsewhere in this Report.

Risks Related to Our Technology Development, Manufacturing and Performance

We face significant challenges in our attempt to develop a solid-state battery cell and produce it at higher volumes with acceptable performance, quality, consistency, reliability, throughput, safety, and costs. Delays or failures in accomplishing our development objectives may delay or prevent successful commercialization of our technology and negatively impact our business.

Developing lithium-metal solid-state batteries that meet the requirements for wide adoption by automotive OEMs is a difficult undertaking and, as far as we are aware, has never been done before. We are still in the development stage and face significant challenges in completing the development of our battery cells and in producing battery cells in commercial volumes with acceptable performance, quality, consistency, reliability, throughput, safety, and costs. Some of the development challenges include increasing the quality, consistency, reliability and production throughput of our separators and cells, increasing the size and layer count of our multilayer cells, increasing manufacturing scale to produce the volume of cells needed for our technology development and customer applications, installing, bringing up and optimizing higher volume manufacturing equipment, packaging design and engineering to ensure adequate cycle life, pressure management, cost reduction, completion of the rigorous and challenging specifications required by our automotive partners, including but not limited to, calendar life, mechanical, safety, and abuse testing.

Our solid-state separator is in the development stage and has never been used before for battery applications (or to our knowledge, for any other applications). There are significant quality, consistency, reliability and throughput, cost and manufacturing process challenges to be solved in order for the separators to be produced and used commercially. We have had and are likely to continue to encounter engineering challenges as we increase the lateral dimensions, reduce the thickness and defects and increase the production volume of our separators. In addition, we are continuously evaluating multiple cathode material compositions for inclusion in our battery cells and have not yet finalized the cathode composition or formulation, or the design of related cell assembly components. We also have not validated that the current cell design meets all automotive requirements. If we are not able to overcome these barriers in developing and producing separators and battery cells at commercial volumes, our business would likely fail.

We have tested single-layer and multilayer cells in commercially relevant areas that measure approximately 60x75mm to 70x85mm, and shipped our first A0 prototype battery cells in 2022. In 2024, we shipped the first B0 prototype samples of our QSE-5 cell. While we target our first commercial product, the QSE-5, to have a capacity of approximately 5 amp-hours, the exact capacity, number of layers and dimensions may vary and depend upon specific customer preference, cell design considerations, and other factors. Any delay in the development or manufacturing scale-up of our solid-state battery cells would negatively impact our business as it will delay time to revenue and negatively impact our customer relationships.

We need to overcome production challenges to produce higher volumes of our separators and prototype battery cells and we may encounter delays and cost overruns related to planning, permitting, construction, equipment installation and reliability, utilities infrastructure installation and operations start-up of our manufacturing facilities, which could delay or prevent the introduction of our product and negatively impact our business.

We will need to overcome production challenges to produce sufficient volumes of our separators and prototype battery cells to complete development of our first commercial product and for customer evaluation and product qualification purposes, as well as subsequent cell designs that may require different capacity, layer counts or dimensions. We have not yet validated a manufacturing process or acquired the equipment necessary to produce higher volumes of our separator, cathode electrode or related cell assembly components that meet customer requirements. We will need to produce these cells at improved yields without compromising performance, and simultaneously solve related packaging and reliability challenges in a way that is scalable and low-cost. There are significant engineering and mechanical challenges that we must overcome to advance the scale up of our battery cells. In addition, we have been designing and procuring certain equipment to continue developing the manufacturing processes necessary to make these battery cells at higher volumes. If we are not able to overcome these developmental hurdles in building our cells, our business is likely to fail.

In addition, we must advance our current manufacturing processes to include more automation, such as automated film handling and stacking, and use higher volume equipment and processes, such as moving to higher throughput continuous flow equipment. We must also continue process development and innovation efforts toward substantially shortening cycle time, improving process control and equipment reliability, and reducing consumables (including energy usage), with the target end goal of increasing the quality, consistency, reliability and throughput of our separators and battery cells.

Further, we must build our pilot line in San Jose, California, to provide a sufficient quantity of separators and cells for internal development, customer sampling, and higher volumes of QSE-5 cells. Ultimately, we need to build out our pilot line to serve as the basis for continued manufacturing process development for the subsequent scale up of our manufacturing capabilities, including to support collaboration and future technology transfer activities as part of the collaboration and licensing arrangements with PowerCo as well as potential future commercial arrangements. However, we could encounter significant delays and cost overruns related to planning, permitting, construction, equipment delivery, installation, qualification, and reliability, utilities infrastructure installation, and operations start-up of our manufacturing facilities, including those containing our pilot line. Examples include global supply chain issues that impact our equipment suppliers, supplier non-performance and equipment damage in transit. In particular, we have experienced short-term power outages at our San Jose facilities that have been resolved, but similar disruptions may occur in the future; delays associated with material shortage and backups at key shipping ports could impact the capacity at which we can run the facility; and certain of our construction contractors have previously reported delays due to labor strikes of their employees that were ultimately resolved but may reoccur in the future. If we are unable to substantially improve our manufacturing processes to increase yield and throughput to achieve the cost, performance and volume levels required for commercial shipments, our business could be materially impacted.

If the cost, performance characteristics or other specifications of the battery fall short of our targets or our customer requirements, our ability to develop, market, and sell our batteries could be harmed.

Even if we complete development and achieve volume production of our solid-state battery, if the cost, performance characteristics or other specifications of the battery fall short of our targets or our customer requirements, our sales, product pricing and margins would likely be adversely affected.

In addition, our battery cells must simultaneously satisfy all the commercial and safety requirements of our customers. Our solid-state battery cell uses a ceramic separator which we believe is safer than conventional polymer separators. We have conducted, and we will continue to conduct, a suite of performance and safety tests on our prototype cells, including on a limited number of QSE-5 B-samples to date. Although certain of our cells tested in our laboratories have passed automotive performance and safety test levels, some of these cells have been subject to additional modified test conditions and tested to the point of failure. However, these performance and safety test results for our prototype cells are not necessarily representative of those of subsequent generations of our cells since performance and safety are a function of a cell's materials composition, which changes from one generation of cells to another and depend on the final design of the battery package. Additional safety tests, with much larger samplings of cells, need to be performed as our materials and processes evolve to ensure efficacy and statistical significance.

Once commercial production of our solid-state battery cells commences, our batteries may contain defects in design and manufacture that may cause them to not perform as expected or that may require repairs, recalls, and design changes. Our batteries are inherently complex and incorporate technology and components that have not been used for other applications and that may contain defects and errors, particularly when first introduced. We have a limited frame of reference from which to evaluate the long-term performance of our solid-state batteries. There can be no assurance that we will be able to detect and fix any defects in our solid-state batteries prior to the sale to potential consumers. If our batteries fail to perform as expected, we could lose design wins and customers may delay deliveries, terminate further orders or initiate product recalls, each of which could adversely affect our sales and brand and could adversely affect our business, prospects and results of operations.

We may not be able to establish supply relationships for necessary materials, components or equipment, which could delay the introduction of our product and negatively impact our business.

We rely on third-party suppliers for components and equipment necessary to develop and manufacture our solid-state batteries, including key supplies, such as our cathode material and manufacturing equipment for both our solid-state separator and solid-state battery cells. We are collaborating with key suppliers but have not yet entered into agreements for the supply of production quantities for many of these materials. To the extent that we are unable to enter into commercial agreements with these suppliers on beneficial terms, or these suppliers experience difficulties or delays ramping up their supply of materials to meet our requirements, the introduction of our battery will be delayed. For example, we have previously experienced minor disruptions to the supply of process gas due to the shortage of truck drivers related to the COVID-19 pandemic and due to an incident at our main supplier's facilities, and have also experienced and could continue to experience disruption to the supply of petroleum-derived products as a result of certain weather and geopolitical events and conflicts and any related political or economic responses and counter-responses or otherwise by various global actors. The war in Ukraine and resulting sanctions against Russia by certain countries has also led to, and a further escalation of the armed conflict in the Middle East could also lead to, an increase in the price of petroleum and petroleum-derived products, which has in certain instances increased and may in the future further increase the cost of manufacturing, input material pricing and logistics costs. These challenges may be exacerbated in situations where we source certain of our materials and equipment exclusively from one or a few suppliers.

Any disruption in the supply of components, equipment or materials could temporarily disrupt research and development activities or production of our batteries until an alternative supplier is able to supply the required material. Changes in business conditions, unforeseen circumstances, political, economic and social instability, governmental changes, disruptions caused by power outages, climate change and natural disasters, and other factors beyond our control or which we do not presently anticipate, could also affect our suppliers' ability to deliver components or equipment to us on a timely basis. Any of the foregoing could materially and adversely affect our results of operations, financial condition and prospects.

Currency fluctuations, trade barriers, tariffs or shortages and other general economic or political conditions may limit our ability to obtain key materials, components or equipment for our solid-state batteries or significantly increase freight charges, raw material costs and other expenses associated with our business, which could further materially and adversely affect our results of operations, financial condition and prospects. In particular, tariffs—whether imposed as part of trade disputes, protective measures, or broader geopolitical strategies—could substantially drive up the cost of components and materials critical to our operations, putting significant pressure on our overall cost structure. For example, in February 2025, the U.S. imposed additional tariffs on imports from China. These tariffs, any additional tariffs imposed on foreign goods, as well as potential retaliation by a foreign government against such tariffs or policies may affect, directly or indirectly, the prices and supply of key materials necessary for our or our supply chain operations. We may also be subject to a number of geopolitical risks, including U.S. and foreign government trade restrictions or sanctions and any political or economic responses or counter-responses to such restrictions or sanctions. As global competition for raw materials continues to intensify, particularly in light of rising demand for battery technologies, we may face difficulties securing critical supplies on favorable terms or at all, which could materially harm our ability to produce batteries at scale and threaten the viability of our business.

We may be unable to adequately control the costs associated with our operations and the components necessary to develop and commercialize our solid-state battery technology, and, if we are unable to control these costs and achieve cost advantages, our business will be adversely affected.

We require significant capital to develop and grow our business and expect to incur significant expenses, including those relating to research and development, raw material procurement, leases, sales, distribution, and technology transfer as we build our brand and market our battery technology, and general and administrative costs as we scale our operations, including the costs of our activities under the PowerCo Collaboration Agreement and, if entered into, the PowerCo IP License Agreement. For example, there has been volatility in prices and availability of raw material such as cobalt, nickel, and lithium and such material may face industry-wide shortages. Our ability to become profitable in the future will not only depend on our ability to successfully market or license our solid-state battery technology, but also to control our costs and achieve our target cost projections, including our projected cost advantage when compared to the costs of building traditional lithium-ion batteries at scale or the costs of building solid-state batteries by other market players. If we or our partners, as applicable, are unable to cost efficiently design, manufacture, market, sell and distribute our solid-state battery technology, including under the PowerCo Collaboration Agreement, our margins, profitability and prospects would be materially and adversely affected. We have not yet produced any solid-state battery cells at commercial capacity or in volume and our forecasted cost advantage for the production of these cells at scale, compared to conventional lithium-ion cells, will require us to achieve rates of throughput, use of electricity and consumables, yield, and levels of automation that we have not yet achieved. If we are unable to achieve these targeted rates, our business will be adversely impacted.

In particular, while we have estimated that eliminating the anode host material and the associated manufacturing costs will provide savings in production at scale compared to the costs of building traditional lithium-ion batteries at leading manufacturers, that estimate is subject to numerous assumptions and uncertainties. To achieve those savings, we or our partners, as applicable, will need to achieve significant cost savings in battery design and manufacturing, in addition to the cost savings associated with the elimination of an anode from our solid-state battery cells, while controlling costs associated with the manufacturing of our separator, including achieving substantial improvements in throughput and yield required to hit commercial targets. Further, we or our partners, as applicable, will need to capture industry-wide cost savings in the materials, components, equipment, facilities design, and processes that our technology shares with traditional lithium-ion battery manufacturing, notably in the cathode and cell design. We cannot be certain that we will achieve these cost savings or that future efficiency improvements in lithium-ion battery manufacturing will not reduce or eliminate these estimated cost savings.

We expect to incur significant costs related to procuring materials required to manufacture and assemble our samples and batteries. We expect to use various materials in our batteries that will require us to negotiate purchase agreements and delivery lead-times on advantageous terms. We and our partners may not be able to control fluctuation in the prices for these materials or negotiate agreements with suppliers on terms that are beneficial to us or our partners. Our business depends on the continued supply of certain proprietary materials for our products. We are exposed to multiple risks relating to the availability and pricing of such materials and components, including reliance upon our vendors to construct and produce equipment to increase volumes, which may lead to delays or the requirement that we make additional upfront payments. Increases in the prices for our raw materials or components would increase our operating costs and negatively impact our prospects. For example, our shipping costs have increased in the past as suppliers have applied fuel surcharges. Costs for certain key raw materials and components have also increased due to fluctuations in global commodity prices. Our suppliers' increasing labor costs have also contributed to rising prices. Given that we have yet to generate any revenue from our business operations, we are also limited in our ability to pass on the cost of any such increases to our customers.

In addition, the cost of producing battery cells depends in part upon the prices and availability of raw materials such as lithium, nickel, cobalt and/or other metals. The prices for these materials fluctuate and their available supply may be unstable, depending on market conditions and global demand for these materials. For example, demand for lithium has increased dramatically in recent years, and is expected to continue to increase, due to the ongoing rapid increase in use of lithium batteries in portable electronics and the growing EV and energy storage markets. Furthermore, significant sources of supply of certain raw and intermediate materials are available in countries that may be subject to political, economic and social instability or where there is an ongoing risk of tariffs or other prohibitions being imposed by the United States or the European Union on the import of such materials from such countries. Certain countries are also imposing controls on the export of such materials. There can be no assurance that suppliers of these materials may be able to meet our or our partners' volume and other specific needs at reasonable prices, particularly as we ramp up our commercial operations.

We rely on complex machinery for our operations, and production involves a significant degree of risk and uncertainty in terms of operational performance and costs.

We rely heavily on complex machinery for our operations and the production of our solid-state battery cells, and this equipment has not yet been qualified to operate at large-scale manufacturing. The work required to integrate this equipment into the production of our solid-state battery cells is time intensive and requires us to work closely with the equipment provider to ensure that it works properly for our unique battery technology. This integration work will involve a significant degree of uncertainty and risk and may result in a delay in the scaling up of production or result in additional cost to our battery cells.

To achieve our commercialization goals, we will require larger-scale machinery. Such machinery is likely to suffer unexpected malfunctions from time to time and may require repairs and spare parts to resume operations, which may not be available when needed, particularly if global supply chain disruptions continue or are not fully resolved. Unexpected malfunctions of our production equipment may significantly affect the intended operational efficiency. In addition, because this equipment has not been used to build our solid-state battery cells before, the operational performance and costs associated with this equipment can be difficult to predict and may be influenced by factors outside of our control, such as, but not limited to, failures by suppliers to deliver necessary components of our products in a timely manner and at prices and volumes acceptable to us, environmental hazards and remediation, difficulty or delays in obtaining governmental permits, damages or defects in systems, industrial accidents, fires, seismic activity and other natural disasters.

Operational problems with our manufacturing equipment could result in the personal injury to or death of workers, the loss of production equipment, damage to manufacturing facilities, monetary losses, delays and unanticipated fluctuations in production. The potential risks of operational problems at our facilities also apply to individuals not employed and equipment not owned by us, such as third-party contractors, and our business partners' personnel and equipment. In addition, operational problems may result in environmental damage, administrative fines, increased insurance costs and potential legal liabilities. These operational problems could have a material adverse effect on our business, results of operations, cash flows, financial condition or prospects.

We may not succeed in attracting and retaining customers, including licensees, during the product development stage or for higher volume commercialization of our technology, and our future growth and success may be adversely affected.

We may not succeed in attracting and retaining customers, including licensees, during the product development stage or for higher volume commercialization of our technology. If we are unable to attract new customers in need of our products or the licensing of our battery technology, whether due to inadequate product-market fit or for other reasons, our business may suffer. Conversely, we may not be able to retain existing customers in case of delays or capacity limitations in the development or manufacturing scale-up of our solid-state battery cells, which would negatively impact our business.

Many of our potential customers tend to be large enterprises that often undertake a significant evaluation process and are frequently subject to budget constraints, multiple approvals and unanticipated administrative, processing and other delays, that result in a lengthy sales or licensing cycle. Therefore, our future success will depend on our ability to effectively sell our products or license our technology to such large customers. Sales to these end-customers involve risks that may not be present (or that are present to a lesser extent) with sales to smaller customers. These risks include, but are not limited to, (i) increased purchasing power and leverage held by large customers in negotiating contractual arrangements with us, including a greater ability to push back on attempts to pass on increased operating and procurement costs and require provisions that can lead to a delay in revenue recognition, (ii) longer sales and implementation cycles and the associated risk that substantial time and resources may be spent on a potential end-customer that elects not to purchase our solutions, and (iii) greater product functionality and scalability requirements, including a broader range of services. There are also only a limited number of OEMs in the automotive sector. All of these factors can add further risk to business conducted with these potential customers.

While we have signed customer sampling agreements with a number of OEMs, we are still in the process of development and manufacturing scale-up of our solid-state battery cells and there is no assurance or guarantee that any of our customers or potential customers will be able to successfully complete their testing and validation processes and, therefore, enter into definitive volume production or license agreements with us, or conversely, that we can sufficiently scale up the manufacturing of our solid-state battery cells in the time frames required by such customers and potential customers.

We may be negatively impacted by any early obsolescence of our manufacturing equipment.

We depreciate the cost of our equipment over their expected useful lives. However, our cell design or manufacturing processes may change periodically, and we may decide to update our design or manufacturing processes more quickly than expected. Moreover, improvements in engineering and manufacturing expertise and efficiency may result in our ability to manufacture our cells using less of our currently installed equipment. Alternatively, as we develop our production processes, we may discontinue the use of already installed equipment in favor of different or additional equipment. The useful life of any equipment that would be retired early as a result would be shortened, causing the depreciation on such equipment to be accelerated, and our results of operations may be harmed. For example, during the year ended December 31, 2024, we wrote off approximately \$13.3 million of property and equipment for assets with no remaining future benefit.

Customer Risks and Risks Related to Our Relationship with Volkswagen

Our relationship with Volkswagen and PowerCo is subject to various risks which could adversely affect our business and future prospects. There are no assurances that we will be able to achieve the milestones for the commercialization of solid-state batteries under our collaboration with PowerCo or that we will enter into the PowerCo IP License Agreement.

On July 5, 2024, we entered into the PowerCo Collaboration Agreement with the goal of industrializing the solid-state lithium metal battery technology we intend to use in our first planned product—the QSE-5 Technology. Under the PowerCo Collaboration Agreement, the parties will collaborate to enable PowerCo to manufacture battery cells incorporating the QSE-5 Technology, including through a joint scale-up team that was established to facilitate the transfer of QSE-5 Technology into a cell size determined by PowerCo and by carrying out the activities set forth in statements of work (the “Project”). In connection with the Project and subject to the completion of certain milestones, the parties intend to enter into the PowerCo IP License Agreement under which we will grant PowerCo a non-exclusive, limited, royalty-bearing license to use the QSE-5 Technology for the purpose of manufacturing and selling batteries primarily for automotive applications, initially at one or more PowerCo facilities that together have an annual capacity of up to 40 GWh, expandable by an additional 40 GWh of annual capacity or such other capacity as may be agreed to by the parties.

There is no assurance that we will be able to complete the development of the solid-state battery cells or achieve the technical milestones in the time frame required by the PowerCo Collaboration Agreement or to satisfy PowerCo's business needs, or that the joint scale-up team will cooperate successfully or complete in a timely and cost-effective manner the responsibilities assigned to them under the PowerCo Collaboration Agreement. If we do not complete this development in a timely manner, PowerCo may terminate the PowerCo Collaboration Agreement. If we are not able to reach certain milestones under the PowerCo Collaboration Agreement, PowerCo has no obligation to enter into the PowerCo IP License Agreement and we will not receive the initial royalty fee otherwise due to us thereunder and will not realize any of the benefits otherwise expected from this agreement. These factors could result in a material adverse effect on our business and financial results. The amounts of royalties to be paid under the PowerCo IP License Agreement, if entered into, will depend on the performance of our solid-state battery and the demand for the vehicles that Volkswagen develops specifically to use with the solid-state battery cells produced under the PowerCo IP License Agreement. If we cannot complete the development of our solid-state battery cells, if PowerCo does not select our solid-state battery cell for commercialization or if there is a delay in the introduction of the Volkswagen vehicles that intend to use our solid-state battery cells, our business will be harmed.

Volkswagen is our largest shareholder and holds the right to designate two directors to our Board. The strong relationship that we have developed with Volkswagen, including as a shareholder, and PowerCo and rights under the PowerCo Collaboration Agreement and, if entered into, the PowerCo IP License Agreement, may deter other automotive OEMs from working closely with us. While the PowerCo IP License Agreement, if entered into, would be non-exclusive, allowing us to license our intellectual property to other third parties, we may still need to incur significant additional expenditures for design, development, and testing to meet the needs of these third parties. If we are not able to expand our other customer relationships to a license or commercialization intent, or if we become too dependent on Volkswagen for our revenue, our business could be harmed. Volkswagen may have economic, business or legal interests or goals that are inconsistent with our goals. Any significant disagreements with Volkswagen may impede our ability to maximize the benefits of our relationship and slow the commercialization of our solid-state battery. In addition, if PowerCo is unable or unwilling to meet its economic or other obligations under the PowerCo Collaboration Agreement and PowerCo IP License Agreement, if entered into, we may be required to terminate such agreements and thereby may not realize any of the benefits otherwise expected from such agreements. These factors could result in a material adverse effect on our business and financial results. While we have entered into the PowerCo Collaboration Agreement and also expect to enter into the PowerCo IP License Agreement with PowerCo, we cannot predict the extent to which PowerCo's activities may pose a competitive risk to, or otherwise be in conflict with, our business.

If the milestones under the PowerCo Collaboration Agreement are met and the PowerCo IP License Agreement is entered into, we will become reliant on PowerCo to scale up and commercialize our technology, preserve the value of our license, and will be exposed to risks related to PowerCo's financial and business conditions.

While we continue to explore opportunities to commercialize our technology with existing and potential partners, the PowerCo Collaboration Agreement is currently the only agreement we have with the intent to commercialize our technology. Therefore, entering into the PowerCo IP License Agreement will make us reliant on PowerCo to scale up and commercialize our technology and preserve the value of our license. It will also result in us having less direct control over decisions relating to the manufacturing of our technology and, compared to the prior JVA arrangement, require us to rely more significantly on the alignment of incentives between us and PowerCo.

PowerCo, established in 2022 by Volkswagen, is a newly formed entity without a proven track record in battery manufacturing, thereby presenting several risks. Its operational capabilities remain untested, raising uncertainties regarding its ability to develop, scale up, and efficiently produce battery cells. Furthermore, PowerCo's capacity to secure the requisite capital for technology development and scaling remains unproven, potentially resulting in delays to key milestones. PowerCo is wholly owned by and dependent on Volkswagen and its financial and operational resources, changes in or poor execution of business plans by either PowerCo or Volkswagen—including any decision by Volkswagen to reduce or terminate the business of PowerCo or to curtail investments in EV production through cost-cutting measures—could adversely harm our business. As PowerCo continues to execute its business plan, there are inherent risks associated with its ability to meet manufacturing timelines, manage labor relations, and sustain supplier and customer relationships. Our concentrated customer base and specific partnership with PowerCo further heighten our exposure to fluctuations in its operations and business model, any of which may impede decision-making and adversely impact the commercialization of our technology.

Additionally, verifying royalty amounts owed to us under the PowerCo IP License Agreement may be difficult. While the agreement will require PowerCo to provide reasonable documentation supporting royalties and grant us the right to audit their books and records, these audits can be expensive and time-consuming, potentially adversely affecting our financial condition and operating results.

Certain agreements and relationships currently restrict or in the future may restrict our business operations, commercialization opportunities, and revenue generation.

Our existing and future commercial agreements may limit or delay our ability to expand our customer base, collaborate with other customers and commercialize our intellectual property, including certain intellectual property jointly developed under such agreements. Certain agreements may also require us to prioritize certain customers' commercialization efforts and focus on developing products that are configured to our customers' specifications with potentially limited end-use applications, which could have an adverse impact on our results of operations if we divert resources to address these customer specific requirements and obligations. Additionally, certain agreements may require us to provide certain customers with advantageous business terms, restricting our ability to negotiate competitive terms with others and potentially reduce our anticipated revenue from royalty payments. These obligations could deter other potential partners and limit or delay our opportunities to generate revenue through licensing our technology, impacting our overall business flexibility and financial outcomes. The concentration of our customer base increases our risks related to the financial condition of our customers, and the fluctuations in financial condition of a single customer or the failure of a single customer to perform its obligations could have a material and adverse effect on our results of operations and cash flow.

We may not be able to accurately estimate the future supply and demand for our batteries, which could result in a variety of inefficiencies in our business and hinder our ability to generate revenue. If we fail to accurately predict and forecast our manufacturing requirements, we could incur additional costs or experience delays.

It is difficult to predict our future revenues and appropriately budget for our expenses, and we may have limited insight into trends that may emerge and affect our business. We anticipate being required to provide forecasts of our demand to our current and future suppliers prior to the scheduled delivery of products to potential customers. Currently, there is no historical basis for making judgments on the demand for our batteries or our ability to develop, manufacture, and deliver batteries, or our profitability in the future. If we overestimate our requirements, our suppliers may have excess inventory, which indirectly would increase our costs. If we underestimate our requirements, our suppliers may have inadequate inventory, which could interrupt manufacturing of our products and result in delays in shipments and revenues. In addition, lead times for materials and components that our suppliers order may vary significantly and depend on factors such as the specific supplier, contract terms and demand for each component at a given time. If we fail to order sufficient quantities of product components in a timely manner, the delivery of batteries to our potential customers could be delayed, which would harm our business, financial condition and operating results.

Our Intellectual Property Risks

We rely heavily on our intellectual property portfolio. If we are unable to protect or assert our intellectual property, our business and competitive position would be harmed.

We may not be able to prevent unauthorized use of our intellectual property, which could harm our business and competitive position. We rely upon a combination of the intellectual property protections afforded by patents, trademarks and trade secrets in the United States and other jurisdictions, as well as license agreements and other contractual protections, to establish, maintain and enforce rights in our proprietary technologies. In addition, we seek to protect our intellectual property through non-disclosure and invention assignment agreements with our employees and consultants, and through non-disclosure agreements with business partners and other third parties. Despite our efforts to protect our proprietary rights, insiders and third parties, including our business partners, may attempt to copy or otherwise obtain, use or practice our intellectual property without our consent, and we may have been, and may continue to be, subject to intentional or inadvertent systems disruptions and physical or virtual security incidents, including theft or unauthorized use of our confidential information, trade secrets and proprietary technology, including with respect to our batteries and cells. Monitoring unauthorized use or loss of our intellectual property is difficult and costly, and the steps we have taken or will take to prevent misappropriation may not be sufficient. Any enforcement efforts we undertake, including litigation, may not be successful and could be time-consuming and expensive and could divert management's attention, which could harm our business, results of operations and financial condition. In addition, existing intellectual property laws and contractual remedies may afford less protection than needed to safeguard our intellectual property portfolio or our competitive position.

Patent, trademark and trade secret laws vary significantly throughout the world. A number of foreign countries do not protect intellectual property to the same extent as do the laws of the United States. Government actions may also undermine our intellectual property. For example, a decree was adopted by the Russian government in March 2022, allowing Russian companies and individuals to exploit inventions owned by patentees from the United States without consent or compensation. Therefore, our intellectual property may not be as strong or as easily enforced outside of the United States and efforts to protect against the unauthorized use of our intellectual property, technology and other proprietary rights may be more expensive and difficult outside of the United States. Failure to adequately protect our intellectual property could result in our competitors using our intellectual property to offer products, potentially resulting in the loss of some of our competitive advantage and a decrease in our revenue which would adversely affect our business, prospects, financial condition and operating results.

Under the PowerCo Collaboration Agreement, we agreed to jointly own with PowerCo certain types of foreground intellectual property. This joint ownership may reduce our ability to protect or assert some of our intellectual property rights. More specifically, we agreed to jointly own certain foreground intellectual property that is jointly developed under the PowerCo Collaboration Agreement and that either party is free to exploit their share of such jointly owned intellectual property without the other's consent, subject to certain conditions. Similarly, we have entered into, and may continue to enter into, other agreements—including joint development agreements with various partners—that involve joint ownership of foreground intellectual property. These agreements may allow our partners to independently use, license, or develop improvements to or derivatives of jointly owned intellectual property without requiring our approval, which could impact our competitive position or limit our ability to fully capitalize on such innovations. Because PowerCo and other partners may exploit such jointly owned intellectual property without our consent, we may not be able to prevent them or their licensees from using or exploiting such jointly owned intellectual property, or any improvements to or derivatives of such intellectual property developed by these partners. Additionally, our ability to innovate on or practice our intellectual property could be adversely hindered by any new such intellectual property created by our partners, and could undermine the value of our intellectual property and negatively impact our ability to work with additional prospective partners, thereby weakening our competitive position.

Furthermore, under these arrangements, including with Volkswagen and PowerCo, our partners have and will have access to certain proprietary information or intellectual property, increasing the risk of misappropriation, unauthorized use, or inadvertent disclosure due to insufficient safeguards, cybersecurity breaches, employee misconduct, or other vulnerabilities. Such risks could undermine the value of our intellectual property, disrupt our business, or impair our ability to effectively protect our rights.

Under the PowerCo IP License Agreement, if entered into, we intend to grant PowerCo a perpetual license to some of our intellectual property. This license may limit our ability to prohibit third parties, including PowerCo and its sublicensees, from exploiting our licensed intellectual property in perpetuity.

We may need to defend ourselves against intellectual property infringement claims, which may be time-consuming and could cause us to incur substantial costs.

Companies, organizations or individuals, including our current and future competitors, may hold or obtain patents, trademarks or other proprietary rights that would prevent, limit or interfere with our ability to make, use, develop or sell our products, which could make it more difficult and costly for us to operate our business. From time to time, we may receive requests from third parties inquiring whether we are infringing their intellectual property and/or seek court declarations that they do not infringe upon our intellectual property. Companies holding patents or other intellectual property relating to our business, including intellectual property for batteries, ceramics, electric motors, electronic power management systems, or manufacturing processes may bring suits alleging infringement of such rights or otherwise asserting their rights and seeking licenses. Additionally, joint ownership of intellectual property, including under agreements such as the PowerCo Collaboration Agreement, may increase the risk of disputes over the use, licensing, or enforcement of jointly owned intellectual property. Such disputes could result in litigation, which may be costly, time-consuming, and disruptive to our operations. In addition, if we are determined to have infringed a third party's intellectual property, we may be required to do one or more of the following:

- cease selling, incorporating or using products, methods or other assets that incorporate or otherwise infringe or misappropriate the challenged intellectual property;
- pay substantial damages;
- obtain a license from the holder of the infringed intellectual property, which license may not be available on reasonable terms or at all; or
- redesign our affected products and methods.

In the event of a successful claim of infringement against us and our failure or inability to obtain a license to the infringed technology on reasonable terms, our business, prospects, operating results and financial condition could be materially adversely affected. In addition, any litigation or claims, whether or not well-founded, could result in substantial costs and diversion of resources and management's attention.

We also license patents and other intellectual property and technology from third parties, and we may face claims that our use of this intellectual property or technology infringes the rights of others. In such cases, we may seek indemnification from our licensors under our license contracts with them. However, our rights to indemnification may be unavailable or insufficient to cover our costs and losses, depending on our use of the technology, whether we choose to retain control over conduct of the litigation, and other factors. Further, joint ownership arrangements may limit our ability to assert or defend claims relating to jointly owned intellectual property, as partners may independently enforce or license such intellectual property, creating additional risks of conflict, misalignment, or exposure to third-party litigation.

Our patent applications may not result in issued patents or our patent rights may be contested, circumvented, invalidated or limited in scope, any of which could have a material adverse effect on our ability to prevent others from interfering with our commercialization of our products.

Our patent applications may not result in issued patents, which may have a material adverse effect on our ability to prevent others from commercially exploiting products similar to ours. The status of patents involves complex legal and factual questions and the breadth of claims allowed is uncertain. As a result, we cannot be certain that the patent applications that we file will result in patents being issued, or that our patents and any patents that may be issued to us will afford protection against competitors with similar technology. Numerous patents and pending patent applications owned by others exist in the fields in which we have developed and are developing our technology and operating our business. Any of our existing or pending patents may be challenged by others on the basis that they are invalid or unenforceable. Furthermore, patent applications filed in foreign countries are subject to laws, rules and procedures that differ from those of the United States, and thus we cannot be certain that foreign patent applications related to issued U.S. patents will be issued.

Even if our patent applications succeed and we are issued patents in accordance with them, these patents may still be contested, circumvented, invalidated or limited in scope in the future. The rights granted under any issued patents may not provide us with meaningful protection or competitive advantages, and some foreign countries provide significantly less effective patent enforcement than in the United States. In addition, the claims under any patents that issue from our patent applications may not be broad enough to prevent others from developing technologies that are similar or that achieve results similar to ours. The intellectual property of others could also bar us from licensing and exploiting any patents that issue from our pending applications. In addition, patents issued to us may be infringed or designed around by others and others may obtain patents that we need to license or design around, either of which would increase costs and may adversely affect our business, prospects, financial condition and operating results.

Our Business Risks

The battery market continues to evolve, is highly competitive, and we may not be successful in competing in this industry or establishing and maintaining confidence in our long-term business prospects among current and future partners and customers, including licensees.

The battery market in which we compete continues to evolve and is highly competitive. To date, we have focused our efforts on our lithium-metal solid-state battery technology, which is being designed to outperform conventional lithium-ion battery technology. However, lithium-ion battery technology has been widely adopted and our current competitors have, and future competitors may have, greater resources than we do and may also be able to devote greater resources to the development of their current and future technologies. These competitors also may have greater access to customers, including licensees, and may be able to establish cooperative or strategic relationships amongst themselves or with third parties that may further enhance their resources and competitive positioning. In addition, lithium-ion battery manufacturers may continue to reduce cost and expand supply of conventional batteries and thereby reduce the prospects for our business or negatively impact the ability for us to sell or license our products at a market-competitive price with sufficient margins. The lithium-ion battery industry may also experience periods of excess manufacturing capacity; this imbalance between demand and supply capacity may create further downward pressure on prices and could lead to competitors selling at or below material costs. In such scenarios, even if our batteries outperform conventional technologies, our competitive advantage may become irrelevant if we cannot offer pricing that meets market expectations, further threatening the viability of our business. For example, Chinese production has significantly driven down the costs of lithium-ion batteries for EVs through massive scale and government support. As of 2024, China's average battery pack price was approximately 30% lower than costs in Europe and the U.S.

Many automotive OEMs, a number of battery technology companies, and consortiums subsidized by countries, such as China, are researching and investing in solid-state battery efforts and, in some cases, in battery development and production. There are a number of companies seeking to develop alternative approaches to solid-state battery technology, including lithium-metal batteries. We expect competition in battery technology and EVs to intensify due to increased demand for EVs and a regulatory push for EV adoption, continued globalization, and consolidation in the worldwide automotive industry. For example, PowerCo is intended to consolidate Volkswagen's activities along the value chain for batteries—from processing raw materials to developing a unified Volkswagen battery to managing the European gigafactories. Additionally, in 2024, China announced the China All-Solid-State Battery Collaborative Innovation Platform, which brings together government, academia and industry to develop and manufacture solid-state batteries that can compete globally. Developments in alternative technologies or improvements in battery technologies made by competitors may materially adversely affect the sales, pricing and gross margins of our batteries. If a competing technology is developed with superior operational or price performance, our business will be harmed. For example, early results of silicon-anode battery technologies suggest they may offer significant competition to our business. These technologies claim to deliver higher energy densities, faster charging times, and potentially lower costs, which could reduce the demand for our solid-state batteries or require us to adjust our pricing or margins to remain competitive. Furthermore, a sustained decline in battery prices—whether due to overcapacity, aggressive pricing by competitors, or subsidies—could make it difficult for us to recover our costs, no matter how advanced our technology is. If we fail to accurately predict and ensure that our battery technology can address customers' changing needs or emerging technological trends, or if our customers fail to achieve the benefits expected from our solid-state batteries, our business will be harmed.

We must continue to commit significant resources to develop our battery technology to establish a competitive position, and these commitments will be made without knowing whether such investments will result in products potential customers will find acceptable. There is no assurance we will successfully identify new customer requirements, develop and bring our batteries to market on a timely basis, or that products and technologies developed by others will not render our batteries obsolete or noncompetitive, any of which would adversely affect our business and operating results.

Customers will be less likely to purchase our batteries if they are not convinced that our business will succeed in the long term. Similarly, suppliers and other third parties will be less likely to invest time and resources in developing business relationships with us if they are not convinced that our business will succeed in the long term. Accordingly, to build, scale up and maintain our business, we must maintain confidence among current and future partners, customers, suppliers, analysts, ratings agencies and other parties in our long-term financial viability and business prospects. Maintaining such confidence may be particularly complicated by certain factors including those that are largely outside of our control, such as our limited operating history, market unfamiliarity with our products, any delays in scaling manufacturing, delivery and service operations to meet demand, competition and uncertainty regarding the future of EVs and our eventual production and sales performance compared with market expectations.

Our future growth and success are dependent upon consumers' willingness to adopt EVs.

Our growth and future demand for our products is highly dependent upon the adoption by consumers of alternative fuel vehicles in general and EVs in particular. In recent years, many countries, companies and consumers have accelerated targets with respect to decreasing dependency on fossil fuels, which in turn is expected to increase demand for EVs; however, the market for new EVs continues to evolve rapidly and is also characterized by rapidly changing technologies, competitive pricing and other competitive factors, evolving government regulation and industry standards, and changing consumer demands and behaviors. In addition, several challenges could slow the adoption of EVs, including the availability and affordability of raw materials critical to EV production, such as lithium, nickel, and cobalt, the adequacy of EV charging infrastructure, and concerns over battery performance, safety, and recyclability. Furthermore, economic uncertainty, fluctuating interest rates and energy prices, and geopolitical events, such as trade restrictions or conflicts affecting supply chains, could also affect consumer purchasing decisions. For example, in 2024, automotive companies across Europe have announced plant closures and layoffs to address weak demand, high costs, and competition from China in the EV market. If the market for EVs in general does not develop as expected, or develops more slowly than expected, our business, prospects, financial condition and operating results could be harmed.

We are an early-stage company with a history of financial losses and expect to incur significant expenses and continuing losses from operations for the foreseeable future.

We incurred a loss from operations of approximately \$525.2 million, a net loss of approximately \$477.9 million for the year ended December 31, 2024, and an accumulated deficit of approximately \$3.4 billion from our inception in 2010 through December 31, 2024. We believe that we will continue to incur operating losses each quarter until at least the time significant production of our lithium-metal solid-state batteries begins, and such production is not expected to begin in the near future.

We expect the rate at which we will incur losses to be significantly higher in future periods as we, among other things, continue to incur significant expenses in connection with the design, development and manufacturing of our batteries; expand our research and development activities; invest in manufacturing capabilities; build up inventories of components for our batteries; increase our sales and marketing activities; develop our distribution infrastructure; and increase our general and administrative functions to support our growing operations. We may find that these efforts are more expensive than we currently anticipate or that these efforts may not result in revenues, which would further increase our losses.

We believe that our technology enables a variety of business models, including but not limited to sole manufacturing, joint ventures, and licensing, each of which may involve certain risks and tradeoffs.

We believe that our technology enables a variety of business models and presents opportunities with a variety of potential customers, such as automotive OEMs, end-users, and licensees, as applicable. In addition to the collaboration with PowerCo, which contemplates a licensing arrangement, we may license technology to other manufacturers, operate our own manufacturing facilities, or enter into joint venture arrangements, among other approaches, each with potential risks and tradeoffs.

Operating solely-owned manufacturing facilities would allow us full control over production and quality, helping us protect proprietary processes and maintain consistency. However, this approach would require significant capital investment in infrastructure, equipment, and workforce, leading to increased operational expenses and financial exposure, and the capital required for such investment may not be available on attractive terms, if at all. Managing manufacturing operations also exposes us to risks such as supply chain disruptions, production delays, cost overruns, equipment failures, and scaling challenges, which may hinder our ability to meet demand or maintain competitive pricing. Without third-party manufacturers to rely on, any inefficiency or failure in our facilities could have a materially adverse effect on our business, profitability, and reputation.

In a joint venture arrangement, we would collaborate with third parties to commercialize and manufacture our battery technology, sharing both risks and resources. This could provide access to additional capital, markets, and expertise, but also introduces risks related to control and management. Disagreements with partners over operational decisions, strategy, or investments could disrupt our business plans, while our reliance on their performance could pose additional risks. If a joint venture partner fails to fulfill their obligations or experiences financial or operational issues, it could lead to inefficiencies, delays, or disruptions that harm our business and reputation.

Under a licensing model, for example if we enter into the PowerCo IP License Agreement with PowerCo, we can leverage our battery technology by licensing it to third parties for commercialization and manufacturing. This approach could reduce capital requirements by limiting investments in infrastructure and operations and potentially enable faster market penetration. However, licensing could lead to lower revenue, reduced control over production, and distribution challenges. Licensing agreements may also pose risks of third-party noncompliance, inconsistent execution, quality issues, or competitive disadvantages. Additionally, relying on third-party licensees could result in missed market opportunities or reputational damage due to negative association with certain third parties, ultimately impacting our profitability and growth.

Aside from the business models described above, if we pursue other types of arrangements or business models, we potentially face other risks and tradeoffs that could have a materially adverse effect on our business, profitability, and reputation.

Our expectations and targets regarding when we will achieve various technical, pre-production and production objectives depend in large part upon assumptions and analyses developed by us. If these assumptions or analyses prove to be incorrect, we may not achieve these milestones when expected or at all.

Our expectations and targets regarding when we will achieve various technical, pre-production and production objectives reflect our current expectations and estimates, and are projections based on information readily available to us when setting such milestones. When or whether we will achieve these objectives within the projected timelines depends on a number of factors, many of which are outside our control, including, but not limited to:

- success and timing of development activity;
- unanticipated technical or manufacturing challenges or delays;
- technological developments relating to lithium-ion, lithium-metal solid-state or other batteries that could adversely affect the commercial potential of our technologies;
- whether we can obtain sufficient capital to continue our research and development activities, build our manufacturing facilities and sustain and grow our business;
- adverse developments in our collaboration with Volkswagen, including termination of the PowerCo Collaboration Agreement or PowerCo IP License Agreement, if entered into, delays in achieving the milestones set forth in the PowerCo Collaboration Agreement or failing to meet the milestones prerequisite to our entering into the PowerCo IP License Agreement;
- our ability to manage our growth;
- whether we can manage relationships with key suppliers;
- our ability to retain existing key management, integrate recent hires and attract, retain and motivate qualified personnel; and
- the overall strength and stability of domestic and international economies.

Unfavorable changes in any of these or other factors, most of which are beyond our control, could materially and adversely affect our ability to achieve our objectives when planned and our business, results of operations and financial results.

Our ability to manage our business is highly dependent on IT systems and our website, systems, and data may be subject to intentional or inadvertent disruption, security incidents, or alleged violations of laws, regulations, or other obligations relating to data handling could adversely impact our reputation and future sales.

We are highly dependent upon a variety of information systems to operate our business. The information systems (including internal and external systems such as our website or systems used by partners, service providers, suppliers, customers, and other third parties') supporting our research, development, and the manufacturing of our batteries, and the data we maintain, including our intellectual property, may be subject to intentional or inadvertent disruption, such as telecommunications or network failures, security incidents, or alleged violations of laws, regulations, or other obligations relating to data handling. Any such matters, or perceptions that any of them have occurred, could result in private claims, demands and litigation, regulatory investigations and other proceedings, as well as fines and other liabilities, which could adversely impact our reputation and future sales. We expect to face significant challenges with respect to information security and maintaining the security and integrity of our systems and other systems used in our business, as well as with respect to the data stored on or processed by these systems. Advances in technology, including increased adoption of artificial intelligence technology by us and third-party service providers, suppliers, customers, and other third-party partners, an increased level of sophistication and expertise of hackers, new discoveries in the field of cryptography or other technological developments can result in actual or perceived compromise or breach of, or other security incident with respect to, the systems used in our business or of security measures used in our business to protect intellectual property, confidential information, personal information, and other data. Additionally, remote working further increases the security threats that we and our third-party service providers, suppliers, and customers face.

The availability and effectiveness of our batteries, and our ability to conduct our business and operations, depend on the continued operation of information technology and communications systems, some of which we have yet to develop or otherwise obtain the ability to use. We must routinely update our IT infrastructure and our various IT systems throughout the organization, or we may not continue to meet our current and future business needs. Systems used in our business by us and our third-party service providers, suppliers, customers, and partners, including data centers and other information technology systems, may also be vulnerable to damage or interruption. Such systems could also be subject to physical or electronic break-ins, corporate sabotage or state-sponsored espionage, and intentional acts of vandalism, infection by ransomware, viruses, or other malware, as well as disruptions and security incidents as a result of non-technical issues, including intentional or inadvertent acts or omissions by employees, service providers, suppliers, customers or others, to among other things, properly implement our software and related security patches and updates. We use service providers to help provide certain services, and any such service providers face similar security and system disruption risks as us. Some of the systems used in our business are not and will not be fully redundant, and our disaster recovery planning cannot account for all eventualities. Any data security incidents or other disruptions to any data centers or other systems used in our business by us and our third-party service providers, suppliers, and customers could result in lengthy interruptions in our service and may adversely affect our business, prospects, financial condition and operating results.

Significant capital and other resources may be required in efforts to enhance our current IT systems, implement new IT systems, protect against information security breaches, security incidents, and system disruptions, or to alleviate problems caused by actual or suspected information security breaches and other data security incidents and system disruptions. The resources required may increase over time as the methods used by hackers and others engaged in online criminal activities and otherwise seeking to obtain unauthorized access to systems or data, and to disrupt systems, are increasingly sophisticated and constantly evolving. In addition, the risk of cyberattacks may be heightened due to the war in Ukraine. Such cyberattacks could disrupt the economy more generally and could also impact our operations either directly or indirectly.

Security breaches and/or incidents can also remain undetected for an extended period, including situations in which hackers mine data over time or optimize the timing and potency of their cyberattacks or disruptions. Any failure or perceived failure by us or our service providers, suppliers, customers, and partners, to prevent information security breaches or other security incidents or system disruptions, or to comply with privacy policies or any actual or asserted legal obligations relating to privacy or information security, or any compromise of security that results in or is perceived or reported to result in unauthorized access to, or loss, theft, alteration, release, transfer, unavailability, or other processing of, our information, or any personal information or other customer data or confidential information, that we or our service providers, suppliers, customers, and partners, maintain or otherwise process, could cause our potential customers to lose trust in us, result in loss or theft of proprietary or sensitive data and intellectual property, could harm our reputation and competitive position and could expose us to legal claims, demands, and litigation, regulatory investigations and proceedings, and fines, penalties, and other liability. Any such actual or perceived security breach, security incident or disruption could also divert the efforts of our technical and management personnel and could require us to incur significant costs and operational consequences in connection with investigating, remediating, eliminating and putting in place additional equipment and devices designed to prevent actual or perceived security breaches and other incidents and system disruptions.

Additionally, our handling of data relating to individuals is subject to a variety of laws and regulations relating to privacy, data protection, and data security, and may become subject to additional obligations, including contractual obligations, relating to our maintenance and other processing of this data. Laws, regulations, and other actual and potential obligations relating to privacy, data protection, and data security are evolving rapidly, and we expect to potentially be subject to new laws and regulations, or new interpretations of laws and regulations, in the future in various jurisdictions. These laws, regulations, and other obligations, and changes in their interpretation, could require us to modify our operations and practices, restrict our activities, and increase our costs, and it is possible that these laws, regulations, and other obligations may be inconsistent with one another or be interpreted or asserted to be inconsistent with our business or practices. Any failure or perceived failure to comply with any applicable laws, regulations, or other obligations relating to privacy, data protection, or data security could also result in regulatory investigations and proceedings, and misuse of or failure to secure data relating to individuals could also result in claims and proceedings against us by governmental entities or others, penalties and other liability, and damage to our reputation and credibility, and could have a negative impact on potential future revenues and profits.

In addition, if any issues concerning the IT systems result in, or contribute to, a delay in our timely reporting of our results of operations for any period or our not filing one or more periodic reports with the SEC on time, the price of our Class A Common Stock could decline substantially, and we could face costly lawsuits, including securities class actions, and also could impair our ability to raise necessary capital to run our operations and progress our product development efforts. Further, as we are dependent upon our ability to gather and promptly transmit accurate information to key decision makers, our business, results of operations and financial condition may be adversely affected if our information systems do not allow us to transmit accurate information, even for a short period of time. Failure to properly or adequately address these issues could negatively impact our ability to perform necessary business operations, which could adversely affect our reputation, competitive position, business, results of operations and financial condition. While our enterprise resource planning (“ERP”) system is designed to accurately maintain our books and records and provide important information to our management team for use in the operation of the business if the ERP system or any other implemented system does not operate as intended, it could adversely affect our financial reporting systems and our ability to produce financial reports and process transactions.

We are exposed to risks related to the use of artificial intelligence by us, our suppliers, partners and competitors.

We are increasingly incorporating artificial intelligence capabilities into our business operations. Artificial intelligence technology is complex and rapidly evolving and presents risks and challenges that may impact our business, including subjecting us to significant competitive, legal, regulatory, operational and other risks. There is no guarantee that use of artificial intelligence will enhance our technologies, benefit our business operations, or produce products and services that are preferred by our partners and customers. Additionally, artificial intelligence algorithms or training methodologies may be flawed, and datasets may contain irrelevant, insufficient, biased or proprietary information, including the intellectual property of others, which can result in output errors and inadvertent infringement of others' intellectual property rights, and may give rise to legal liability and materially harm our business. Our competitors may also be more successful in their artificial intelligence strategy and develop competitive products with the aid of artificial intelligence technology. As a result, any issues in the development and use of artificial intelligence by us or our suppliers, partners and competitors, combined with an uncertain regulatory environment, may result in reputational harm, liability, or other adverse consequences to our business operations.

Evolving scrutiny and changing expectations from global regulators and our stakeholders regarding our environmental, social and governance (ESG) practices and value proposition could adversely affect our business, brand and reputation.

There is evolving focus, including from global regulators and stakeholders such as our investors, customers and partners, on ESG matters, including climate change, environmental stewardship, diversity and inclusion, and sustainability strategy. In particular, increasing public awareness and concern over climate change may result in new or increased legal and regulatory requirements to reduce or mitigate the effects of climate change on the environment. Increased costs of energy or compliance with emissions standards due to increased legal or regulatory requirements may cause disruptions in or increased costs associated with our development and manufacturing operations. Agreements with customers and partners, such as the PowerCo Collaboration Agreement, include and may include obligations related to sustainability targets. There can be no certainty that we will manage such matters successfully, or that we will successfully meet stakeholders' expectations as to our proper role with respect to ESG matters. Any failure or perceived failure to timely manage, respond, or meet ESG related contractual, legal or regulatory requirements, expectations or targets, including with respect to reducing our or our partners' impact on the environment, or addressing climate change related impacts or other sustainability concerns, could subject us to significant costs and liabilities and adversely affect our business and reputation.

From time to time, we are involved in litigation, regulatory actions or government investigations and inquiries, which could have an adverse impact on our profitability and consolidated financial position.

We are involved in a variety of litigation, other claims, suits, regulatory actions or government investigations and inquiries and commercial or contractual disputes that, from time to time, are significant. See Note 7, Commitments and Contingencies, to the consolidated financial statements included elsewhere in this Report for a description of certain litigation matters that we are involved in.

In addition, from time to time, we may also be involved in legal proceedings and investigations arising in the normal course of business including, without limitation, commercial or contractual disputes, including warranty claims and other disputes with potential customers and suppliers; intellectual property matters; personal injury claims; environmental issues; tax matters; and employment matters including actions under California's Private Attorney General Act.

It is difficult to predict the outcome or ultimate financial exposure, if any, represented by these matters, and there can be no assurance that any such exposure will not be material. Such claims may also negatively affect our reputation.

We may become subject to product liability claims, which could harm our financial condition liquidity and reputation if we are not able to successfully defend or insure against such claims.

We may become subject to product liability claims, even those without merit, which could harm our business, prospects, reputation, operating results, and financial condition. We face inherent risk of exposure to claims in the event our batteries do not perform as expected, fail to meet relevant safety standards or requirements, or malfunction resulting in personal injury or death. Our risks in this area are particularly pronounced given our batteries have not yet been commercially tested or mass produced. A successful product liability claim against us could require us to pay a substantial monetary award. Moreover, a product liability claim could generate substantial negative publicity about our batteries and business and inhibit or prevent commercialization of other future battery candidates, which would have a material adverse effect on our brand, business, prospects and operating results. Any insurance coverage might not be sufficient to cover all potential product liability claims. Any lawsuit seeking significant monetary damages either in excess of our coverage, or outside of our coverage, may have a material adverse effect on our reputation, business and financial condition. We may not be able to secure additional product liability insurance coverage on commercially acceptable terms or at reasonable costs when needed, particularly if we do face liability for our products and are forced to make a claim under our policy.

We are subject to anti-corruption, anti-bribery, anti-money laundering, financial and economic sanctions and similar laws, and non-compliance with such laws can subject us to administrative, civil and criminal fines and penalties, collateral consequences, remedial measures and legal expenses, all of which could adversely affect our business, results of operations, financial condition and reputation.

We are subject to anti-corruption, anti-bribery, anti-money laundering, financial and economic sanctions and similar laws and regulations in various jurisdictions in which we conduct or in the future may conduct activities, including the U.S. Foreign Corrupt Practices Act (“FCPA”), the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.K. Bribery Act 2010, the U.S. Bank Secrecy Act, as amended, and other similar laws and regulations. The FCPA and the U.K. Bribery Act 2010 prohibit us and our officers, directors, employees and business partners acting on our behalf, including agents, from corruptly offering, promising, authorizing or providing anything of value to a “foreign official” for the purposes of influencing official decisions or obtaining or retaining business or otherwise obtaining favorable treatment. The U.K. Bribery Act also prohibits non-governmental “commercial” bribery and soliciting or accepting bribes. The U.S. Bank Secrecy Act, particularly 18 U.S.C. §§ 1956, 1957, generally prohibits persons from engaging in transactions where the proceeds at issue derive from, or are intended to facilitate or conceal, illegal activity, or where a party to the transaction is “willfully blind” to the illegal sources of the proceeds.

We may leverage third parties to conduct our business. We, our directors, officers, employees, representatives, consultants, agents, and business partners may have direct or indirect interactions with officials and employees of government agencies or state-owned or affiliated entities and we may be held liable for the corrupt or other illegal activities of these directors, officers, employees, representatives, consultants, agents, and business partners even if we do not explicitly authorize such activities. The FCPA also requires companies to make and keep books, records and accounts that accurately reflect transactions and dispositions of assets and to maintain a system of adequate internal controls and compliance procedures designed to prevent such violations. While we have policies and procedures designed to ensure compliance with these laws and regulations, we cannot guarantee that none of our directors, officers, employees, representatives, consultants, agents, and business partners will not engage in improper conduct for which we may be held responsible.

Any allegations of or violations of anti-corruption, anti-bribery, anti-money laundering, or financial and economic sanctions laws could subject us to whistleblower complaints, adverse media coverage, investigations, and severe administrative, civil and criminal sanctions, collateral consequences, remedial measures and legal expenses, all of which could materially and adversely affect our business, results of operations, financial condition and reputation. Responding to any investigation or action will likely result in a materially significant diversion of management’s attention and resources and significant defense costs and other professional fees. In addition, changes in economic sanctions laws in the future could adversely impact our business and investments in our Class A Common Stock.

Inflation and increased interest rates may adversely affect our financial condition and results of operations.

Our operations could be adversely impacted by inflation, primarily due to higher material, labor, and construction costs. To date, we do not believe that inflation has had a material impact on our results of operations, capital resources or liquidity; however, we have experienced increases in prices of raw materials, components and labor costs. Our future mitigation strategies may include considering alternative vendors, vertically integrating certain aspects of our supply chain and redesigning our product or production process. It is difficult to determine what impact inflationary pressures will have on our long-term growth strategies, as there is uncertainty regarding how long higher levels of inflation may persist, and to what level these increased costs will affect commercialization of our product. If we are not able to fully offset higher costs through price increases or other corrective measures, this may adversely affect our business, financial condition and results of operations.

Our management has limited experience in operating a public company.

Some of our executive officers have limited experience in the management of a publicly traded company. As a public company, we are subject to significant regulatory oversight and reporting obligations under federal securities laws, and certain executives’ limited experience in dealing with the increasingly complex laws pertaining to public companies could be a significant disadvantage in that it is likely that an increasing amount of their time may be devoted to these activities which will result in less time being devoted to the management and growth of our Company. Additionally, we may not have adequate personnel with the appropriate level of knowledge, experience, and training in the accounting policies, practices or internal controls over financial reporting required of public companies in the United States.

We may be negatively impacted by epidemics, pandemics, and other outbreaks.

We face various risks related to epidemics, pandemics, and other outbreaks. For example, the COVID-19 pandemic resulted in changes in consumer and business behavior, a severe market downturn, and restrictions on business and individual activities, as well as in significant volatility in the global economy and reduced economic activity. The spread of COVID-19 also impacted our potential customers and our suppliers by disrupting the manufacturing, delivery and overall supply chain of battery, EV and equipment manufacturers and suppliers and led to a global decrease in battery and EV sales in markets around the world. In response to the pandemic, government authorities implemented numerous measures to try to contain the virus, such as travel bans and restrictions, quarantines, stay-at-home or shelter-in-place orders, and business shutdowns, which affected our operations and the operations of our suppliers, vendors and business partners.

In the event of a further epidemic, pandemic or other outbreak, we may face similar adverse effects as experienced during the COVID-19 pandemic. For example, we may be required to take a variety of measures as may be required by government authorities or that we determine are in the best interests of our employees, suppliers, vendors and business partners, and any such measures may adversely affect our future manufacturing plans, supply chain sales and marketing activities, business and results of operations.

The extent to which any such epidemic, pandemic or other outbreak would impact our business, prospects and results of operations will depend on future developments, which are highly uncertain and cannot be predicted, including the duration and spread of any such epidemic, pandemic or other outbreak, the actions to contain the outbreak or treat its impact, including the development, distribution and administration of effective vaccines, a waning immunity among persons already vaccinated, an increase in fatigue or skepticism with respect to initial or booster vaccinations, the severity of breakthrough cases and variants, including potentially vaccine-resistant variants, and how quickly and to what extent normal economic and operating activities can resume. Even after any such epidemic, pandemic or other outbreak has subsided, we may continue to experience an adverse impact to our business as a result of the global economic impact, including any recession that has occurred or may occur in the future, or due to changes in consumer behavior, for example an increase in remote work leading to a decrease in demand for automobiles.

Our Regulatory Risks

Global trade issues and changes in and uncertainties with respect to trade policies and export regulations, including import and export license requirements, trade sanctions or restrictions, tariffs and international trade disputes, could substantially harm our business and operating results.

Our batteries, and the sale of EVs and motor vehicles in general, are subject to substantial regulation under international, federal, state and local laws, including export control laws. We expect to incur significant costs in complying with these regulations. Regulations related to the battery and EV industry and alternative energy are currently evolving and we face risks associated with changes to these regulations as well as potential for heightened regulatory scrutiny. For example, laws and regulations may be passed that make manufacturers financially responsible for the collection, treatment, recycling and disposal of certain products, including batteries for EVs. The costs of complying with such requirements, as they now exist or as may be introduced in the future, and the associated administrative burden could adversely affect our financial condition and results of operations, particularly if we are unable to pass on such costs to our customers. The costs of complying with such requirements, as they now exist or as may be introduced in the future, and the associated administrative burden could adversely affect our financial condition and results of operations, particularly if we are unable to pass on such costs to our customers.

Internationally, there may be laws and regulations in the United States or in jurisdictions we have not yet entered or laws we are unaware of in jurisdictions we have entered that may restrict our sales or other business practices. The laws in this area can be complex, difficult to interpret and may change over time. Continued regulatory limitations and other obstacles that may interfere with our ability to engage with partners or commercialize our products can negatively impact demand for our future product, increase our supply chain complexity and manufacturing costs, reduce the competitiveness of our products, or restrict our ability to sell products or raise capital, any or all of which could have a negative and material impact on our business, prospects, financial condition and results of operations.

In addition, the complex relationships among the United States and the countries in which we may conduct business, pose inherent risk that political, diplomatic, and national security factors can lead to global trade restrictions and changes in trade policies and export regulations that affect the EV industry. As geopolitical conflicts, such as wars in Ukraine and in the Middle East and the U.S.-China trade tensions continue, or possibly escalate, this may lead to further disruption, instability and volatility in global markets and industries that could negatively impact our operations and our supply chain. The U.S. government and other governments have already imposed severe sanctions and export controls against Russia and Belarus, as well as entities in China and other countries that are supporting Russia's invasion of Ukraine, and may yet impose additional sanctions and controls. The impact of these measures, as well as potential responses to them by Russia, China, and other countries, is currently unknown and they could adversely affect the global economy, our business, supply chain, partners or customers.

The U.S. government has and may continue to make significant changes in U.S. trade policy, including further expanding its controls on exports and imposing new tariffs on imports from various countries, which could negatively impact U.S. trade and result in the adoption of tariffs by other countries as well, leading to a global trade war. More specifically, the U.S. government has from time to time imposed significant tariffs on and prohibited imports of products from China. In retaliation, China has implemented additional tariffs on a wide range of American products, imposed controls on exports of rare earth minerals to the United States and may impose additional tariffs and controls on inputs used by the EV industry. Such tariffs and prohibitions, if expanded to other categories, could have a significant impact on our business, adversely affect supply chains, and may impact our ability to access materials or production equipment in a timely manner, including around the importation of parts of our batteries and certain production equipment that is manufactured in, or with inputs from, China. If we attempt to renegotiate prices with suppliers or diversify our supply chain in response to tariffs, such efforts may not yield immediate results or may be ineffective. We might also consider increasing prices to our customers once we commence sales of our products; however, this could reduce the competitiveness of our products and adversely affect net sales.

We cannot predict what actions may ultimately be taken with respect to tariffs or trade relations between the U.S. and other countries, what products may be subject to such actions, or what actions may be taken by the other countries in retaliation. If we fail to manage these dynamics successfully, gross margins and profitability could be adversely affected. As of the date of this report, tariffs have not had a material impact on our business, but should there be further disruption, instability and volatility in global markets and industries resulting from the dynamics of geopolitical relations between the U.S. and China, or the U.S. and other countries, our business could be materially and adversely affected, including due to volatility of prices and lead times of equipment and materials sourced from or with a supply chain passing through China.

The U.S. or foreign governments may take additional administrative, legislative, or regulatory action that could materially interfere with our ability to sell products in certain countries. Sustained uncertainty about, or worsening of, current global economic conditions and further escalation of trade tensions between the United States and its trading partners, especially China, could result in a global economic slowdown and long-term changes to global trade, including retaliatory trade restrictions which may have an adverse effect on our business, financial condition and results of operations. Any alterations to our business strategy or operations made in order to adapt to or comply with any such changes would be time-consuming and expensive, and certain of our competitors may be better suited to withstand or react to these changes.

To the extent regulations change, we may not be in compliance with applicable international, federal, state or local regulations, which would have an adverse effect on our business. Compliance with changing regulations could be burdensome, time consuming, and expensive. To the extent compliance with new regulations is cost prohibitive, our business, prospects, financial condition and operating results would be adversely affected.

We are subject to environmental and safety risks and requirements relating to environmental and safety regulations and environmental remediation matters which could adversely affect our business, results of operation and reputation.

Battery technology development and manufacturing involves certain inherent environmental and safety risks. Some of our employees handle hazardous materials, including chemicals, such as lithium and sulfide containing materials, that pose specific challenges. We have engineering and administrative controls in place for handling these materials along with any hazardous substances and the employees who handle such materials are required to follow certain safety procedures, including the use of personal protective equipment such as respirators where needed, chemical goggles, and other protective clothing. In addition to exposure, materials with lithium and sulfides have the propensity to start fires. While we believe we have taken precautionary measures which include engineering controls, personal protective equipment, procedures and training to prevent human exposures and fires, including annual safety training for our employees, we cannot ensure that human or environmental exposure to hazardous materials used in our development activities and prototype products will not occur. Any such exposure could result in future third-party claims against us, damage to our reputation, and heightened regulatory scrutiny, remedial and corrective action obligations or the incurrence of capital expenditures, any of which could limit or impair our ability to attract customers. The occurrence of future events such as these could have a material adverse effect on our business, financial condition and results of operations.

We utilize new manufacturing equipment, techniques and processes, including specialized automated manufacturing equipment within our separator, cathode, and cell assembly process areas. These equipment and processes pose hazards typical to manufacturing such as but not limited to hazardous materials, moving parts, and high voltage and/or high current electrical systems typical of large manufacturing equipment and related safety incidents. Although we conduct equipment and process reviews before use, we may not be able to prevent the occurrence of safety incidents that damage machinery or our products, slow or stop production, or harm employees. Consequences to such safety incidents may include litigation, regulation, fines, increased insurance premiums, personal injury to or death of our employees, mandates to temporarily halt production, workers' compensation claims, damage to our facilities, or other actions that impact our company brand, finances, or ability to operate.

In addition to risks listed above, we are subject to numerous federal, state and local environmental laws and regulations governing, among other things, solid and hazardous waste storage, treatment and disposal, and remediation of releases of hazardous materials. There are significant capital, operating and other costs associated with compliance with these environmental laws and regulations. Environmental laws and regulations, including used battery recycling, recovery and reuse, are cost intensive activities that we support. Federal, state and local authorities also regulate a variety of matters, including, but not limited to, health, safety and permitting in addition to the environmental matters discussed above. New legislation and regulations may require us to make material changes to our operations, resulting in significant increases to the cost of production.

Risks Related to Ownership of Our Common Stock and Our Certificate of Incorporation and Bylaws Provisions

Our Class A Common Stock has been and may in the future continue to be subject to extreme volatility.

The trading price of our Class A Common Stock has been and may in the future continue to be subject to extreme volatility. For example, from November 27, 2020, the date our Class A Common Stock began trading on the NYSE, through December 31, 2024, our Class A Common Stock has experienced an intra-day trading high of \$132.73 per share and an intra-day trading low of \$4.65 per share. At certain times during such period, the daily fluctuations in the trading price of our Class A Common Stock were substantially greater than 10%. We cannot predict the magnitude of future fluctuations in the trading price of our Class A Common Stock. The trading price of our Class A Common Stock may be affected by a number of factors, including events described in the risk factors set forth in this Report and in our other reports filed with the SEC from time to time, as well as our operating results, financial condition and other events or factors. Any of the factors listed below could have a material adverse effect on your investment in our securities. Factors affecting the trading price of our securities may include:

- announcements by us or our competitors regarding technical developments and levels of performance achieved by our or their battery technologies;
- announcements by us regarding the timing of our production objectives, including regarding our pilot line and our QSE-5 product;
- announcements by us or Volkswagen regarding developments in our relationship with Volkswagen, or changes in Volkswagen's investment in us;
- misinformation or negative information available in public media published or disseminated by third parties and not otherwise attributable to official statements made by us;
- our ability to bring our products and technologies to market on a timely basis, or at all;
- our operating results or development efforts failing to meet the expectation of securities analysts or investors in a particular period;
- actual or anticipated fluctuations in our quarterly financial results or the quarterly financial results of companies perceived to be similar to it;
- changes in the market's expectations about our operating results or the EV industry;
- success of competitors actual or perceived development efforts;
- changes in financial estimates and recommendations by securities analysts concerning us or the battery industry in general;
- operating and share price performance of other companies that investors deem comparable to us;
- disputes or other developments related to proprietary rights, including patents, litigation matters and our ability to obtain and assert intellectual property protection for our technologies;
- changes in laws and regulations affecting our business;
- our ability to meet compliance requirements;
- commencement of, resolution of, or involvement in, litigation involving us;
- contests, actions or requests by activist stockholders seeking to effect change in our strategic operations;
- changes in our capital structure, such as future issuances of securities or the incurrence of additional debt;
- the volume of shares of Class A Common Stock available for public sale;
- the level of demand for our stock, including the amount of short interest in our Class A Common Stock;
- any major change in our Board or management;

- sales of substantial amounts of the shares of Class A Common Stock by our directors, executive officers or significant stockholders, including Volkswagen, or the perception that such sales could occur;
- changes in the estimates and assumptions that we make in the preparation of our financial statements may result in the fluctuation of our results of operations; and
- general economic and political conditions such as recessions, interest rates, fuel prices, international currency fluctuations, acts of terrorism, hostilities or the perception that hostilities may be imminent, and military conflict and acts of war.

Broad market and industry factors may materially harm the market price of our securities irrespective of our operating performance. The stock market has experienced price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of the particular companies affected. The trading prices and valuations of securities may not be predictable. A loss of investor confidence in the market or the securities of other companies which investors perceive to be similar to us could depress the market price of our securities regardless of our business, prospects, financial conditions or results of operations. A decline in the market price of our securities also could adversely affect our ability to issue additional securities and our ability to obtain additional financing in the future.

Following certain periods of volatility in the market price of our securities, we may become the subject of securities litigation. We have experienced and may in the future experience additional litigation following periods of volatility. This type of litigation may result in substantial costs and a diversion of management's attention and resources.

Sales of substantial amounts of our Class A Common Stock in the capital markets by us or our stockholders could result in additional dilution of the percentage ownership of our stockholders and could reduce the price of our Class A Common Stock.

Sales of a substantial number of shares of our Class A Common Stock in the capital markets could result in additional dilution of the percentage ownership of our stockholders, and the perception that such sales could occur could adversely affect the market price of our Class A Common Stock, which may make it more difficult for you to sell your Class A Common Stock at a time and price that you deem appropriate.

We have filed registration statements with the SEC to register shares for certain stockholders to sell their shares. We have also filed registration statements with the SEC to register shares reserved for future issuance under our equity compensation plans. Subject to there being effective registration statements covering the sales of such shares, the satisfaction of applicable exercise periods and expiration of any applicable lock-up agreements, the shares issued upon exercise of outstanding stock options and settlement of outstanding restricted stock units will be available for immediate resale in the open market.

We completed underwritten public offerings in March 2021 and August 2023 and made sales pursuant to the ATM offering during the year ended December 31, 2024. All shares sold pursuant to such offerings are freely tradable without restrictions or further registration under the Securities Act, except for any shares sold to or purchased by any of our "affiliates" as defined in Rule 144 under the Securities Act. We may in the future offer for sale additional shares of our Class A Common Stock or other securities convertible into or exchangeable for our Class A Common Stock. For example, we may use the ATM offering or conduct other capital raises in the future, any of which may be dilutive to existing stockholders. We cannot assure you 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 paid by you for your existing shares, and investors purchasing shares or other securities in future offerings could have rights superior to existing stockholders. A significant portion of our total outstanding shares are eligible to be sold into the market, which could cause the market price of our Class A Common Stock to drop significantly, even if our business is doing well.

Developing solid-state batteries is capital-intensive, and we may not be able to raise additional capital on attractive terms, if at all. If we cannot raise additional capital when needed, our operations and prospects could be materially and adversely affected.

The development, design, manufacture and license or sale of batteries is a capital-intensive business, which to date we have financed through joint venture arrangements, other third-party financings and issuance of additional equity. As a result of the nature of our business, we can be expected to continue to sustain substantial operating expenses without generating sufficient revenues to cover expenditures. Over time, we expect that we will need to raise additional funds, including through entry into new collaboration, license or joint venture arrangements, through the issuance of equity, equity-related or debt securities or through obtaining credit from financial institutions to fund, together with our principal sources of liquidity, ongoing costs such as research and development relating to our batteries, the construction and scale up of our pilot line, any significant unplanned or accelerated expenses, and new strategic investments. We cannot be certain that additional capital will be available on attractive terms, if at all, when needed, which could materially and adversely affect our financial condition, results of operations, business and prospects.

Any failure by our management to use the proceeds effectively from our completed public offerings or any future offerings of equity or debt instruments, whether from the ATM or other sources of liquidity, such as the royalty fee under the PowerCo IP License Agreement, if entered into, could harm our business, and we may invest such proceeds in a manner that does not produce income or that loses value, which may negatively impact the market price of our Class A Common Stock.

Short sellers may engage in manipulative activity that could drive down the market price of our Class A Common Stock.

Short selling is the practice of selling securities that the seller does not own but rather has borrowed or intends to borrow from a third party with the intention of later buying lower priced identical securities to return to the lender. Accordingly, it is in the interest of a short seller of our Class A Common Stock for the price to decline. Some short sellers publish, or arrange for the publication of, opinions about or characterizations of our business which may create negative market momentum, even if they contain false and misleading statements about our Company. Issuers, like us, whose securities have historically had limited trading history or volumes and/or have been susceptible to relatively high volatility levels can be particularly vulnerable to such short seller attacks. No assurances can be made that similar declines in the market price of our Class A Common Stock will not occur in the future, in connection with the activities of short sellers. If we are subject to unfavorable allegations promoted by short sellers, we may have to expend a significant amount of resources to investigate such allegations and defend ourselves.

We are required to use judgments in making estimates and assumptions in the preparation of our consolidated financial statements, and our results of operations may fluctuate significantly as a result of changes to our estimates and assumptions.

Certain of our accounting policies require the application of subjective or complex judgments, often requiring us to make estimates about the effects of matters that are inherently uncertain and may change in subsequent periods, or for which the use of different estimates that could have reasonably been used in the current period would have had a material impact on our financial condition and results of operations.

All stock-based awards are required to be recognized based on their estimated grant date fair values. The amount recognized could vary depending on a number of assumptions or changes that may occur. We have granted stock-based awards to certain members of our management team pursuant to the EPA Program. EPA Program awards have a vesting schedule based on the attainment of both performance (e.g., business milestones) and market conditions (e.g., stock price target).

For awards containing service, performance and market conditions, where all conditions must be satisfied prior to vesting, such as the EPA Program awards, compensation expense is recognized over the requisite service period, which is based on management's estimate of the probability and timing of the performance condition being satisfied, assessed at each reporting period. These estimates require management's judgments and changes in the probability-based assumptions can materially affect the timing of recognition of stock-based compensation expense and consequently, the related amount recognized in our statements of operations and comprehensive income.

Concentration of ownership among a few stockholders and our executive officers, directors and their affiliates and the dual class structure of our Common Stock may prevent other stockholders from influencing significant corporate decisions, including the outcome of important transactions, including a change in control.

As of December 31, 2024, our executive officers, directors and their affiliates as a group and each of our stockholders who own 10% or more of our outstanding Class A Common Stock or our Class B Common Stock (together, the "Common Stock"), in the aggregate, beneficially own approximately 21.5% of our Class A Common Stock and 93.6% of our Class B Common Stock outstanding, representing approximately 59.2% of the vote. As a result, these stockholders, including Volkswagen, will be able to exercise a significant level of control over all matters requiring stockholder approval, including the election of directors, any amendment of our Amended and Restated Certificate of Incorporation (the "Certificate of Incorporation") and approval of significant corporate transactions. In addition, Volkswagen holds the right to designate two directors to our Board. Currently, Dr. Günther Mendl, Head of the Center of Excellence Battery at Volkswagen AG, and Sebastian Schebera, Head of Strategic Partnerships at Volkswagen AG, are members of our Board. This control could have the effect of delaying or preventing a change of control or changes in our management and will make the approval of certain transactions difficult or impossible without the support of these stockholders and of their votes. Shares of Class B Common Stock have 10 votes per share, while shares of Class A Common Stock have one vote per share. As of December 31, 2024, the holders of the Class B Common Stock (excluding the voting power of any shares of Class A Common Stock beneficially owned by such holders) control approximately 52.2% of the voting power of our capital stock and therefore collectively control matters submitted to our stockholders for approval, including the election of directors, amendments of our organizational documents and any merger, consolidation, sale of all or substantially all of our assets or other major corporate transactions. Even though these holders are not party to any agreement that requires them to vote together, they may have interests that differ from yours and may vote in a way with which you disagree, and which may be adverse to your interests. This concentrated control may have the effect of delaying, preventing or deterring a change in control of us, could deprive our stockholders of an opportunity to receive a premium for their capital stock as part of a sale of us, and might ultimately affect the market price of shares of our Class A Common Stock.

Our dual class structure may depress the trading price of the Class A Common Stock.

We cannot predict whether our dual class structure will result in a lower or more volatile market price of the Class A Common Stock, in adverse publicity, or in other adverse consequences. For example, certain index providers have in the past imposed, and may again in the future impose, restrictions on including companies with multiple-class share structures in certain of their indexes. In addition, several stockholder advisory firms oppose the use of multiple class structures. As a result, the dual class structure of our Common Stock may cause stockholder advisory firms to publish negative commentary about our corporate governance practices or otherwise seek to cause us to change our capital structure. Any such exclusion from indices or any actions or publications by stockholder advisory firms critical of our corporate governance practices or capital structure could adversely affect the value and trading market of the Class A Common Stock.

Anti-takeover provisions in our Certificate of Incorporation or Bylaws and under Delaware law could make an acquisition of us more difficult, limit attempts by our stockholders to replace or remove our management and limit the market price of our Class A Common Stock.

Our Certificate of Incorporation, our amended and restated Bylaws (the “Bylaws”) and Delaware law contain provisions which could have the effect of rendering more difficult, delaying or preventing an acquisition deemed undesirable by our Board. These provisions include:

- authorizing “blank check” preferred stock, which could be issued by our Board without stockholder approval and may contain voting, liquidation, dividend and other rights superior to the Common Stock;
- limiting the liability of, and providing indemnification and exculpation rights to, our directors and officers;
- prohibiting cumulative voting in the election of directors;
- providing that vacancies on our Board may be filled only by majority of directors then in office of our Board, even though less than a quorum;
- prohibiting the ability of our stockholders to call special meetings;
- establishing advance notice procedures for stockholder proposals to be brought before an annual meeting, including proposed nominations of persons for election to our Board;
- requiring that, once there are no longer any outstanding shares of the Class B Common Stock, any action to be taken by our stockholders be effected at a duly called annual or special meeting and not by written consent;
- specifying that special meetings of our stockholders can be called only by a majority of our Board, the chair of our Board, or our Chief Executive Officer;
- requiring the approval of holders of at least two-thirds of the outstanding voting securities to amend the Bylaws and certain provisions of the Certificate of Incorporation once there are no longer any outstanding shares of Class B Common Stock; and
- reflecting two classes of Common Stock.

These provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our Board, which is responsible for appointing the members of our management. In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law (“DGCL”), which generally prohibits a Delaware corporation from engaging in any of a broad range of business combinations with any “interested” stockholder for a period of three years following the date on which the stockholder became an “interested” stockholder.

Our Bylaws provide, subject to limited exceptions, that the Court of Chancery of the State of Delaware and the federal district courts of the United States will be the sole and exclusive forum for certain stockholder litigation matters, which could limit our stockholders' ability to obtain a chosen judicial forum for disputes with us or our directors, officers, employees or stockholders.

Our Bylaws provide that, unless otherwise consented to by us in writing, the Court of Chancery of the State of Delaware (or, if the Court of Chancery does not have jurisdiction, another State court in Delaware or the federal district court for the District of Delaware) shall, to the fullest extent permitted by law, be the sole and exclusive forum for the following types of actions or proceedings: (i) any derivative action or proceeding brought on behalf of the Company; (ii) any action asserting a claim of breach of a fiduciary duty owed by, or otherwise wrongdoing by, any of our directors, officers, or other employees to us or our stockholders; (iii) any action arising pursuant to any provision of the DGCL or the Certificate of Incorporation or the Bylaws; (iv) any action to interpret, apply, enforce or determine the validity of the Certificate of Incorporation or the Bylaws; or (v) any other action asserting a claim that is governed by the internal affairs doctrine, in all cases subject to the court having jurisdiction over indispensable parties named as defendants. The Bylaws further provide that, unless otherwise consented to by the Company in writing, the federal district courts of the United States will be the sole and exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act against any person in connection with any offering of the Company's securities, including any auditor, underwriter, expert, control person or other defendant. These provisions would not apply to suits brought to enforce a duty or liability created by the Exchange Act.

Any person or entity purchasing, holding or otherwise acquiring any interest in our securities shall be deemed to have notice of and consented to these provisions. These choice of forum provisions may limit a stockholder's ability to bring a claim in a judicial forum of its choosing for disputes with the Company or any of our directors, officers, other employees or stockholders, which may discourage lawsuits with respect to such claims. There is uncertainty as to whether a court would enforce such provisions, and the enforceability of similar choice of forum provisions in other companies' charter documents has been challenged in legal proceedings. It is possible that a court could find these types of provisions to be inapplicable or unenforceable, and if a court were to find the choice of forum provisions contained in the Bylaws to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business, operating results and financial condition.

We do not expect to declare any dividends in the foreseeable future.

We do not anticipate declaring any cash dividends to holders of our Common Stock in the foreseeable future. Consequently, investors may need to rely on sales of their shares after price appreciation, which may never occur, as the only way to realize any future gains on their investment.

General Risk Factors

If we are unable to attract and retain key employees and qualified personnel, our ability to compete could be harmed.

Our success depends on our ability to attract and retain our executive officers, key employees and other qualified personnel. Achieving this objective may be difficult due to many factors, including fluctuations in global economic and industry conditions, management or organizational changes, the availability of qualified employees, evolving immigration and export control policies and restrictions, the attractiveness of our compensation and benefit programs, our career growth and development opportunities, and our employment policies. Specifically, as we build our brand and become more well known, there is increased risk that competitors or other companies will seek to hire our personnel. None of our employees are bound by a non-competition agreement. The failure to attract, integrate, train, motivate and retain these personnel could seriously disrupt our operations and harm our business and prospects. Further, any future reduction in force may yield unintended consequences, such as making future retention and recruiting of qualified personnel more difficult, attrition beyond our planned reduction in workforce, decline in employee productivity and reduced employee morale, which may cause our remaining employees to seek alternative employment.

In addition, we are highly dependent on the services of our senior technical and management personnel, who would be difficult to replace. Any changes in our management team, including if any senior management or key technical personnel were to depart, could negatively impact our prospects, trigger further departures and limit our ability to operate and grow our business.

Our facilities or operations could be damaged or adversely affected by natural disasters and other catastrophic events outside of our control.

Our facilities or operations could be adversely affected by events outside of our control, such as natural disasters, wars, epidemics, pandemics, and other calamities. We cannot assure you that any backup systems will be adequate to protect us from the effects of fire, floods, typhoons, earthquakes, power loss, telecommunications failures, break-ins, war, riots, terrorist attacks or similar events. Any of the foregoing events may give rise to interruptions, breakdowns, system failures, technology platform failures or internet failures, which could cause the loss or corruption of data or malfunctions of software or hardware as well as adversely affect our ability to provide services.

Any economic, financial or banking crisis, or perceived threat of such a crisis, including a significant decrease in consumer confidence, may materially and adversely affect our business, financial condition and results of operations.

In recent years, the United States and global economies suffered dramatic downturns as a result of the COVID-19 pandemic, a deterioration in the credit markets and related financial crisis as well as a variety of other factors including, among other things, extreme volatility in security prices, severely diminished liquidity and credit availability, ratings downgrades of certain investments and declining valuations of others, and volatility in the capital and credit markets and uncertainty with respect to the health of the U.S. banking system. The United States and certain foreign governments have taken unprecedented actions in an attempt to address and rectify these extreme market and economic conditions by providing liquidity and stability to the financial markets. If in future crises governments refuse to take such actions or if the actions taken by these governments are not successful, and/or if the uncertainty in the macroeconomic environment, including elevated inflation concerns, elevated interest rates, tighter credit, currency fluctuations, or concerns or speculation about similar banking disruption events or risks, continues, the resulting adverse economic conditions could lead to market-wide liquidity problems and other disruptions, which may negatively impact the demand for our solid-state battery cells and may negatively impact our liquidity and ability to raise capital, if needed, on a timely basis and on acceptable terms or at all.

Our results of operations and financial condition could be materially affected by the enactment of legislation implementing changes in the U.S. or foreign taxation of business activities or the adoption of other tax reform policies.

As we expand the scale of our business activities, any changes in the U.S. or foreign taxation of such activities may increase our worldwide effective tax rate and harm our business, results of operations, and financial condition. For example, the Organisation for Economic Co-operation and Development has proposed implementing changes to existing tax laws, including a proposed 15% global minimum tax. Numerous countries have enacted tax legislation to adopt this global minimum tax beginning in 2024. Further, beginning in 2022, the Tax Cuts and Jobs Act of 2017 eliminated the option to deduct research and development expenditures currently and requires taxpayers to capitalize and amortize them over five or fifteen years. This requirement may impact our effective tax rate and our cash tax liability in future years.

In addition, the Inflation Reduction Act of 2022 (the “IRA”) includes numerous incentives and tax credits aimed at reducing the effects of climate change, such as the extension and expansion of EV charging infrastructure tax credits under Section 30C of the Internal Revenue Code of 1986 (the “Code”), the expansion of tax credits for EVs under Section 30D of the Code, the expansion of advanced manufacturing tax credits under Section 48C of the Code, and enactment of advanced manufacturing production credits for eligible component production in the United States under Section 45X of the Code. Such tax credits may potentially benefit incumbents more than new entrants, and consequently have adverse competitive effects for new entrants. However, the full impact of the IRA cannot be known, and many of the IRA’s provisions are not self-executing and require further guidance from the Internal Revenue Service (the “IRS”) and Treasury Department (the “Treasury”), which we expect to be issued in the coming months and years. On May 6, 2024, the Treasury and the IRS, in conjunction with the Department of Energy, released final regulations that contain guidance regarding the “battery component” and “critical mineral” sourcing requirements that must be met to be eligible to claim the Section 30D credit, including that at least 50% (for EVs placed in service in 2024) of the value of certain critical minerals in an EV’s battery are extracted and processed in the U.S. or a trade partner country, increasing by 10% per year through 2027 to 80% for EVs placed in service in 2027 and later years, and at least 60% of the value of the battery components in an EV’s battery are manufactured or assembled in North America, increasing by 10% per year through 2027 and to 100% for EVs placed in service in 2028 and later years. The final regulations also provide that an EV is not eligible for the Section 30D credit if any of its battery components or applicable critical minerals are supplied by a “foreign entity of concern,” such as Russia or China, regardless of its overall value percentage.

These incentives may expire on a particular date, end when the allocated funding is exhausted, or be reduced or terminated as a matter of regulatory or legislative policy. Any other reduction in rebates, tax credits or other financial incentives could materially reduce the demand for EVs, which could adversely impact the battery demand for EVs, or materially reduce the amount of incentives available for the manufacture of our products and have an adverse impact on our business. While certain tax credits and other incentives for EVs have been available in the past, there is no guarantee these programs will be available in the future. The impact of future changes to U.S. and foreign tax law on our business is uncertain and could be adverse, and we will continue to monitor and assess the impact of any such changes.

Our ability to use our deferred tax assets to offset future taxable income is subject to certain limitations, which may have a material impact on our business, financial condition or results of operations.

In general, under Section 382 of the Code, a corporation that undergoes an “ownership change” is subject to limitations on its ability to use its pre-change net operating loss carryforwards (“NOLs”) to offset future taxable income. An “ownership change” is generally defined as a greater than 50 percentage point change (by value) in a corporation’s equity ownership by certain stockholders over a three-year period. Similar provisions of state tax law may also apply to limit our use of accumulated state tax attributes. As a result, even if we earn net taxable income in the future, our ability to use our pre-change NOLs and other tax attributes to offset such future taxable income or tax liability may be subject to limitations, which could potentially result in increased future income tax liability to us. We have determined that we have experienced ownership changes in the past. However, we do not believe that these ownership changes will result in limitation on the use of our NOL or other tax attributes. Future changes in our stock ownership, which may be outside of our control, may trigger additional ownership changes, which may further limit our ability to use our NOLs and other tax attributes.

There is also a risk that changes in law or regulatory changes, including suspensions on the use of net operating losses or tax credits, possibly with retroactive effect, may result in our existing net operating losses or tax credits expiring or otherwise being unavailable to offset future income tax liabilities. Limitations may also apply under state law. For example, recently enacted California legislation limits the use of state NOLs for tax years beginning on or after January 1, 2024 and before January 1, 2027.

Due to such limitations and changes in law, certain of our deferred tax assets may expire unutilized or underutilized, which could prevent us from offsetting future taxable income. We continue to assess the realizability of our deferred tax assets in the future. Future adjustments in our valuation allowance may be required, which may have a material impact on our quarterly and annual operating results.

Our insurance coverage may not be adequate to protect us from all business risks.

We may be subject, in the ordinary course of business, to losses resulting from products liability, cyber-attacks, accidents, acts of God, and other claims against us, for which we may have no insurance coverage. As a general matter, the policies that we do have may include significant deductibles or self-insured retentions, and we cannot be certain that our insurance coverage will be sufficient to cover all future losses or claims against us. A loss that is uninsured or which exceeds policy limits may require us to pay substantial amounts, which could adversely affect our financial condition and operating results.

There can be no assurance that we will be able to comply with the continued listing standards of the NYSE.

Our Class A Common Stock is listed on the NYSE under the symbol “QS”. If we were to fail to meet the requirements and standards of the NYSE and if the NYSE were to consequently delist our Class A Common Stock from trading on its exchange and we are not able to list such securities on another national securities exchange, we expect such securities could be quoted on an over-the-counter market. If this were to occur, we and our stockholders could face significant material adverse consequences including:

- a limited availability of market quotations for our securities;
- reduced liquidity for our securities;
- a limited amount of news and analyst coverage; and
- a decreased ability to issue additional securities or obtain additional financing in the future.

We have incurred and will continue to incur significant expenses and administrative burdens as a public company, which could have an adverse effect on our business, financial condition and results of operations.

As a public company, we incur significant legal, accounting, administrative and other costs and expenses associated with being subject to the reporting requirements of the Exchange Act, corporate governance requirements and listing standards. In addition, the Sarbanes-Oxley Act of 2002 (the “Sarbanes-Oxley Act”), including the requirements of Section 404, as well as rules and regulations subsequently implemented by the SEC, the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 and any rules and regulations promulgated and to be promulgated thereunder, the PCAOB and the securities exchanges, impose additional reporting and other obligations on public companies. Meeting the standards and controls required of a public company in the United States requires significant ongoing costs. It is possible that we will be required to further expand our employee base and hire additional employees to support our operations, particularly as such standards and controls continue to change over time, which will increase our operating costs in future periods.

Compliance with evolving public company requirements may continue to increase costs and make certain activities more time-consuming. For example, we have created new Board committees and adopted new internal controls and disclosure controls and procedures. In addition, expenses associated with SEC reporting requirements already have been and will continue to be incurred. Furthermore, if any issues in complying with those requirements are identified, such as a material weakness in our internal controls that requires a restatement of previously issued consolidated financial statements, we could incur additional costs rectifying those or new issues, and the existence of these issues could adversely affect our reputation or investor perceptions of it. The cost of director and officer liability insurance is significant and risks associated with our status as a public company may make it more difficult to attract and retain qualified persons to serve on our Board or as executive officers. The reporting and other obligations imposed by these rules and regulations have resulted in and may continue to result in significant accounting, administrative, financial compliance and legal costs. These costs have required and may continue to require us to divert a significant amount of money that could otherwise be used to expand the business and achieve strategic objectives. Advocacy efforts by stockholders and third parties have prompted and in the future may also prompt additional changes in governance and reporting requirements, which could further increase costs.

If we experience material weaknesses in the future or otherwise fail to maintain an effective system of internal controls in the future, our business could be adversely affected, and we may not be able to accurately report our financial condition or results of operations which may adversely affect investor confidence in us and, as a result, the value of our Class A Common Stock.

As a public company, we are required, under Section 404 of the Sarbanes-Oxley Act, to furnish annual reports by management on, among other things, the effectiveness of our internal control over financial reporting. This assessment needs to include disclosure of any material weaknesses identified by our management in our internal control over financial reporting. A material weakness is a deficiency or combination of deficiencies in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of a company's annual and interim financial statements will not be detected or prevented on a timely basis. If we identify one or more material weaknesses in our internal control over financial reporting, we will be unable to assert that our internal controls are effective. The effectiveness of our controls and procedures may be limited by a variety of factors, including:

- faulty human judgment and simple errors, omissions or mistakes;
- fraudulent action of an individual or collusion of two or more people;
- inappropriate management override of procedures; and
- the possibility that any enhancements to controls and procedures may still not be adequate to assure timely and accurate financial control.

Pursuant to the Sarbanes-Oxley Act and the rules and regulations promulgated by the SEC, we are required to furnish in this Report a report by our management regarding the effectiveness of our internal control over financial reporting. The report includes, among other things, an assessment of the effectiveness of our internal control over financial reporting as of the end of our fiscal year, including a statement as to whether or not our internal control over financial reporting is effective. This assessment must include disclosure of any material weaknesses in our internal control over financial reporting identified by management. While we believe our internal control over financial reporting is currently effective, we have previously identified and had to remediate a material weakness and the effectiveness of our internal controls in future periods is subject to the risk that our controls may become inadequate because of changes in conditions. Establishing, testing and maintaining an effective system of internal control over financial reporting requires significant resources and time commitments on the part of our management and our finance staff, may require additional staffing and infrastructure investments and would increase our costs of doing business.

In addition, under the federal securities laws, our auditors are required to express an opinion on the effectiveness of our internal controls. If we are unable to confirm that our internal control over financial reporting is effective, or if our independent registered public accounting firm is unable to express an opinion on the effectiveness of our internal controls, we could lose investor confidence in the accuracy and completeness of our financial reports, which could cause the price of our Class A Common Stock to decline.

Our disclosure controls and procedures may not prevent or detect all errors or acts of fraud.

We are subject to the periodic reporting requirements of the Exchange Act. We designed our disclosure controls and procedures to provide reasonable assurance that information we must disclose in reports we file or submit under the Exchange Act is accumulated, communicated to management, recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC. We believe that any disclosure controls and procedures, no matter how well-conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met.

These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by an unauthorized override of the controls. Accordingly, because of the inherent limitations in our control system, misstatements due to error or fraud may occur and not be detected.

If securities or industry analysts do not publish or cease publishing research or reports about us, our business, or the market in which we operate, or if they change their recommendations regarding our securities adversely, the price and trading volume of our securities could decline.

The trading market for our securities will be influenced by the research and reports that industry or securities analysts may publish about us, our business, market or competitors. If any of the analysts who cover us change their recommendation regarding our shares of Class A Common Stock adversely, or provide more favorable relative recommendations about our competitors, the price of our shares of Class A Common Stock would likely decline. If any analyst who covers us were to cease our coverage of us or fails to regularly publish reports on us, we could lose visibility in the financial markets, which in turn could cause the price or trading volume of our Class A Common Stock to decline.

Item 1B. Unresolved Staff Comments.

None.

Item 1C. Cybersecurity

Risk Management and Strategy

We have established policies and processes for assessing, identifying, managing and disclosing, as necessary, risks from cybersecurity threats, and have integrated these processes into our overall risk management systems and processes as described below.

We routinely assess material risks from cybersecurity threats, including from any potential unauthorized occurrence on or conducted through our information systems that may result in adverse effects on the confidentiality, integrity, or availability of our information systems or any information residing therein. These risk assessments are designed to identify internal and external risks, the likelihood and potential damage that could result from such risks, and the sufficiency of existing policies, procedures, systems, and safeguards in place to manage such risks. Following these risk assessments, we evaluate whether and how to re-design, implement, and maintain safeguards intended to address and minimize identified risks and continue monitoring and testing the effectiveness of such safeguards.

We devote significant resources and have designated senior management to manage the cybersecurity and information security risk assessment and mitigation process. We have established an internal security committee that includes members of our information security/technology, internal audit/compliance, finance and accounting, people operations, and legal teams, to instill a thoughtful security culture across our Company. Our employees and contractors are made aware of our cybersecurity policies through mandatory trainings during onboarding and on an annual basis. We also engage and consult with third parties in connection with our risk assessment processes, including advisors, consultants and auditors. These service providers assist us to design and implement our cybersecurity policies and procedures, as well as to monitor and test our safeguards.

The Company deploys multiple tools and processes to monitor the prevention, detection, mitigation, and remediation of cybersecurity incidents, both internal and associated with the use of any third-party service provider.

We have not experienced a material security breach in our systems, and, to our knowledge, there have not been any material compromises of our confidential information in our third-parties' systems, nor have we incurred any significant expenses or penalties to resolve or settle any security breach in the past three years. For additional information regarding whether any risks from cybersecurity threats are reasonably likely to materially affect our Company, including our business strategy, results of operations, or financial condition, please refer to Item 1A, "Risk Factors – Our Business Risks – Our ability to manage our business is highly dependent on IT systems and our website, systems, and data we maintain may be subject to intentional or inadvertent disruption, security incidents, or alleged violations of laws, regulations, or other obligations relating to data handling that could adversely impact our reputation and future sales," in this Annual Report on Form 10-K.

Governance

One of the key functions of our board of directors is informed oversight of our risk management process, including risks from cybersecurity threats. Our board of directors is responsible for monitoring and assessing strategic risk exposure, and our executive officers are responsible for the day-to-day management of the material risks we face. Our board of directors administers its cybersecurity risk oversight function directly, as well as through the audit committee, which has been tasked with such oversight in the audit committee charter. The audit committee of our board of directors reviews cybersecurity and information security risks and mitigation strategies; the audit committee receives periodic updates on information security and privacy, and the full board receives at least an annual update.

Our information security team has many years of experience implementing cybersecurity at technology and research and development companies, and together with our internal information security committee, is primarily responsible for assessing and managing our material risks from cybersecurity threats.

Our head of information security periodically provides briefings to our internal security committee and to the audit committee and board of directors on an annual basis regarding our Company's cybersecurity risks and activities, including, as applicable, any recent cybersecurity incidents and related responses and remediation efforts, cybersecurity systems testing, activities of third parties, policies and the like. We have internal guidelines governing our identification, assessment, communication, and escalation upon the occurrence of a cybersecurity incident. Depending on the nature and severity of an incident, this process provides for escalating notification to a special executive security committee and the chair of the audit committee, among others as needed, to manage the Company's response.

Item 2. Properties.

We are headquartered in San Jose, California. Our facilities, which are primarily in San Jose, California include various leased properties for our offices and engineering, research and development, and pre-pilot manufacturing activities.

Item 3. Legal Proceedings.

Information regarding legal proceedings is available in Note 7, Commitments and Contingencies, to the consolidated financial statements in this Report.

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

Our Class A Common Stock is listed on NYSE under the symbol “QS”. Our Class B Common Stock is neither listed nor traded.

Holders

As of February 19, 2025, there were approximately 56 holders of record of our shares of Class A Common Stock and approximately 5 holders of record of our shares of Class B Common Stock. The actual number of stockholders of our common stock is greater than this number of record holders and includes stockholders who are beneficial owners but whose shares of common stock are held in street name by banks, brokers and other nominees.

Dividends

We have never declared or paid cash dividends on our common stock. We currently do not anticipate declaring any cash dividends to holders of our common stock in the foreseeable future.

Recent Sales of Unregistered Equity Securities

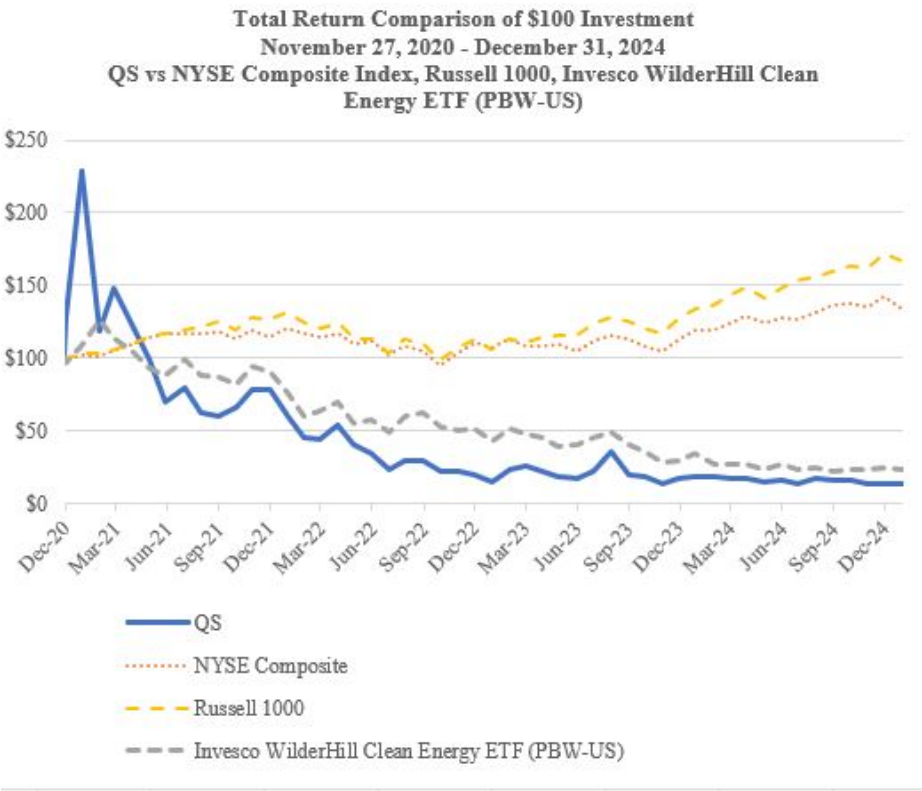
None.

Issuer Purchases of Equity Securities

None.

Performance Graph

The following chart compares the changes in cumulative total return on our Class A Common Stock with the changes in cumulative total returns on the NYSE Composite Index, the total returns on Russell 1000 Index, and the total returns on PBW - Invesco WilderHill Clean Energy ETF for the period from November 27, 2020 (the first date our Class A Common Stock began trading on the NYSE) through December 31, 2024. The chart assumes \$100 was invested in each of the Company's common stock, the NYSE Composite Index, the Russell 1000 Index and PBW - Invesco WilderHill Clean Energy ETF on November 27, 2020. The comparisons in this chart are required by the SEC and are not intended to forecast or be indicative of the possible future performance of our common stock.



Item 6. [Reserved]

Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations.

The following discussion and analysis should be read in conjunction with our audited consolidated financial statements and the related notes appearing elsewhere in this Report. This discussion may contain forward-looking statements based upon current expectations that involve risks and uncertainties. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth in the section titled “*Risk Factors*” as set forth in this Report. Unless the context otherwise requires, references in this “*Management’s Discussion and Analysis of Financial Condition and Results of Operations*” to “the Company”, “we”, “us” and “our” refer to the business and operations of QuantumScape Corporation and its consolidated subsidiaries.

Overview

We are developing next-generation battery technology for EVs and other applications. We believe that our technology will enable a new category of battery that meets the requirements for broader market adoption. The lithium-metal solid-state battery technology that we are developing is being designed to offer greater energy density, faster charging, and greater safety when compared to today’s conventional lithium-ion batteries.

We are a development-stage company with no revenue to date, have incurred a net loss from operations of approximately \$525.2 million for the year ended December 31, 2024, and an accumulated deficit of approximately \$3.4 billion from our inception through December 31, 2024. We expect to incur significant expenses and continuing losses for the foreseeable future.

Key Trends, Opportunities and Uncertainties

We are a pre-revenue company. We believe that our performance and future success depend on several factors that present significant opportunities for us but also pose significant risks and challenges, including those discussed below and in the section titled “*Risk Factors*” appearing elsewhere in this Report.

Product Development

We have demonstrated capabilities of our solid-state separator and battery technology in single-layer and multilayer cell cycling data, and in 2022, shipped our first A0 prototype battery cells to multiple OEMs for testing. Following that shipment, we continued focusing our research and development on subsequent generations of prototype samples incorporating advances in cell functionality, process and reliability, as well as bringing online our pilot line in San Jose, California. In 2023, we announced our first targeted commercial product, the QSE-5, a cell with a capacity of approximately 5 amp-hours as further described under the “Research and Development” section in Item 1 above. In 2024, we began producing low volumes of our first B-sample cells, and we began shipping these cells for automotive customer testing. These are B-samples of QuantumScape’s first product, QSE-5, with an energy density of over 800 Wh/L and <15 minute 10% to 80% fast-charging capability.

Our team of scientists, engineers, technicians, and other staff is highly motivated and committed to solving these challenges ahead. However, any delays in the completion of these tasks will require additional cash use and delay market entry.

Process Development

Our architecture depends on our proprietary solid-state ceramic separator. Though our separator’s design is unique, our early-generation process relied on established or similar high-volume production processes already deployed in other industries. We are developing subsequent, proprietary higher-volume separator manufacturing processes that seek to further reduce cost, increase throughput, and improve quality.

Our separator is being designed to enable our ‘anode-free’ architecture. As manufactured, our solid-state battery cell has no anode; the lithium-metal anode is formed during the first charge of the cell. The lithium that forms the anode comes from the cathode material we purchase. Eliminating the anode bill of materials and associated manufacturing costs found in conventional lithium-ion cells could result in a meaningful cost of goods sold (COGS) advantage once sufficient scale and process maturity are achieved. In addition, our solid-state battery cell is being designed to reduce the time and capital-intensity of the formation and aging process step as compared to conventional lithium-ion manufacturing.

We are focused on the throughput and capability of our pilot line in San Jose, California. As part of the continued expansion of our throughput we are automating our manufacturing process and purchasing larger-scale battery-cell manufacturing equipment. We will need to substantially improve our battery cell manufacturing processes to increase throughput required for higher numbers of battery cells and to achieve the cost, performance and volume levels required for commercial shipments.

Our pilot line is intended to serve four purposes. First, to provide a sufficient quantity of separator and cells for internal development and customer sampling. Second, to provide the basis for continued manufacturing process development and to help inform equipment selection and specifications for future manufacturing activities by us or our partners. Third, we target the initial production of QSE-5 cells at the pilot line. Fourth, to support collaboration and future technology transfer activities as part of the collaboration and licensing arrangements with PowerCo as well as potential future commercial arrangements. Delays in the successful buildout of our pilot line may impact both our development and future scale-up timelines.

We will need to achieve significant cost savings in battery design and manufacturing, in addition to the cost savings associated with the elimination of an anode from our solid-state battery cells as manufactured, while controlling costs associated with the manufacture of our separator, including achieving substantial improvements in quality, consistency, reliability, throughput and safety required to hit commercial targets. Further, we will need to capture industry cost savings in the materials, components, equipment, facilities design, and processes that we share, notably in the cathode and cell design.

Commercialization and Market Focus

The automotive qualification process generally includes several major delivery milestones of A, B and C samples. Each major sampling stage may consist of several generations of increasingly mature prototypes. The timelines for each stage involve uncertainty and will be influenced by a number of factors, including product and process development risks; the specification, ordering, and qualification of production equipment; other supply chain dynamics; and OEM validation timeframes.

We have demonstrated capabilities of our solid-state separator and battery technology in single-layer and multilayer solid-state cells in commercially relevant areas (ranging from approximately 60x75mm to 70x85mm). We will work to continue improving quality, consistency, reliability, throughput, and safety and optimize all components of the cell. We will continue to work to further develop and validate the volume manufacturing processes to enable higher volume manufacturing and minimize manufacturing costs. Finally, we intend for the building out of our pilot line to serve as the basis for continued manufacturing process development for the subsequent scale up of the manufacturing capabilities of our battery cells.

On July 5, 2024, we entered into the PowerCo Collaboration Agreement with the goal of industrializing the solid-state lithium-metal battery technology we intend to use in our first planned product—the QSE-5 Technology. PowerCo was formed by Volkswagen in 2022 as a company intended to consolidate Volkswagen’s activities in the development and production of battery cells. In connection with the PowerCo Collaboration Agreement and subject to the completion of certain milestones, we and PowerCo intend to enter into the PowerCo IP License Agreement under which we will grant PowerCo a non-exclusive, limited, royalty-bearing license to use the QSE-5 Technology for the purpose of manufacturing and selling batteries primarily for automotive applications, and PowerCo will pre-pay an initial royalty fee of \$130 million, against which any future royalties due will be credited. The initial royalty is subject to a time-based diminishing clawback if the PowerCo IP License Agreement is terminated early by PowerCo under certain conditions. The PowerCo Collaboration Agreement supersedes the JVA, which was terminated concurrently. As compared to a joint venture arrangement of similar output volumes, we expect the licensing arrangement to result in less revenue, as well as lower costs and capital requirements.

While we signed an agreement with PowerCo with the goal of commercializing our battery technology, we intend to continue working closely with automotive OEMs to make our solid-state battery cells widely available over time. In addition, we have signed customer sampling agreements with a number of OEMs, ranging from leading manufacturers by global revenue to premium performance and luxury carmakers, to collaborate with us in the testing and validating of our solid-state battery cells with the goal to include such cells into pre-production prototype vehicles and ultimately into serial production vehicles. We are currently focused on automotive EV applications, which have among the most stringent sets of requirements for batteries. Meanwhile, our solid-state battery technology has applicability in other large and growing markets including stationary storage and consumer electronics such as smartphones and wearables and we intend to explore opportunities in those areas as appropriate.

We believe that our technology enables a variety of business models and presents opportunities with a variety of potential customers, such as automotive OEMs, end-users, and licensees, as applicable. In addition to the collaboration with PowerCo, which contemplates a licensing arrangement, we may operate solely-owned manufacturing facilities, license technology to other manufacturers, or enter into joint venture arrangements, among other approaches. We intend to continue to invest in research and development to improve battery cell performance, improve manufacturing processes, and reduce cost.

Access to Capital

Based on our current business plan, we believe that our cash resources will last into the second half of 2028. In July 2022, we filed a shelf registration statement on Form S-3 with the SEC (File No. 333-266419) (the “Form S-3”), which the SEC declared effective in August 2022, for the offer and sale of Class A Common Stock, preferred stock, depositary shares, debt securities, warrants, subscription rights, purchase contracts and units in one or more offerings and in any combination for an aggregate offering price of up to \$1 billion. In February 2023, we filed a prospectus supplement to the Form S-3 for the issuance and sale of our Class A Common Stock from time to time for an aggregate offering price of up to \$400 million (the “ATM offering”). During the year ended December 31, 2024, 24.9 million shares of our Class A Common Stock were sold pursuant to the ATM offering for aggregate proceeds of approximately \$128.5 million, net of issuance costs paid including the commission fees to the sales agents of approximately \$2.0 million. In August 2023, we completed an underwritten public offering of 37.5 million shares of our Class A Common Stock for an aggregate purchase price of \$288.2 million, net of issuance costs of \$11.8 million (the “August 2023 Public Offering”).

Changes to our technology development, operating costs and scale-up, including our ability to meet the milestones to enable the entry into the PowerCo IP License Agreement and related receipt of the initial royalty fee from PowerCo, could materially impact us and the availability of our capital resources. We may also need additional cash resources due to changed business conditions or other developments, including unanticipated delays in negotiations with automotive OEMs and tier-one automotive suppliers or other suppliers, supply chain challenges, competitive pressures, inflation, and regulatory developments, among others. To the extent that our current resources are insufficient to satisfy our cash requirements, we may need to seek additional equity or debt financing. If such financing is not available, or if the financing terms are onerous given the high-interest rate environment or less desirable than we expect, we may be forced to decrease our level of investment in product development or scale back our operations, which could have an adverse impact on our business and financial prospects.

Regulatory Landscape

We operate in an industry that is subject to many established environmental regulations, which have generally become more stringent over time, particularly in hazardous waste generation and disposal and pollution control. Regulations in our target markets include economic incentives to purchasers of EVs, tax credits for EV manufacturers, and economic penalties that may apply to a car manufacturer based on its fleet-wide emissions which may indirectly benefit us to the extent that the regulations expand the market size of EVs. While we also expect environmental regulations to provide a tailwind to our growth, it is possible for certain regulations to result in margin pressures. Trade restrictions and tariffs, while historically minimal between the European Union and the United States where most of our production and sales are initially expected, are subject to unknown and unpredictable changes that could impact our ability to meet projected sales or margins. In addition, there are government regulations pertaining to battery safety, transportation of batteries, use of batteries in cars, and factory safety. We will ultimately have to comply with these regulations to sell our batteries into the market. The license and sale of our battery technologies abroad is likely to be subject to more stringent export controls in the future.

Basis of Presentation

We currently conduct our business through one operating segment. As a pre-revenue company with no commercial operations, our activities to date have been limited and were conducted primarily in the United States. Our historical results are reported under United States of America generally accepted accounting principles (“U.S. GAAP”) and in U.S. dollars. Upon commencement of commercial operations, we expect to expand our global operations substantially, including in the United States and the European Union, and as a result we expect our future results to be sensitive to foreign currency transaction and translation risks and other financial risks that are not reflected in our historical financial statements. As a result, we expect that the financial results we report for periods after we begin commercial operations will not be comparable to the financial results included in this Report.

Components of Results of Operations

We are a research and development stage company and we have not generated any revenues to date. Our historical results may not be indicative of our future results for reasons that may be difficult to anticipate. Accordingly, the drivers of our future financial results, as well as the components of such results, may not be comparable to our historical or projected results of operations.

Operating Expenses

Research and Development Expense

To date, our research and development expenses have consisted primarily of personnel-related expenses for scientists, experienced engineers and technicians as well as costs associated with the construction and ramp up of our pilot line in San Jose, including the material and supplies to support the product development and process engineering efforts. As we ramp up our engineering operations to complete the development of our solid-state, lithium-metal batteries and required process engineering to meet automotive cost targets, we anticipate that research and development expenses will increase significantly for the foreseeable future as we continue to invest in additional plant and equipment for product development (e.g., multilayer cell stacking, packaging engineering), building prototypes, and testing of battery cells as our team works to meet the full set of automotive product requirements. We also recognize significant non-cash stock-based compensation to employees directly involved in research and development activities. For stock-based compensation awards with performance and market conditions, such as the awards granted under our Extraordinary Performance Award Program (the “EPA Program”) in December 2022 and 2021, and for stock-based compensation awards with performance conditions, such as the restricted stock units with performance conditions (“PSUs”) granted in 2023 and 2024, the non-cash expense recognized is based on a probability assessment of the performance conditions, and as such, research and development expenses may fluctuate in the future as the performance conditions are re-assessed at each reporting period. Further, should the stated market conditions of the EPA Program grants be achieved prior to the expected achievement period, we may accelerate the stock-based compensation expense recognized, which could result in significant fluctuations in research and development expense recognized in the future. For more information on the EPA Program grants and PSUs, see Note 8, Stockholders’ Equity, to our consolidated financial statements included elsewhere in this Report.

As we ramp toward commercialization of our technology, we will begin to incur expenses that are directly associated with such, including allocation of indirect costs from research and development.

General and Administrative Expense

General and administrative expenses consist mainly of personnel-related expenses for our executive, sales and marketing, insurance and other administrative functions as well as outside professional services, including legal, accounting and other advisory services. We are continuing to expand our supporting systems, in anticipation of planning for and supporting the commercialization of our technology and due to the ongoing requirements of being a public company. Accordingly, we expect our general and administrative expenses to increase in the near term and for the foreseeable future. Upon commencement of commercial operations, we also expect general and administrative expenses to include customer and sales support and advertising costs. We also recognize significant non-cash stock-based compensation to executives and certain employees. The non-cash expenses recognized for EPA Program grants and PSUs are based on a probability assessment of the performance conditions, and as such, general and administrative expenses may fluctuate in the future as the performance conditions are re-assessed at each reporting period. Further, should the stated market conditions of the EPA Program awards be achieved prior to the expected achievement period, we may accelerate the stock-based compensation expense recognized, which could result in significant fluctuations in general and administrative expense recognized in the future.

As we ramp toward commercialization of our technology, we will begin to incur expenses that are directly associated with such, including allocation of indirect costs from general and administrative activities.

Other Income (Expense)

Interest Expense

Interest expense consists primarily of interest expense associated with our finance lease for one of our facilities.

Interest Income

Interest income consists primarily of interest income from marketable securities.

Other Income (Expense)

Our other income (expense) consists of miscellaneous income and expenses.

Income Tax Expense (Benefit)

Our income tax provision consists of an estimate for U.S. federal and state income taxes based on enacted rates, as adjusted for allowable credits, deductions, uncertain tax positions, changes in deferred tax assets and liabilities, and changes in tax law. We maintain a valuation allowance against the full value of our U.S. federal and state net deferred tax assets because we believe the recoverability of the tax assets is not more likely than not.

Results of Operations

In this section, we discuss the results of our operations for the year ended December 31, 2024 compared to the year ended December 31, 2023. For a discussion of the year ended December 31, 2023 and the year ended December 31, 2022, please refer to Part II, Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in our Annual Report on Form 10-K for the year ended December 31, 2023, which was filed with the SEC on February 28, 2024 and is incorporated herein by reference.

The following table sets forth our historical operating results for the periods indicated (amounts in thousands):

	Year Ended December 31,			2024 vs. 2023		2023 vs. 2022	
	2024	2023	2022	\$ Change	% Change	\$ Change	% Change
Operating expenses:							
Research and development	\$ 382,971	\$ 347,945	\$ 297,435	\$ 35,026	10 %	\$ 50,510	17 %
General and administrative	142,236	131,085	123,183	11,151	9 %	7,902	6 %
Total operating expenses	525,207	479,030	420,618	46,177	10 %	58,412	14 %
Loss from operations	(525,207)	(479,030)	(420,618)	(46,177)	10 %	(58,412)	14 %
Other income (loss):							
Interest expense	(2,224)	(2,377)	(2,399)	153	(6) %	22	(1) %
Interest income	46,024	36,488	10,905	9,536	26 %	25,583	235 %
Other income (loss)	3,465	(160)	216	3,625	(2266) %	(376)	(174) %
Total other income	47,265	33,951	8,722	13,314	39 %	25,229	289 %
Net loss	(477,942)	(445,079)	(411,896)	(32,863)	7 %	(33,183)	8 %
Less: Net (loss) income attributable to non-controlling interest	(85)	66	11	(151)	(229) %	55	500 %
Net loss attributable to common stockholders	<u>\$ (477,857)</u>	<u>\$ (445,145)</u>	<u>\$ (411,907)</u>	<u>\$ (32,712)</u>	<u>7 %</u>	<u>\$ (33,238)</u>	<u>8 %</u>

Research and Development

The increase in research and development expense in the year ended December 31, 2024 compared to the year ended December 31, 2023 primarily resulted from an increase of \$16.2 million in personnel cost to support our battery technology development, an increase of \$15.3 million related to depreciation and amortization, an increase of \$3.7 million in non-cash stock-based compensation expense primarily due to the net effect of new restricted stock units granted offset by full amortization of awards subsequent to December 31, 2023 and forfeiture of restricted stock units with performance conditions, an increase of \$3.5 million in material supplies, and an increase of \$3.0 million in facility expenses offset primarily by a decrease of \$8.2 million in write-off of property and equipment.

General and Administrative

The increase in general and administrative expenses in the year ended December 31, 2024 compared to the year ended December 31, 2023 primarily resulted from the net \$24.5 million litigation settlement for the Securities Class Action Litigation described in Note 7, Commitments and Contingencies, to the consolidated financial statements included elsewhere in this Report, an increase of \$10.3 million in charges related to other legal matters, professional fees, outside services and office administration, and an increase of \$1.6 million in personnel costs offset by a decrease of \$25.3 million in non-cash stock-based compensation expense primarily due to the net effect of forfeiture of EPA awards and restricted stock units with performance conditions offset by new restricted stock units granted subsequent to December 31, 2023.

Other Income (Expense)

Interest Income

The increase in interest income during the year ended December 31, 2024 compared to the year ended December 31, 2023 was mainly due to the increases in the weighted average interest rate and investment.

Other Income (Expense)

Other income for the year ended December 31, 2024 primarily consisted of other miscellaneous income. Other expense for the year ended December 31, 2023 primarily consisted of foreign currency exchange loss.

Liquidity and Capital Resources

As of December 31, 2024 and December 31, 2023, our principal sources of liquidity were our cash and cash equivalents and marketable securities in the amount of approximately \$910.8 million and \$1.1 billion, respectively. Our cash equivalents are invested in U.S. money market funds, U.S. Treasury bonds and commercial paper. Our marketable securities are invested in U.S. Treasury notes and bonds, commercial paper, and corporate notes and bonds.

We have yet to generate any revenue from our business operations. To date, we have funded our capital expenditure and working capital requirements through equity as further discussed below. Our ability to successfully develop our products, commence commercial operations and expand our business will depend on many factors, including our working capital needs, the availability of equity or debt financing and, over time, our ability to generate cash flows from operations.

During the year ended December 31, 2022, we received net proceeds of \$124.1 million from investing activities, mainly due to the maturities of marketable securities.

During the year ended December 31, 2023, we completed the August 2023 Public Offering of 37.5 million shares of our Class A Common Stock and received net proceeds of \$288.2 million.

During the year ended December 31, 2024, we sold 24.9 million shares of our Class A Common Stock pursuant to the ATM offering and received approximately \$128.5 million in proceeds, net of issuance costs paid.

We believe that our cash on hand will be sufficient to meet our working capital and capital expenditure requirements for a period of at least twelve months from the date of this Report. Based on our current business plan, we believe that our cash resources will last into the second half of 2028, in part due to our transition from the JVA arrangement to the licensing arrangement with PowerCo, which, if entered into, is expected to have significantly lower costs and capital requirements. However, any changes to our technology development, operating costs and scale-up, including our ability to meet the milestones to enable the entry into the PowerCo IP License Agreement and related receipt of the initial royalty fee from PowerCo, could materially impact us and the availability of our capital resources. We may need additional cash resources due to changed business conditions or other developments, including unanticipated delays in negotiations with automotive OEMs and tier-one automotive suppliers or other suppliers, supply chain challenges, competitive pressures, inflation, and regulatory developments, among others. To the extent that our current resources are insufficient to satisfy our cash requirements, we may need to seek additional equity or debt financing. If such financing is not available, or if the financing terms are onerous given the high-interest rate environment or less desirable than we expect, we may be forced to decrease our level of investment in product development or scale back our operations, which could have an adverse impact on our business and financial prospects.

In July 2022, we filed the Form S-3, which the SEC declared effective in August 2022, for the offer and sale of Class A Common Stock, preferred stock, depositary shares, debt securities, warrants, subscription rights, purchase contracts and units in one or more offerings and in any combination for an aggregate offering price of up to \$1 billion, or \$700 million subsequent to our August 2023 Public Offering. Such securities may be offered pursuant to the base prospectus contained in the shelf registration statement and a prospectus supplement that would be prepared and filed at the time of any offering.

In February 2023, we filed a prospectus supplement to the Form S-3 for the issuance and sale of our Class A Common Stock from time to time for an aggregate offering price of up to \$400 million through J.P. Morgan Securities LLC, Cowen and Company, LLC, Deutsche Bank Securities Inc. and UBS Securities LLC, as the sales agents. We entered into Distribution Agreements with each of these sales agents in February 2023, in connection with the ATM offering. We have up to three years from the date of the Distribution Agreements to sell the shares, however we are not obligated to sell any such shares. Any net proceeds from the sale of shares will be used for working capital and other general corporate purposes and would further extend our forecasted cash runway. During the year ended December 31, 2024, 24.9 million shares of our Class A Common Stock were sold pursuant to the ATM offering for aggregate proceeds of approximately \$128.5 million, net of issuance costs paid including commission fees to the sales agents of approximately \$2.0 million.

Cash Flows and Material Cash Requirements

The following table provides a summary of our cash flow data for the periods indicated (amounts in thousands):

	Year Ended December 31,		
	2024	2023	2022
Net cash used in operating activities	\$ (274,555)	\$ (240,025)	\$ (218,024)
Net cash provided by (used in) investing activities	128,869	(152,532)	124,119
Net cash provided by financing activities	144,028	300,213	8,598

Operating Activities

Our cash flows used in operating activities to date have been primarily driven by the growth in our underlying business to support the research and development of next-generation battery technology. To support our research and development activities and our plan to build out and scale up our pilot line, we are expecting cash payments of approximately \$9.1 million during the next twelve months and approximately \$65.4 million thereafter for the operating lease commitments as of December 31, 2024. From time to time, we also enter into non-cancellable service and purchase commitments. We are expecting cash used in operating activities to include payments of approximately \$4.3 million in the next twelve months and approximately \$3.6 million thereafter through 2027 for our non-cancellable commitments as of December 31, 2024.

Cash used in operating activities for the year ended December 31, 2024 was primarily driven by a net loss of \$477.9 million, offset by non-cash expense of \$144.7 million related to stock-based compensation, non-cash expense of \$57.8 million related to depreciation and amortization, non-cash expense of \$13.3 million related to the write-off of property and equipment, non-cash lease expense and amortization of right-of-use assets of \$8.0 million. Cash used in the operating activities was further driven by \$29.3 million related to amortization of premiums and accretion of discounts on marketable securities and a decrease of \$5.1 million in operating lease liabilities, and offset by an increase of \$15.0 million in accounts payable, accrued liabilities and accrued compensation and benefits.

Cash used in operating activities for the year ended December 31, 2023 was primarily driven by a net loss of \$445.1 million, offset by non-cash expense of \$166.3 million related to stock-based compensation, non-cash expense of \$42.0 million related to depreciation and amortization, non-cash expense of \$21.5 million related to the write-off of property and equipment, and non-cash lease expense and amortization of right-of-use assets of \$7.8 million. These were partially adjusted by \$18.9 million related to amortization of premiums and accretion of discounts on marketable securities, and an increase of \$7.5 million in prepaid expenses and other assets.

Cash used during the year ended December 31, 2022 was primarily driven by a net loss of \$411.9 million offset by non-cash expenses including \$127.1 million related to stock-based compensation, \$28.3 million related to depreciation and amortization, \$13.7 million related to the write-off of property and equipment, \$7.8 million related to lease expense and amortization of right-of-use assets, and \$4.0 million related to amortization of premiums and accretion of discounts on marketable securities. This was partially offset by an increase of \$5.6 million in accounts payable and accrued liabilities mainly driven by higher period-over-period spending in payroll, materials and supplies, professional services and general and administrative to support the growth of the business, specifically in the research and development of our battery technology, a \$5.0 million decrease in prepaid and other assets and an increase of \$2.3 million in other long-term liabilities.

Investing Activities

Our cash flows from investing activities to date have been comprised of purchases of property and equipment and purchases, maturities and sales of our marketable securities. We expect the level of capital investment to increase substantially in the near future as we acquire the property and equipment for and build out our pilot line.

Cash provided by investing activities for the year ended December 31, 2024 primarily consists of proceeds from the maturity and sale of marketable securities of \$1.5 billion and \$1.2 million, respectively. These were offset by \$1.3 billion used for the purchase of marketable securities and \$62.1 million used for the purchase of various property and equipment, primarily to support our research and development activities.

Cash used in investing activities for the year ended December 31, 2023 primarily consists of \$1.1 billion used for the purchase of marketable securities and \$84.5 million used for the purchase of various property and equipment, primarily to support our research and development activities. These were offset by the proceeds from the maturity and sale of marketable securities of \$1.0 billion and \$1.5 million, respectively.

Cash provided by investing activities for the year ended December 31, 2022 primarily consists of the maturity and sale of marketable securities of \$837.4 million and \$15.1 million, respectively, offset by \$569.6 million used for the purchase of marketable securities. Cash provided by investing activities also reflects \$158.8 million of cash used for various property and equipment, primarily to support our research and development activities.

Financing Activities

Our cash flows from financing activities primarily consist of proceeds from the issuance of common stock and exercise of stock options. Finance lease commitment for one of our buildings will result in net cash payments of \$5.3 million in the next twelve months and payments of \$39.0 million thereafter.

Cash provided by financing activities during the year ended December 31, 2024 is primarily due to approximately \$128.5 million in net proceeds from the ATM offering and \$20.1 million received from the exercise of stock options and our employee stock purchase plan.

Cash provided by financing activities during the year ended December 31, 2023 is primarily due to \$288.2 million in net proceeds received from the August 2023 Public Offering and, \$14.0 million received from the exercise of stock options and our employee stock purchase plan.

The cash provided by financing activities during the year ended December 31, 2022 is primarily due to \$9.4 million received from the exercise of stock options and our employee stock purchase plan.

Critical Accounting Policies and Estimates

Our consolidated financial statements have been prepared in accordance with U.S. GAAP. In the preparation of these consolidated financial statements, we are required to use judgment in making estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities as of the date of the consolidated financial statements, as well as the reported expenses incurred during the reporting periods.

We consider an accounting judgment, estimate or assumption to be critical when (1) the estimate or assumption is complex in nature or requires a high degree of judgment and (2) the use of different judgments, estimates and assumptions could have a material impact on the consolidated financial statements. Our significant accounting policies are described in Note 2, Summary of Significant Accounting Policies, to our audited consolidated financial statements included elsewhere in this Report. We believe that the following accounting estimates are the most critical to fully understand and evaluate our reported financial results, as they require our most subjective or complex management judgments, resulting from the need to make estimates about the effect of matters that are inherently uncertain and unpredictable.

Stock-Based Compensation

The share-based awards under our equity plans include stock options, restricted stock units with service conditions only (“RSU”), PSU and performance-based awards under the EPA Program. We recognize the cost of share-based awards granted to employees and directors based on the estimated grant-date fair value of the awards, and compensation expense is recognized on a straight-line basis over the requisite service period. For share-based awards with only service conditions, the requisite service period is generally the vesting period. We reverse previously recognized costs for unvested awards in the period that forfeitures occur.

The fair values of RSUs and PSUs are measured on the grant date based on the closing fair market value of our common stock.

The fair values of options granted with performance (e.g., business milestone) and market conditions (e.g., stock price target) are estimated at the grant date using a Monte Carlo simulation model. The model determined the grant date fair value of each vesting tranche and the future time when the market condition for such tranche is expected to be achieved. The Monte Carlo valuation requires the Company to make assumptions and judgments about the variables used in the calculation including the expected term, volatility of our common stock, an assumed risk-free interest rate, and cost of equity.

For performance-based awards with a vesting schedule based entirely on the attainment of both performance and market conditions, each quarter the Company assesses whether it is probable that it will achieve each performance condition that has not previously been achieved or deemed probable of achievement and if so, the future time when the Company expects to achieve that business milestone, or its “expected business milestone achievement time.” When the Company first determines that a business milestone has become probable of being achieved, the Company allocates on a straight-line basis the entire expense for the related tranche over the number of quarters between the grant date and the then-applicable “expected vesting date,” which represents the requisite service period. The requisite service period at any given time is generally the period between the grant date and the later of (i) the expected time when the performance condition will be achieved (if the related performance condition has not yet been achieved) and (ii) the expected time when the market condition will be achieved (if the related market condition has not yet been achieved). The Company immediately recognizes a cumulative catch-up expense for all accumulated expense for the quarters from the grant date through the quarter in which the performance condition was first deemed probable of being achieved. Each quarter thereafter, the Company recognizes the then-remaining expense for the tranche through the end of the requisite service period except that upon vesting of a tranche, all remaining expense for that tranche is immediately recognized. The Company accounts for forfeitures when they occur. The fair value of such awards is estimated on the grant date using Monte Carlo simulations, which is impacted by the following assumptions:

- *Expected Term*—We estimated the expected term based on the midpoint between the time of vesting and the remaining time to expiration.
- *Expected Volatility*—Given the limited market trading history of our common stock, volatility is based on a weighted blend of (i) the average volatility of peer companies within the automotive and energy storage industries multiplied by a ratio of our volatility based on available stock price data as compared to the average volatility of our peer companies over the same period and (ii) our implied volatility from exchange traded options.
- *Cost of Equity*—Cost of equity is calculated using (i) risk-free rate, (ii) average peer group market beta and (iii) the market-risk premium.

As the stock-based compensation expense is based on the probability assessment of the performance conditions, we may experience significant fluctuation in the non-cash stock-based compensation recognized quarter over quarter. Although the potential stock-based compensation expense that may be recognized over the remaining term of the performance award may be estimated at each of the applicable grant date and the amount is expected to be material to the financial statements in the aggregate, the actual expense recognized may range from zero to the maximum; the actual expense may be recognized over a period less than the remaining term of the performance award; and the amount recognized quarter over quarter is expected to be material and may significantly fluctuate.

Recent Accounting Pronouncements

See Note 3, Recent Accounting Pronouncements, to the audited consolidated financial statements included elsewhere in this Report for more information about recent accounting pronouncements, the timing of their adoption, and, to the extent it has made one, of their potential impact on our financial condition and its results of operations and cash flows.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

We are exposed to a variety of markets and other risks including the effects of change in interest rates, inflation and foreign currency translation and transaction risks as well as risks to the availability of funding sources, hazard events and specific asset risks.

Interest Rate Risk

The market interest risk in our financial instruments and our financial positions represents the potential loss arising from adverse changes in interest rates. As of December 31, 2024, we had cash and cash equivalents and marketable securities of \$910.8 million, consisting of interest-bearing money market accounts and marketable securities, for which the fair market value would be affected by change in the general level of U.S. interest rates. As of December 31, 2024, an immediate increase of 100 basis points in interest rates would have resulted in a decline in the fair value of our marketable securities of approximately \$3.0 million. This estimate is based on a sensitivity model that measures market value changes when changes in interest rates occur. Such losses would only be realized if we sold the investments prior to maturity.

Inflation Risk

Our operations could be adversely impacted by inflation, primarily from higher material, labor, and construction costs. To date, we do not believe that inflation has had a material impact to our results of operations, capital resources or liquidity, however, we have experienced increases in prices of raw materials, components and labor costs. Our future mitigation strategies may include considering alternative vendors, vertically integrating certain aspects of our supply chain and redesigning our product or production process. At this time, it is difficult to determine what impact these inflationary pressures will have on our long-term growth strategies, as there is uncertainty regarding how long higher levels of inflation may persist, and to what level we will be successful in passing these increased costs to our customers upon commercialization of our technology. If we are not able to fully offset higher costs through price increases or other corrective measures, this may adversely affect our business, financial condition and results of operations.

Foreign Currency Risk

Our functional currency is the U.S. dollar, while certain of our future subsidiaries may have other functional currencies, reflecting their principal operating markets. To date, we have not had material exposure to foreign currency fluctuations and have not hedged such exposure, although we may do so in the future.

Item 8. Financial Statements and Supplementary Data.

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Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of QuantumScape Corporation

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of QuantumScape Corporation (the Company) as of December 31, 2024 and 2023, the related consolidated statements of operations and comprehensive income (loss), redeemable non-controlling interest and stockholders' equity and cash flows for each of the three years in the period ended December 31, 2024, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2024 and 2023, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2024, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2024, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated February 26, 2025 expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the 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 audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the 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 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 financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of the critical audit matter 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 matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Accounting for the performance-based equity awards (Extraordinary Performance Award Program and Performance-based Stock Units) – stock-based compensation

Description of the Matter

As discussed in Note 2 and Note 8 to the consolidated financial statements, the Company granted stock options to the Chief Executive Officer at the time and other members of the Company's management team pursuant to the Extraordinary Performance Award Program "EPA Program" in December 2021 and December 2022. The EPA program vests upon the achievement of performance (business milestones) and market (stock price target) conditions under five tranches. Additionally, as discussed in Note 2 and Note 8 to the consolidated financial statements, the Company granted performance-based restricted stock units ("PSUs") to members of the Company's management team and certain other employees in the years ended December 31, 2023 and 2024. The PSUs vest upon the achievement of performance (business milestones) conditions by tranche.

When the Company determines achievement of the related performance condition is considered probable then the stock-based compensation expense is recognized over the expected vesting period which is for the EPA Program the longer of the time to achieve the performance or market condition for each tranche, and for the PSUs the time to achieve the performance condition for each tranche assuming the service condition has also been met. The Company recorded stock-based compensation credit of \$13.4 million during the year-ended December 31, 2024 and had \$7.9 million of unrecognized stock-based compensation expense as of December 31, 2024 for the tranches that were considered probable for EPA awards. The Company recorded stock-based compensation expense of \$24.3 million during the year-ended December 31, 2024 and had \$13.5 million of unrecognized stock-based compensation expense as of December 31, 2024 for the tranches that were considered probable for PSU awards. Auditing the Company's accounting for the EPA Program and PSU awards is complex and judgmental due to the subjectivity of management's assessment of the probability and timing of performance conditions being met for each tranche of the award.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design, and tested the operating effectiveness of controls over the Company's assessment of the probability and timing of performance conditions being met. Our substantive audit procedures included, among others, evaluation of the judgments made by management in determining the estimated probability and timing of each performance condition by discussing status with internal operational personnel and comparing the achievement of the business milestones to the Company's annual plan.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2012.

San Jose, California

February 26, 2025

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of QuantumScape Corporation

Opinion on Internal Control Over Financial Reporting

We have audited QuantumScape Corporation's internal control over financial reporting as of December 31, 2024, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, QuantumScape Corporation (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2024, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the 2024 consolidated financial statements of the Company and our report dated February 26, 2025 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible 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 Controls Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the 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 audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

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.

/s/ Ernst & Young LLP

San Jose, California

February 26, 2025

QuantumScape Corporation
Consolidated Balance Sheets

(In Thousands, Except per Share Amounts)

	As of December 31,	
	2024	2023
Assets		
Current assets		
Cash and cash equivalents	\$ 140,866	\$ 142,524
Marketable securities	769,901	928,284
Prepaid expenses and other current assets	11,519	12,709
Total current assets	922,286	1,083,517
Property and equipment, net	299,992	313,164
Right-of-use assets - finance lease	22,267	25,140
Right-of-use assets - operating lease	51,472	55,863
Other assets	26,378	24,294
Total assets	<u>\$ 1,322,395</u>	<u>\$ 1,501,978</u>
Liabilities, redeemable non-controlling interest and stockholders' equity		
Current liabilities		
Accounts payable	\$ 6,466	\$ 12,959
Accrued liabilities	17,447	10,180
Accrued compensation and benefits	32,212	26,043
Operating lease liability, short-term	5,526	5,006
Finance lease liability, short-term	3,233	2,907
Total current liabilities	64,884	57,095
Operating lease liability, long-term	52,913	57,622
Finance lease liability, long-term	31,865	35,098
Other liabilities	14,886	11,986
Total liabilities	164,548	161,801
Commitment and contingencies (see Note 7)		
Redeemable non-controlling interest	—	1,770
Stockholders' equity		
Preferred stock- \$0.0001 par value; 100,000 shares authorized, none issued and outstanding as of December 31, 2024 and 2023	—	—
Common stock - \$0.0001 par value; 1,250,000 shares authorized (1,000,000 Class A and 250,000 Class B); 487,883 Class A and 54,666 Class B shares issued and outstanding as of December 31, 2024, 433,157 Class A and 59,874 Class B shares issued and outstanding as of December 31, 2023	54	49
Additional paid-in-capital	4,515,879	4,221,892
Accumulated other comprehensive loss	428	(2,877)
Accumulated deficit	(3,358,514)	(2,880,657)
Total stockholders' equity	1,157,847	1,338,407
Total liabilities, redeemable non-controlling interest and stockholders' equity	<u>\$ 1,322,395</u>	<u>\$ 1,501,978</u>

The accompanying notes are an integral part of these consolidated financial statements.

QuantumScape Corporation
Consolidated Statements of Operations and Comprehensive Income (Loss)

(In Thousands, Except per Share Amounts)

	Year Ended December 31,		
	2024	2023	2022
Operating expenses:			
Research and development	\$ 382,971	\$ 347,945	\$ 297,435
General and administrative	142,236	131,085	123,183
Total operating expenses	525,207	479,030	420,618
Loss from operations	(525,207)	(479,030)	(420,618)
Other income (loss):			
Interest expense	(2,224)	(2,377)	(2,399)
Interest income	46,024	36,488	10,905
Other income (loss)	3,465	(160)	216
Total other income	47,265	33,951	8,722
Net loss	(477,942)	(445,079)	(411,896)
Less: Net (loss) income attributable to non-controlling interest, net of tax of \$0	(85)	66	11
Net loss attributable to common stockholders	\$ (477,857)	\$ (445,145)	\$ (411,907)
Net loss	\$ (477,942)	\$ (445,079)	\$ (411,896)
Other comprehensive income (loss):			
Unrealized gain (loss) on marketable securities	3,305	14,996	(13,665)
Total comprehensive loss	(474,637)	(430,083)	(425,561)
Less: Comprehensive (loss) income attributable to non-controlling interest	(85)	66	11
Comprehensive loss attributable to common stockholders	\$ (474,552)	\$ (430,149)	\$ (425,572)
Basic and Diluted net loss per share	\$ (0.94)	\$ (0.96)	\$ (0.95)
Basic and Diluted weighted-average common shares outstanding	508,102	462,239	432,973

The accompanying notes are an integral part of these consolidated financial statements.

QuantumScape Corporation
Consolidated Statements of Redeemable Non-Controlling Interest and Stockholders' Equity

(In Thousands)

	Redeemable Non- Controlling Interest	Common Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity
		Shares	Amount				
Balance as of December 31, 2021	\$ 1,693	428,319	\$ 43	\$ 3,634,665	\$ (2,023,605)	\$ (4,208)	\$ 1,606,895
Exercise of stock option and employee stock purchase plan	—	4,343	—	7,555	—	—	7,555
Shares issued upon vesting of restricted stock units	—	5,297	1	1,851	—	—	1,852
Stock-based compensation	—	—	—	127,110	—	—	127,110
Net income (loss)	11	—	—	—	(411,907)	—	(411,907)
Unrealized loss on marketable securities	—	—	—	—	—	(13,665)	(13,665)
Balance as of December 31, 2022	\$ 1,704	437,959	\$ 44	\$ 3,771,181	\$ (2,435,512)	\$ (17,873)	\$ 1,317,840
Exercise of stock option and employee stock purchase plan	—	7,935	1	14,021	—	—	14,022
Shares issued upon vesting of restricted stock units	—	9,637	—	—	—	—	—
Issuance of common stock, net of issuance costs of \$11.8 million	—	37,500	4	288,150	—	—	288,154
Stock-based compensation	—	—	—	148,540	—	—	148,540
Net income (loss)	66	—	—	—	(445,145)	—	(445,145)
Unrealized gain on marketable securities	—	—	—	—	—	14,996	14,996
Balance as of December 31, 2023	\$ 1,770	493,031	\$ 49	\$ 4,221,892	\$ (2,880,657)	\$ (2,877)	\$ 1,338,407
Exercise of stock options and employee stock purchase plan	—	9,996	—	20,091	—	—	20,091
Shares issued upon vesting of restricted stock units	—	14,575	2	23,107	—	—	23,109
Shares issued under At-The-Market Offering, net of issuance costs	—	24,947	3	128,439	—	—	128,442
Stock-based compensation	—	—	—	122,350	—	—	122,350
Net loss	(85)	—	—	—	(477,857)	—	(477,857)
Unrealized gain on marketable securities	—	—	—	—	—	3,305	3,305
Dissolution of joint venture	(1,685)	—	—	—	—	—	—
Balance as of December 31, 2024	\$ —	542,549	\$ 54	\$ 4,515,879	\$ (3,358,514)	\$ 428	\$ 1,157,847

The accompanying notes are an integral part of these consolidated financial statements.

QuantumScape Corporation
Consolidated Statements of Cash Flows
(In Thousands)

	Year Ended December 31,		
	2024	2023	2022
Operating activities			
Net loss	\$ (477,942)	\$ (445,079)	\$ (411,896)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	57,781	41,958	28,280
Amortization of right-of-use assets and non-cash lease expense	8,010	7,791	7,843
Amortization of premiums and accretion of discounts on marketable securities	(29,313)	(18,908)	3,989
Stock-based compensation expense	144,653	166,297	127,110
Write-off of property and equipment	13,347	21,528	13,695
Other	109	469	840
Changes in operating assets and liabilities:			
Prepaid expenses and other current assets and other assets	(893)	(7,533)	5,048
Accounts payable, accrued liabilities and accrued compensation and benefits	14,965	(2,904)	5,611
Operating lease liability	(5,059)	(3,410)	(844)
Other liabilities	(213)	(234)	2,300
Net cash used in operating activities	(274,555)	(240,025)	(218,024)
Investing activities			
Purchases of property and equipment	(62,131)	(84,510)	(158,845)
Proceeds from maturities of marketable securities	1,484,857	1,041,528	837,410
Proceeds from sales of marketable securities	1,245	1,477	15,105
Purchases of marketable securities	(1,295,102)	(1,111,027)	(569,551)
Net cash provided by (used in) investing activities	128,869	(152,532)	124,119
Financing activities			
Proceeds from exercise of stock options and employee stock purchase plan	20,091	14,022	9,407
Proceeds from issuance of common stock, net of issuance costs paid	128,529	288,164	—
Principal payment for finance lease	(2,907)	(1,973)	(809)
Dissolution of joint venture	(1,685)	—	—
Net cash provided by financing activities	144,028	300,213	8,598
Net increase (decrease) in cash, cash equivalents and restricted cash	(1,658)	(92,344)	(85,307)
Cash, cash equivalents and restricted cash at beginning of period	160,572	252,916	338,223
Cash, cash equivalents and restricted cash at end of period	<u>\$ 158,914</u>	<u>\$ 160,572</u>	<u>\$ 252,916</u>
Supplemental disclosure of cash flow information			
Cash paid for interest	\$ 2,224	\$ 1,778	\$ 1,610
Purchases of property and equipment, not yet paid	\$ 3,249	\$ 10,554	\$ 18,192

The following table presents the Company's cash, cash equivalents and restricted cash by category in the Company's Consolidated Balance Sheets (amounts in thousands):

	December 31,		
	2024	2023	2022
Cash and cash equivalents	\$ 140,866	\$ 142,524	\$ 235,393
Other assets	18,048	18,048	17,523
Total cash, cash equivalents and restricted cash	<u>\$ 158,914</u>	<u>\$ 160,572</u>	<u>\$ 252,916</u>

The accompanying notes are an integral part of these consolidated financial statements.

QuantumScape Corporation
Notes to Consolidated Financial Statements

December 31, 2024

Note 1. Nature of Business

Organization

The original QuantumScape Corporation, now named QuantumScape Battery, Inc. (“Legacy QuantumScape”), a wholly owned subsidiary of the Company (as defined below), was founded in 2010 with the mission to revolutionize energy storage to enable a sustainable future. In 2020, QuantumScape became a publicly traded company (NYSE: QS) through a business combination with a special purpose acquisition company named Kensington Capital Acquisition Corp. (“Kensington”) which changed its name to QuantumScape Corporation upon closing in November 2020 (the “Business Combination”). As a result of the Business Combination, QuantumScape Battery Inc. survived and became a wholly owned subsidiary of QuantumScape Corporation (the “Company”).

The Company is focused on the development and commercialization of its solid-state lithium-metal batteries. Planned principal operations have not yet commenced. As of December 31, 2024, the Company had not derived revenue from its principal business activities.

Note 2. Summary of Significant Accounting Policies

Basis of Presentation

The Company’s consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America (“U.S. GAAP”) as determined by the Financial Accounting Standards Board (the “FASB”) Accounting Standards Codification (“ASC”) and pursuant to the regulations of the U.S. Securities and Exchange Commission (the “SEC”). Certain prior period balances have been reclassified to conform to the current period presentation in the consolidated financial statements and the accompanying notes.

The Company’s policy is to consolidate all entities that it controls by ownership of a majority of the outstanding voting stock. In addition, the Company consolidates entities that meet the definition of a variable interest entity (“VIE”) for which the Company is the related party most closely associated with and is the primary beneficiary. The primary beneficiary is the party who has the power to direct the activities of a VIE that most significantly impact the entity’s economic performance and who has an obligation to absorb losses of the entity or a right to receive benefits from the entity that could potentially be significant to the entity. For consolidated entities that are less than wholly owned, the third party’s holding of an equity interest is presented as redeemable non-controlling interests in the Company’s Consolidated Balance Sheets and Consolidated Statements of Redeemable Non-Controlling Interest and Stockholders’ Equity. The portion of net earnings (loss) attributable to the redeemable non-controlling interests is presented as net income (loss) attributable to non-controlling interests in the Company’s Consolidated Statements of Operations and Comprehensive Income (Loss).

Since 2012, the Company has had a relationship with the Volkswagen Group, including its affiliates Volkswagen Group of America, Inc. (“VWGoA”) and Volkswagen Group of America Investments, LLC (“VGA”), collectively referred to as “Volkswagen.”

Legacy QuantumScape was a single-legal entity prior to becoming a partner with Volkswagen in QSV Operations LLC (“QSV”). As noted in the section titled “Joint Venture and Redeemable Non-Controlling Interest” below, Legacy QuantumScape determined QSV was a VIE for which it was required to consolidate the operations upon its formation in 2018 and the Company continued to consolidate the operations of QSV in its financial statements following the closing of the Business Combination until QSV was dissolved in September 2024 (See Note 10 Joint Venture and Redeemable Non-Controlling Interest). The dissolution and deconsolidation of QSV had an immaterial impact on the Company’s consolidated financial statements. Following the dissolution of QSV, the Company no longer has any interest in any VIEs.

All intercompany accounts and transactions are eliminated in consolidation.

Use of Estimates

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Notes to Consolidated Financial Statements — Continued

December 31, 2024

The preparation of financial statements in accordance with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of commitments and contingencies at the date of the financial statements as well as reported amounts of expenses during the reporting periods. Estimates made by the Company include, but are not limited to, those related to the valuation of awards under the Extraordinary Performance Award Program (the “EPA Program”) and the determination of business milestone achievement dates related to stock awards with performance conditions, among others. The Company bases these estimates on historical experience and on various other assumptions that it believes are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying amounts of assets and liabilities that are not readily apparent from other sources. Actual results could differ materially from those estimates.

Joint Venture and Redeemable Non-Controlling Interest

QSV was incorporated as a limited liability company in 2018. VWGoA, VGA and Legacy QuantumScape executed a Joint Venture Agreement (as amended, the “JVA”), effective September 2018, with the goal of jointly establishing a manufacturing facility to produce the pilot line of the Company’s product through QSV. In connection with this agreement, the parties also entered into two operating agreements: (i) the Limited Liability Company Agreement of QSV to govern the respective rights and obligations as members of QSV and (ii) the Common IP License Agreement for the Company to license certain intellectual property pertaining to automotive battery cells as defined in the JVA to VWGoA, VGA and QSV.

Volkswagen is a related party stockholder (approximately 24.0% voting interest holder of the Company as of December 31, 2024 and December 31, 2023, respectively). Upon the effectiveness of the JVA, each party contributed \$1.7 million in cash to capitalize QSV in exchange for 50% equity interests.

The joint venture was considered a VIE with a related party and therefore the related party whose business was more closely related to the planned operations of the joint venture was required to consolidate the operations.

The Company determined its operations were most closely aligned with the operations of the joint venture and therefore consolidated the results of QSV’s operations in its Consolidated Balance Sheets, Consolidated Statements of Operations and Comprehensive Income (Loss), and Consolidated Statements of Redeemable Non-Controlling Interest and Stockholders’ Equity.

On July 5, 2024, the Company, QS, VWGoA, VGA, and QSV (the “JV Entity”), entered into a Joint Venture Termination and Release Agreement (the “JV Termination Agreement”) to, among other things, terminate the JVA, dissolve the JV Entity, and remove earmark restrictions on \$134.0 million of funds previously reserved by the Company for future contribution to the JV Entity that automatically terminated pursuant to the terms of the JVA. QSV was subsequently dissolved in September 2024. As part of the dissolution of QSV, \$1.8 million of redeemable non-controlling interest was distributed in cash to VGA. QSV had minimal operations through its date of dissolution.

Concentrations of Credit Risk

Financial instruments that potentially subject the Company to credit risk consist principally of cash and cash equivalents and marketable securities. As of December 31, 2024 and 2023, approximately \$78.7 million and \$115.8 million of our total cash and cash equivalents and marketable securities, are held in U.S. money market funds, and \$695.5 million and \$723.9 million are invested in U.S. government and agency securities, respectively. The Company seeks to mitigate its credit risk with respect to cash and cash equivalents and marketable securities by making deposits with what we believe to be large, reputable financial institutions and investing in high credit rated shorter-term instruments.

Cash and Cash Equivalents and Restricted Cash

Management considers all highly liquid investments with original maturities of three months or less to be cash equivalents.

Restricted cash is maintained under an agreement that legally restricts the use of such funds and is reported within other assets as the date of availability or disbursement for all restricted cash is more than one year from December 31, 2024.

Restricted cash is comprised of \$18.0 million as of both December 31, 2024 and December 31, 2023, all of which is pledged as a form of security for the Company’s lease agreements for its facilities. The restricted cash is maintained in certificates of deposits as of December 31, 2024.

Marketable Securities

The Company’s investment policy is consistent with the definition of available-for-sale securities. The Company does not buy and hold securities principally for the purpose of selling them in the near future. The Company’s policy is focused on the preservation of capital, liquidity, and return. From time to time, the Company may sell certain securities, but the objectives are generally not to generate profits on short-term differences in price.

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Notes to Consolidated Financial Statements — Continued

December 31, 2024

These securities are carried at estimated fair value with unrealized gains and losses included in other comprehensive gain/loss in stockholders' equity until realized. Gains and losses on marketable security transactions are reported on the specific-identification method. Dividend and interest income are recognized when earned.

Fair Value Measurement

The Company applies fair value accounting for all financial assets and liabilities measured on a recurring and nonrecurring basis. Fair value is defined as an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or a liability. The accounting guidance established a fair value hierarchy based on three levels of inputs, of which the first two are considered observable and the last unobservable, used to determine the fair value of its financial instruments. A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement.

- Level 1 – Quoted prices in active markets for identical assets or liabilities that the entity has the ability to access.
- Level 2 – Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets and liabilities.
- Level 3 – Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets and liabilities.

Property and Equipment

Property and equipment are recorded at historical cost, less accumulated depreciation. Depreciation is computed using the straight-line method over the estimated useful life of the related asset. Improvements that increase functionality of the fixed asset are capitalized and depreciated over the asset's remaining useful life. Deposits for purchases of property and equipment are included in construction-in-progress. Construction-in-progress is not depreciated until the asset is placed in service. Fully depreciated assets are retained in property and equipment, net, until removed from service.

The Company reviews the estimated useful lives of its fixed assets on an ongoing basis. The estimated useful lives of assets are generally as follows:

Computer equipment, hardware, and software	3 - 5 years
Furniture and fixtures	7 - 10 years
Machinery and equipment	3 - 10 years
Leasehold improvements	Shorter of the lease term (including estimated renewals) or the estimated useful lives of the improvements

Impairment of Long-Lived Assets

The Company evaluates the carrying value of long-lived assets when indicators of impairment exist. The carrying value of a long-lived asset is considered impaired when the estimated separately identifiable, undiscounted cash flows from such an asset are less than the carrying value of the asset. In that event, a loss is recognized based on the amount by which the carrying value exceeds the fair value of the long-lived asset. The long-lived assets outside of U.S. are not material as of December 31, 2024. During the year ended December 31, 2024 and the year ended December 31, 2023, the Company wrote off approximately \$13.3 million and \$21.5 million of property and equipment for assets with no remaining future benefit, respectively. During the year ended December 31, 2022, the Company wrote off approximately \$13.7 million of equipment and incurred cancellation charges of approximately \$2.8 million. These charges are recorded in Research and Development expense in the Consolidated Statements of Operations and Comprehensive Income (Loss).

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Notes to Consolidated Financial Statements — Continued

December 31, 2024

Leases

The Company classifies arrangements meeting the definition of a lease as operating or financing leases, and leases are recorded on the Consolidated Balance Sheets as both a right-of-use (“ROU”) asset and lease liability, calculated by discounting fixed lease payments over the lease term at the rate implicit in the lease or the Company’s incremental borrowing rate which is the rate incurred to borrow on a collateralized basis over a similar term. Lease liabilities are increased by interest and reduced by payments each period, and the ROU asset is reduced over the lease term. For operating leases, interest on the lease liability and the non-cash lease expense result in straight-line rent expense over the lease term. For finance leases, interest on the lease liability and the amortization of the ROU asset results in front-loaded expense over the lease term. Variable lease expenses, including common maintenance fees, insurance and property tax, are recorded when incurred.

In calculating the right-of-use asset and lease liability, the Company elects to combine lease and non-lease components for all classes of assets, and elects to exclude short-term leases having terms of twelve months or less.

Segments

Operating segments are defined as components of an entity for which separate financial information is available and that is regularly reviewed by the Chief Operating Decision Maker (the “CODM”) in deciding how to allocate resources to an individual segment and in assessing performance. The Company’s CODM is its Chief Executive Officer.

The Company has determined that it operates in one operating segment and one reportable segment, as the CODM reviews financial information presented on a consolidated basis. The operating segment has not derived revenue from its business activities as of December 31, 2024. The CODM uses net loss for purposes of making operating decisions, allocating resources, and evaluating financial performance. Significant expenses include non-cash stock-based compensation, depreciation and amortization, and write-off of property and equipment, which are reflected in the Consolidated Statement of Cash Flows for the years ended December 31, 2024, 2023, and 2022. Significant expenses also include personnel costs of \$153.1 million, \$135.3 million, and \$131.2 million, respectively, for the years ended December 31, 2024, 2023, and 2022; and professional services and legal contingency of \$58.6 million, \$27.2 million and \$27.0 million, respectively, for the years ended December 31, 2024, 2023, and 2022. Other expenses include materials, facilities, other research, development, and administrative expenses, which are recorded within operating expenses. Other segment items included in consolidated net loss are interest income, interest expense, and other income (loss), which are reflected in the Consolidated Statements of Operations and Comprehensive Income (Loss) for the years ended December 31, 2024, 2023 and 2022.

The long-lived assets outside of U.S. are not material as of December 31, 2024. The measure of segment assets is reported on the balance sheet as total consolidated assets. Refer to the Consolidated Balance Sheets as of December 31, 2024 and 2023 for total consolidated assets.

Research and Development Cost

Costs related to research and development are expensed as incurred.

General and Administrative Expenses

General and administrative expenses represent costs incurred by the Company in managing the business, including salary, benefits, incentive compensation, marketing, insurance, professional fees and other operating costs associated with the Company’s non-research and development activities.

Stock-Based Compensation

The Company measures and recognizes compensation expense for all stock-based awards made to employees, directors, and non-employees, including stock options, restricted stock units and restricted shares, based on estimated fair values recognized over the requisite service period. The Company accounts for forfeitures when they occur.

The fair values of options granted with only service conditions are estimated on the grant date using the Black-Scholes option pricing model. This valuation model for stock-based compensation expense requires the Company to make assumptions and judgments about the variables used in the calculation, including the expected term (weighted-average period of time that the options granted are expected to be outstanding), the volatility of the Company’s common stock, and an assumed risk-free interest rate. The Company recognizes compensation expense for all options with only service conditions on a straight-line basis over the requisite service period of the awards, which is generally the option vesting term of four years.

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Notes to Consolidated Financial Statements — Continued

December 31, 2024

The fair values of options granted with performance (e.g., business milestone) and market conditions (e.g., stock price target) are estimated at the grant date using a Monte Carlo simulation model. The model determined the grant date fair value of each vesting tranche and the future date when the market condition for such tranche is expected to be achieved. The Monte Carlo valuation requires the Company to make assumptions and judgements about the variables used in the calculation including the expected term, volatility of the Company's common stock, an assumed risk-free interest rate, and cost of equity.

For performance-based options with a vesting schedule based on the attainment of both performance and market conditions, along with service conditions, each quarter the Company assesses whether it is probable that it will achieve each performance condition that has not previously been achieved or deemed probable of achievement and if so, the future time when the Company expects to achieve that business milestone, or its "expected business milestone achievement time." When the Company first determines that a business milestone has become probable of being achieved, the Company allocates the entire expense for the related tranche over the number of quarters between the grant date and the then-applicable "expected vesting date," which represents the requisite service period. The requisite service period at any given time is generally the period between the grant date and the later of (i) the expected time when the performance condition will be achieved (if the related performance condition has not yet been achieved) and (ii) the expected time when the market condition will be achieved (if the related market condition has not yet been achieved). The Company immediately recognizes a cumulative catch-up expense for all accumulated expense for the quarters from the grant date through the quarter in which the performance condition was first deemed probable of being achieved. Each quarter thereafter, the Company recognizes the then-remaining expense for the tranche through the end of the requisite service period except that upon vesting of a tranche, all remaining expense for that tranche is immediately recognized.

The fair values of restricted stock units granted with service conditions only are based on the closing price of the Company's Class A Common Stock on the date of grant. The Company recognizes compensation expense for restricted stock units with only service conditions on a straight-line basis over the requisite service period of the awards, which is generally the award vesting term of four years.

The fair values of restricted stock units granted with service and performance conditions are based on the closing price of the Company's Class A Common Stock on the grant date. The vesting schedule of such awards is based entirely on the attainment of both service and performance conditions. Each quarter the Company assesses whether it is probable that it will achieve each performance condition and if so, the future time when the Company expects to achieve that performance condition, the "expected vesting date". When the Company first determines that a performance condition has become probable of being achieved, the Company allocates the entire expense for the related tranche over the number of quarters between the grant date and expected vesting date, which represents the requisite service period. The requisite service period at any given time is generally the period between the grant date and the expected time when the performance condition will be achieved with the service condition also being met.

The Company's 2020 Employee Stock Purchase Plan (the "ESPP") is compensatory in accordance with ASC 718-50-25. The Company measures and recognizes compensation expense for shares to be issued under the ESPP based on estimated grant date fair value recognized on a straight-line basis over the offering period.

The ESPP provides eligible employees with the opportunity to purchase shares of the Company's Class A Common Stock at a discount through payroll deductions. There were 1,180,215 shares purchased under the ESPP during the year ended December 31, 2024. As of December 31, 2024, 9.3 million shares of Class A Common Stock were reserved for future issuance under the ESPP.

The Company established the corporate bonus plan from 2023 to settle in the form of restricted stock units to eligible employees upon the achievement of certain service and performance conditions ("the Bonus Plan"). The awards under the Bonus Plan are classified as a liability prior to the settlement of vested restricted stock units, upon which the liability is reclassified into equity. The Company recognizes compensation expense for the annual Bonus Plan to be settled in restricted stock units on a straight-line basis over the requisite service period of approximately a year. The Bonus Plan awards are measured at the grant date fair value, i.e., the closing price of the Company's Class A Common Stock on the grant date, which is the settlement date.

Income Taxes

The Company accounts for income taxes under an asset and liability approach. Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes and operating loss carryforwards, measured by applying currently enacted tax laws. Valuation allowances are provided when necessary to reduce net deferred tax assets to an amount that is more likely than not to be realized.

The Company recognizes tax liabilities based upon its estimate of whether, and the extent to which, additional taxes will be due when such estimates are more likely than not to be sustained. An uncertain income tax position will not be recognized if it has less than a 50% likelihood of being sustained.

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Notes to Consolidated Financial Statements — Continued

December 31, 2024

Net Loss per Share of Common Stock

Basic net income (loss) per share is computed by dividing the net loss attributable to common stockholders by the weighted-average number of shares of common stock outstanding during the period.

Diluted earnings (loss) per share adjusts basic earnings per share for the potentially dilutive impact of stock awards. For awards that are liability-classified, during periods when the impact is dilutive, the Company assumes share settlement of the instruments as of the period end date and adjusts the denominator to include the dilutive shares calculated using the treasury stock method.

Note 3. Recent Accounting Pronouncements

In March 2023, the FASB issued ASU 2023-01, Leases (Topic 842): Common Control Agreements, which clarifies the accounting for leasehold improvements associated with common control leases. The ASU is effective for all entities in fiscal years beginning after December 15, 2023. The Company adopted the guidance in 2024. The adoption of such guidance had no impact on the Company's consolidated financial statements as of December 31, 2024.

In August 2023, the FASB issued ASU 2023-05, Business Combinations - Joint Venture Formations (Subtopic 805-60): Recognition and Initial Measurement, which addresses the accounting for contributions made to a joint venture, upon formation, in a joint venture's separate financial statements. The ASU is effective prospectively for all joint venture formations with a formation date on or after January 1, 2025. Additionally, a joint venture that was formed before January 1, 2025 may elect to apply the amendments retrospectively. Early adoption is permitted, either prospectively or retrospectively. The Company is currently evaluating the impact that the adoption of this standard will have on its consolidated financial statements.

In November 2023, the FASB issued ASU 2023-07, Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures, which improves reportable segment disclosure requirements, primarily through enhanced disclosures about significant segment expenses. The ASU is effective for all entities in fiscal years beginning after December 15, 2023 and interim periods within fiscal years beginning after December 15, 2024. Early adoption is permitted and public entities should apply the amendments retrospectively to all prior periods presented in the financial statements. The Company adopted the guidance in 2024. The adoption of such guidance had no material impact on the Company's consolidated financial statements as of December 31, 2024. For further information, refer to the Segments section in Note 2 "Summary of Significant Accounting Policies."

In December 2023, the FASB issued ASU 2023-09, Income Taxes (Topic 740): Improvements to Income Tax Disclosures, which enhances the transparency and decision usefulness of income tax disclosures. The ASU is effective for all public business entities for annual periods beginning after December 15, 2024. Early adoption is permitted for annual financial statements that have not yet been issued or made available for issuance. The Company is currently evaluating the impact that the adoption of this standard will have on its consolidated financial statements.

In March 2024, the FASB issued ASU 2024-01, Compensation - Stock Compensation (Topic 718): Scope Application of Profits Interest and Similar Awards, which provides illustrative guidance to help entities determine whether profits interest and similar awards should be accounted for as share-based payment arrangements within the scope of FASB ASC 718, Compensation-Stock Compensation. The ASU is effective for all public business entities for annual periods beginning after December 15, 2024, and interim periods within those annual periods. Early adoption is permitted for both interim and annual financial statements that have not yet been issued or made available for issuance. The Company is currently evaluating the impact that the adoption of this standard will have on its consolidated financial statements.

In November 2024, the FASB issued ASU 2024-03, Income Statement—Reporting Comprehensive Income—Expense Disaggregation Disclosures (Subtopic 220-40): Disaggregation of Income Statement Expenses, which requires disclosure of specified information about certain costs and expenses in the notes to financial statements at interim and annual reporting periods. The ASU is effective for all public business entities for annual periods beginning after December 15, 2026 and interim periods within annual reporting periods beginning after December 15, 2027. Early adoption is permitted for annual financial statements that have not yet been issued or made available for issuance. The Company is currently evaluating the impact that the adoption of this standard will have on its consolidated financial statements.

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Notes to Consolidated Financial Statements — Continued

December 31, 2024

Note 4. Fair Value Measurement

The Company's financial assets subject to fair value measurements on a recurring basis and the level of inputs used for such measurements were as follows (amounts in thousands):

	Fair Value Measured as of December 31, 2024		Total
	Level 1	Level 2	
Assets included in:			
Money market funds ⁽¹⁾	\$ 78,736	\$ —	\$ 78,736
Commercial paper ⁽²⁾	—	61,926	61,926
U.S. government and agency securities ⁽²⁾	—	695,504	695,504
Corporate notes and bonds ⁽²⁾	—	54,615	54,615
Total fair value	<u>\$ 78,736</u>	<u>\$ 812,045</u>	<u>\$ 890,781</u>
	Fair Value Measured as of December 31, 2023		Total
	Level 1	Level 2	
Assets included in:			
Money market funds ⁽¹⁾	\$ 115,848	\$ —	\$ 115,848
Commercial paper ⁽²⁾	—	80,913	80,913
U.S. government and agency securities ⁽²⁾	—	723,888	723,888
Corporate notes and bonds ⁽²⁾	—	147,923	147,923
Total fair value	<u>\$ 115,848</u>	<u>\$ 952,724</u>	<u>\$ 1,068,572</u>

(1) Money market funds are included in cash and cash equivalents on the Consolidated Balance Sheets.

(2) Marketable securities consist of commercial paper, U.S. government and agency securities, corporate notes and bonds. As of December 31, 2024 and 2023, marketable securities with original maturities of three months or less of \$42.1 million and \$24.4 million, respectively, are included in cash and cash equivalents on the Consolidated Balance Sheets.

Level 1 assets: Money market funds are classified as Level 1 within the fair value hierarchy, as fair value is based on unadjusted quoted prices in active markets for identical assets.

Level 2 assets: Investments in commercial paper, U.S. government and agency securities, and corporate notes and bonds are classified as Level 2 as they were valued based upon quoted market prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-based valuation techniques for which all significant inputs are observable in the market or can be corroborated by observable market data for substantially the full term of the assets.

The Company had no financial liabilities subject to fair value measurements on a recurring basis as of December 31, 2024 and December 31, 2023.

There have been no changes to the valuation methods utilized during the year ended December 31, 2024. As of December 31, 2024 and 2023, the carrying values of cash and cash equivalents, accounts payable and accrued liabilities approximate their respective fair values due to their short-term nature.

Marketable Securities

The following table summarizes, by major security type, the Company's assets that are measured at fair value on a recurring basis and are categorized using the fair value hierarchy. Amortized cost net of unrealized gain (loss) is equal to fair value as of December 31, 2024 and 2023. The fair value as of December 31, 2024 and 2023 are as follows (amounts in thousands):

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Notes to Consolidated Financial Statements — Continued

December 31, 2024

	December 31, 2024			
	Amortized Cost	Gross Unrealized Gain	Gross Unrealized Loss	Fair Value
Level 1 securities				
Money market funds	\$ 78,736	\$ —	\$ —	\$ 78,736
Level 2 securities				
Commercial paper	61,926	—	—	61,926
U.S. government and agency securities	695,082	436	(14)	695,504
Corporate notes and bonds	54,609	28	(22)	54,615
Total	\$ 890,353	\$ 464	\$ (36)	\$ 890,781

	December 31, 2023			
	Amortized Cost	Gross Unrealized Gain	Gross Unrealized Loss	Fair Value
Level 1 securities				
Money market funds	\$ 115,848	\$ —	\$ —	\$ 115,848
Level 2 securities				
Commercial paper	80,913	—	—	80,913
U.S. government and agency securities	725,301	334	(1,747)	723,888
Corporate notes and bonds	149,387	40	(1,504)	147,923
Total	\$ 1,071,449	\$ 374	\$ (3,251)	\$ 1,068,572

Realized gains and losses and interest income from the investment are included in interest income.

The Company regularly reviews its available-for-sale marketable securities in an unrealized loss position and evaluates the current expected credit loss by considering factors such as historical experience, market data, issuer-specific factors, and current economic conditions. The following tables display additional information regarding gross unrealized losses and fair value by major security type for the 17 and 51 marketable securities in unrealized loss positions as of December 31, 2024 and 2023, respectively (amounts in thousands):

	December 31, 2024					
	Less than 12 Consecutive Months		12 Consecutive Months or Longer		Total	
	Gross Unrealized Loss	Fair Value	Gross Unrealized Loss	Fair Value	Gross Unrealized Loss	Fair Value
U.S. government and agency securities	\$ (14)	\$ 96,988	\$ —	\$ —	\$ (14)	\$ 96,988
Corporate notes and bonds	(19)	33,111	(3)	1,063	(22)	34,174
Total	\$ (33)	\$ 130,099	\$ (3)	\$ 1,063	\$ (36)	\$ 131,162

	December 31, 2023					
	Less than 12 Consecutive Months		12 Consecutive Months or Longer		Total	
	Gross Unrealized Loss	Fair Value	Gross Unrealized Loss	Fair Value	Gross Unrealized Loss	Fair Value
U.S. government and agency securities	\$ (10)	\$ 31,741	\$ (1,737)	\$ 87,257	\$ (1,747)	\$ 118,998
Corporate notes and bonds	(5)	13,338	(1,499)	125,524	(1,504)	138,862
Total	\$ (15)	\$ 45,079	\$ (3,236)	\$ 212,781	\$ (3,251)	\$ 257,860

QuantumScape Corporation
Notes to Consolidated Financial Statements — Continued

December 31, 2024

The unrealized losses were attributable to changes in interest rates that impacted the value of the investments, and not increased credit risk. During the years ended December 31, 2024, 2023, and 2022, the Company received proceeds of \$1.2 million, \$1.5 million, and \$15.2 million, including interest, from the sale of available-for-sale marketable securities, respectively. The Company realized immaterial gains and losses as a result of such sales. The Company does not intend to sell the investments that are in an unrealized loss position, nor is it more likely than not that the Company will be required to sell the investments before the recovery of the amortized cost basis, which may be its maturity. Accordingly, the Company did not record an allowance for credit losses associated with these investments.

The estimated amortized cost and fair value of available-for-sale securities by contractual maturity as of December 31, 2024 are as follows (amounts in thousands):

	December 31, 2024	
	Amortized Cost	Fair Value
Due within one year	\$ 890,353	\$ 890,781
Due after one year and through five years	—	—
Total	<u>\$ 890,353</u>	<u>\$ 890,781</u>

Note 5. Balance Sheet Components

Property and Equipment

Property and equipment as of December 31, 2024 and 2023 consisted of the following (amounts in thousands):

	December 31,	
	2024	2023
Computer equipment, hardware, and software	\$ 7,831	\$ 7,191
Furniture and fixtures	107,886	77,813
Leasehold improvements	115,879	99,524
Machinery and equipment	161,460	146,730
Construction-in-progress	61,935	89,664
Property and equipment, gross	454,991	420,922
Accumulated depreciation and amortization	(154,999)	(107,758)
Property and equipment, net	<u>\$ 299,992</u>	<u>\$ 313,164</u>

Depreciation and amortization expense related to property and equipment was \$57.0 million, \$41.4 million and \$27.4 million for the years ended December 31, 2024, 2023 and 2022, respectively.

Accrued Liabilities

Accrued liabilities as of December 31, 2024 and 2023 consisted of the following (amounts in thousands):

	December 31,	
	2024	2023
Litigation-related accrual	\$ 11,950	\$ 4,000
Other	5,497	6,180
Accrued liabilities	<u>\$ 17,447</u>	<u>\$ 10,180</u>

QuantumScape Corporation
Notes to Consolidated Financial Statements — Continued

December 31, 2024

Other Liabilities

Other liabilities as of December 31, 2024 and 2023 consisted of the following (amounts in thousands):

	December 31,	
	2024	2023
Long-term advance payments	\$ 2,515	\$ 2,515
Asset retirement obligation	12,371	9,471
Other liabilities	<u>\$ 14,886</u>	<u>\$ 11,986</u>

Note 6. Leases

The Company leases its facilities and certain equipment, with current lease terms running through 2032. The Company did not include renewal options in the calculation of the lease liability and right-of use asset at the lease inception unless the exercise of such options was reasonably certain. Fixed rent generally escalates each year, and the Company is responsible for a portion of the landlords' operating expenses such as property tax, insurance and common area maintenance.

The Company's leases include various operating leases expiring at various dates through September 2032 and a finance lease expiring September 2032 for one of our buildings in San Jose. Many leases include one or more options to renew. The Company does not assume renewals in our determination of the lease term unless the renewals are deemed to be reasonably certain.

The Company's leases do not have any contingent rent payments and do not contain residual value guarantees.

The components of lease related expense are as follows (amounts in thousands):

Lease costs	Year Ended December 31,		
	2024	2023	2022
Finance lease costs:			
Amortization of right-of-use assets	\$ 2,873	\$ 2,873	\$ 2,873
Interest on lease liabilities	2,224	2,377	2,399
Operating lease costs	8,994	9,047	9,082
Variable lease costs	3,256	3,775	2,330
Total lease expense	<u>\$ 17,347</u>	<u>\$ 18,072</u>	<u>\$ 16,684</u>

The components of supplemental cash and non-cash information related to leases are as follows (amounts in thousands):

	Year Ended December 31,		
	2024	2023	2022
Operating outgoing cash flows - finance lease	\$ 2,224	\$ 1,778	\$ 1,610
Financing outgoing cash flows - finance lease	2,907	1,973	809
Operating outgoing cash flows - operating lease	8,832	7,428	4,673
Right-of-use assets obtained in exchange for new operating lease liabilities	868	—	28,845

The table below displays additional information for leases as of December 31, 2024 and 2023:

	December 31,	
	2024	2023
Finance lease		
Weighted-average remaining lease term - finance lease (in years)	7.8	8.8
Weighted-average discount rate - finance lease	6.06 %	6.06 %
Operating lease		
Weighted-average remaining lease term - operating lease (in years)	7.7	8.6
Weighted-average discount rate - operating lease	6.34 %	6.36 %

QuantumScape Corporation
Notes to Consolidated Financial Statements — Continued

December 31, 2024

As of December 31, 2024, future minimum payments during the next five years and thereafter are as follows (amounts in thousands):

Fiscal Year	Operating Lease	Finance Lease
2025	\$ 9,072	\$ 5,272
2026	9,329	5,417
2027	9,557	5,566
2028	9,555	5,719
2029	9,686	5,876
Thereafter	27,279	16,470
Total	74,478	44,320
Less present value discount	(16,039)	(9,222)
Lease liabilities	\$ 58,439	\$ 35,098

As the Company's lease agreements do not provide an implicit rate, the Company used an estimated incremental borrowing rate that will be incurred to borrow on a collateralized basis over a similar term at the lease commencement date or modification date in determining the present value of lease payments.

Asset Retirement Obligations

The Company establishes assets and liabilities for the present value of estimated future costs to return certain of our leased facilities to their original condition upon the termination or expiration of a lease. The recognition of an asset retirement obligation requires the Company to make assumptions and judgments including the actions required to satisfy the liability, inflation rates and the credit-adjusted risk-free rate. The initially recognized asset retirement cost is amortized using the same method and useful life as the long-lived asset to which it relates. Accretion expense is recognized over time as the discounted liability is accreted to its expected settlement value. The Company recorded asset retirement obligation of approximately \$12.4 million and \$9.5 million as of December 31, 2024 and December 31, 2023, respectively, in Accrued liabilities in the Consolidated Balance Sheets.

Note 7. Commitments and Contingencies

From time to time, and in the ordinary course of business, the Company is subject to certain claims, charges and litigation concerning matters arising in connection with the conduct of the Company's business activities.

QuantumScape Corporation
Notes to Consolidated Financial Statements — Continued

December 31, 2024

Securities Class Action Litigation

Beginning in January 2021, class action lawsuits were filed in the United States District Court for the Northern District of California by purported purchasers of Company securities (together, the “Securities Class Action Litigation”). The lead plaintiff filed a consolidated complaint on June 21, 2021, which alleged a purported class that includes all persons who purchased or acquired our securities between November 27, 2020 and April 14, 2021. The consolidated complaint named the Company, its then-Chief Executive Officer, its Chief Financial Officer, and its Chief Technology Officer as defendants. The consolidated complaint alleges that the defendants purportedly made false and/or misleading statements and failed to disclose material adverse facts about the Company’s business, operations, and prospects, including information regarding the Company’s battery technology. In April 2024, the parties reached an agreement in principle to settle these consolidated actions. We recorded for the year ended December 31, 2024 a net charge of \$24.5 million for the settlement of these actions. This net charge represents the gross settlement amount of \$47.5 million and \$0.4 million of related legal fees, offset by \$23.4 million for amounts recovered under our applicable insurance policies. The court granted final approval of the settlement in January 2025 and final judgment was accordingly entered in the action. As of December 31, 2024, there is no outstanding liability related to this matter.

Shareholder Derivative Litigation

Two shareholder derivative suits were filed in February 2021 in the United States District Court for the Northern District of California against 11 officers and directors of the Company and have been consolidated into one action, with the first-filed complaint being designated the operative one. The Company is the nominal defendant. The complaint alleges that the individual defendants breached various duties to the Company and contains additional similar allegations based on the same general allegations in the class action described immediately above. VGA is also named as a defendant in the derivative litigation. The action is currently stayed. A shareholder derivative suit was filed in October 2024 in the United States District Court for the Northern District of California against current and former officers and directors of the Company and VGA alleging breaches of duties to the Company. The Company is the nominal defendant. The action was deemed related to the consolidated action and is currently stayed.

Since June 2022, four shareholder derivative suits have been filed in the Court of Chancery of the State of Delaware against current and former directors and officers of the Company. The Company is the nominal defendant. The complaints allege that the individual defendants breached various duties to the Company. VGA is also named as a defendant in three of those actions. In September 2022, the four actions were consolidated and stayed. A consolidated amended complaint was filed on July 30, 2024.

A shareholder derivative action was filed in the United States District Court for the District of Delaware on February 22, 2024, against current and former directors and officers of the Company. The Company is the nominal defendant. The complaint alleges that the individual defendants breached various duties to the Company and includes a claim for contribution related to the class action. The complaint also alleges that plaintiff previously sent a litigation demand to the Board and alleges that the demand has effectively been rejected. The action is currently stayed.

Two additional shareholder derivative actions were filed in the Court of Chancery of the State of Delaware, on May 30, 2024 and October 14, 2024, against current and former directors and officers of the Company. The Company is the nominal defendant. The complaints allege that the individual defendants breached various duties to the Company. The complaints also allege that the plaintiffs previously sent a litigation demand to the Board and allege that the demands had effectively been rejected. The action filed in May 2024 is currently stayed.

Delaware Class Action

A shareholder derivative suit was filed in the Court of Chancery of the State of Delaware on August 16, 2022, against former and current directors and officers of the Company and of Kensington. Defendants moved to dismiss the complaint. Plaintiff filed an amended complaint on March 3, 2023, this time seeking relief on behalf of a putative class of holders of Kensington Class A Common Stock who held such stock prior to the November 23, 2020 redemption deadline and were allegedly entitled to redeem their shares but did not. The amended class action complaint alleges that the defendants breached various duties to Kensington stockholders or aided and abetted such breaches. Defendants moved to dismiss the amended complaint on May 8, 2023, and a hearing was held on February 21, 2024. The Kensington Defendants’ motion to dismiss was denied. The Legacy QuantumScape Defendants’ motion to dismiss was denied as to two defendants and granted as to the others. In October 2024, the parties reached an agreement in principle to settle the action. The settlement is subject to final documentation, notice to class members, and approval by the court.

QuantumScape Corporation
Notes to Consolidated Financial Statements — Continued

December 31, 2024

Private Attorneys General Actions

The Company is a defendant in two Private Attorneys General Act (“PAGA”) wage-and-hour actions filed in Santa Clara County Superior Court by former employees, along with a related class action in arbitration. The complaints allege violations of California’s Labor Code. The actions are presently stayed. The Company denies the allegations.

For many legal matters, particularly those in early stages, the Company cannot reasonably estimate the possible loss (or range of loss), if any. The Company records an accrual for legal matters at the time or times it determines that a loss is both probable and reasonably estimable. As of December 31, 2024, the amount accrued for each matter was individually not material, and the aggregate amount accrued was approximately \$12 million. The amounts accrued as of December 31, 2023 for legal matters were not material. Regarding matters for which no accrual has been made (including the potential for losses in excess of amounts accrued), the Company currently believes, based on its own investigations, that any losses (or ranges of losses) that are reasonably possible and estimable will not, in the aggregate, have a material adverse effect on its financial position, results of operations, or cash flows. However, the ultimate outcome of legal proceedings involves judgments, estimates, and inherent uncertainties and cannot be predicted with certainty. Should the ultimate outcome of any legal matter be unfavorable, the Company’s business, financial condition, results of operations, or cash flows could be materially and adversely affected. The Company may also incur substantial legal fees, which are expensed as incurred, in defending against legal claims.

Other commitments

The Company’s minimum purchase commitments consist of non-cancellable agreements to purchase goods and services, primarily for materials, and licenses and hosting services, entered into in the ordinary course of business.

As of December 31, 2024, future minimum purchase commitments in aggregate during the next five years and thereafter are as follows (amounts in thousands):

Fiscal Year	Minimum Purchase Commitments
2025	\$ 4,309
2026	2,142
2027	1,418
Thereafter	—
Total	<u>\$ 7,869</u>

Note 8. Stockholders’ Equity

As of December 31, 2024 and 2023, 1,350,000,000 shares, \$0.0001 par value per share are authorized, of which, 1,000,000,000 shares are designated as Class A Common Stock, 250,000,000 shares are designated as Class B Common Stock, and 100,000,000 shares are designated as Preferred Stock.

Common Stock

Holders of common stock are entitled to dividends when, as, and if, declared by the Company’s Board of Directors (the “Board”), subject to the rights of the holders of all classes of stock outstanding having priority rights to dividends. As of December 31, 2024, the Company had not declared any dividends. The holder of each share of Class A Common Stock is entitled to one vote, and the holder of each share of Class B Common Stock is entitled to ten votes.

In March 2021, the Company completed an underwritten public offering of shares of its Class A Common Stock and issued 11,960,000 shares for an aggregate purchase price of \$462.9 million, net of issuance costs of \$15.5 million (the “March 2021 Public Offering”).

On February 28, 2023, the Company entered into separate Distribution Agreements with J.P. Morgan Securities LLC, Cowen and Company, LLC, Deutsche Bank Securities Inc. and UBS Securities LLC, as sales agents, pursuant to which the Company is able to, from time to time, issue and sell common stock with an aggregate offering price of up to \$400 million (the “At-the-Market Offering”, or the ATM offering under the prospectus supplement to the Form S-3 filed on February 28, 2023 (File No. 333-266419). During the year ended December 31, 2024, 24.9 million shares of the Company’s Class A Common Stock were sold pursuant to the ATM offering for aggregate proceeds of approximately \$128.5 million, net of issuance costs paid.

In August 2023, the Company completed an underwritten public offering of 37.5 million shares of its Class A Common Stock for an aggregate purchase price of \$288.2 million, net of issuance costs of \$11.8 million (the “August 2023 Public Offering”).

QuantumScape Corporation
Notes to Consolidated Financial Statements — Continued

December 31, 2024

Equity Incentive Plans

Prior to the Business Combination, the Company maintained its 2010 Equity Incentive Plan (the “2010 Plan”), under which the Company granted options and restricted stock units to purchase or directly issue shares of common stock to employees, directors, and non-employees.

Upon the closing of the Business Combination, awards under the 2010 Plan were converted at an exchange ratio of 4.02175014920, and assumed into the 2020 Equity Incentive Award Plan (the “2020 Plan”, and together with the 2010 Plan, the “Plans”). The 2020 Plan permits the granting of awards in the form of incentive stock options, nonqualified stock options, stock appreciation rights, restricted shares, restricted stock units and performance awards to employees, directors, and non-employees.

As of December 31, 2024, 109,465,480 shares of Class A Common Stock are authorized for issuance pursuant to awards under the 2020 Plan, plus any shares of Class A Common Stock subject to stock options, restricted stock units or other awards that were assumed in the Business Combination and terminate as a result of being unexercised or are forfeited or repurchased by the Company, with the maximum number of shares to be added to the 2020 Plan equal to 69,846,580 shares of Class A Common Stock. As of December 31, 2024, 49,420,281 shares of Class A Common Stock are reserved and available for future issuance under the 2020 Plan.

Options may be granted at a price per share not less than 100% of the fair market value at the date of grant. If the option is granted to a 10% stockholder, then the purchase or exercise price per share shall not be less than 110% of the fair market value per share of the common stock on the grant date. Options granted generally vest over a period of four years and have ten-year contractual terms.

Stock Options

Stock option activity under the Plans, including the EPA Program discussed below, is as follows:

	Number of Shares Outstanding (in thousands)	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (Years)	Intrinsic value (in thousands)
Balance as of December 31, 2023 ⁽¹⁾	42,141	\$ 9.60	5.48	
Cancelled and forfeited ⁽²⁾	(9,241)	23.04		
Expired	(42)	6.23		
Exercised	(8,815)	1.65		
Balance as of December 31, 2024	24,043	\$ 7.36	4.21	\$ 55,244
Vested and expected to vest as of December 31, 2024 ⁽³⁾	20,516	\$ 4.66	3.74	\$ 55,244
Vested and exercisable as of December 31, 2024	17,953	\$ 2.24	3.30	\$ 55,244

(1) This includes 15.1 million options granted and outstanding as of December 31, 2023 pursuant to the EPA Program.

(2) This includes 9.2 million options forfeited under the EPA Program.

(3) This includes 2.4 million options granted pursuant to the EPA Program that are expected to vest as of December 31, 2024. None of the options granted pursuant to the EPA Program were vested and exercisable as of December 31, 2024.

There were no options granted during the year ended December 31, 2024 or December 31, 2023. Options with a weighted average fair value of \$4.93 per share were granted during the year ended December 31, 2022.

The aggregate intrinsic value of options exercised during the years ended December 31, 2024, December 31, 2023 and December 31, 2022 was \$39.9 million and \$49.8 million and \$42.0 million, respectively.

Additional information regarding options outstanding as of December 31, 2024, is as follows:

Range of Exercise Price per Share	Number of Options Outstanding (in thousands)	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (Years)
\$1.05 - \$1.35	10,248	\$ 1.32	2.14
\$2.38	5,541	\$ 2.38	4.51
\$6.23	2,375	\$ 6.23	5.67
\$23.04	5,879	\$ 23.04	6.96
	24,043	\$ 7.36	4.21

QuantumScape Corporation
Notes to Consolidated Financial Statements — Continued

December 31, 2024

Stock-based compensation expense is based on the grant-date fair value. The Company recognizes compensation expense for awards with only service conditions on a straight-line basis over the requisite service period of the awards, which is generally the option vesting term of four years.

Excluding options granted pursuant to the EPA Program, as of December 31, 2024, the Company had unrecognized stock-based compensation of \$0.6 million related to unvested stock options that are expected to be recognized over an estimated weighted average period of 0.7 years.

There were no options granted in the year ended December 31, 2024 or December 31, 2023. The following weighted average assumptions were used as inputs to the Monte Carlo simulation in determining the estimated grant-date fair value of the Company's stock options for the year ended December 31, 2022:

	Year Ended December 31,
	2022
Volatility	98.69 %
Risk-free interest rate	3.52 %
Expected dividend	—
Cost of equity	14.62 %
Weighted average fair value at grant date	\$ 4.93

All options granted during the year ended December 31, 2022 were granted pursuant to the EPA Program and were valued using a Monte Carlo simulation. The Monte Carlo simulation used in the valuation of the options required the Company to make assumptions and judgements about the variables used in the calculation including the expected term, volatility of the Company's common stock and cost of equity. The Company estimated expected term based on the midpoint between the time of vesting and the remaining time to expiration of the option. Volatility is based on a blend of (i) the Company's historical volatility from daily closing stock prices given increased trading history and (ii) the Company's implied volatility from exchange traded options. Cost of equity is calculated using (i) risk-free rate, (ii) average peer group market beta and (iii) the market-risk premium.

EPA Program

In December 2021, the Company granted stock options for the purchase of an aggregate of approximately 14.7 million shares of the Company's Class A Common Stock to the Company's Chief Executive Officer at the time and other members of the Company's management team pursuant to the EPA Program that was approved by the Company's stockholders in December 2021. In December 2022, the remaining 2.1 million stock options under the EPA Program were granted to members of the Company's management team under the same terms as those in the initial grant in 2021, representing the final grant pursuant to the EPA Program approved in December 2021. The EPA Program consists of five equal tranches (each a "Tranche") that vest if the Company meets certain business milestones (performance conditions) and stock price targets (market conditions).

QuantumScape Corporation
Notes to Consolidated Financial Statements — Continued

December 31, 2024

Business Milestones

The compensation committee of the Board selected the following eleven business milestones for the EPA Program, of which one new business milestone must be achieved for each Tranche.

- Delivery of an A-sample battery cell that meets specifications agreed upon with an automaker
- The validation by an auto maker of a completed B-sample battery cell (a B-sample battery cell is a functional, complete battery cell prototype produced from our pilot line)
- Delivery of at least 1-gigawatt hour (GWh) of battery cells to a single customer
- Delivery of at least 3-gigawatt hour (GWh) of battery cells to each of three or more customers, with at least one of such customers being an auto maker
- \$5 billion in GAAP revenue over a period of trailing four quarters
- \$10 billion in GAAP revenue over a period of trailing four quarters
- Total cumulative battery cell production of 500 GWh
- Total cumulative battery cell production of 1,000 GWh
- Adjusted EBITDA margin of at least 25% over four consecutive quarters
- 10% of worldwide market share in automotive battery cells (excluding China)
- 20% of worldwide market share in automotive battery cells (excluding China)

Once a business milestone has been achieved, that business milestone will be considered achieved, even if later the Company does not maintain performance at that level.

Stock Price Targets

The stock price targets of the five Tranches of the EPA Program are \$60, \$120, \$180, \$240 and \$300.

To meet the stock price targets, the stock price must be sustained and not merely momentarily achieved. Except in the case of a change in control, the Company's stock price for the purposes of assessing the stock price target will be the 120-day trailing average closing price (based on trading days), but a stock price target will not be achieved unless the trailing average closing price of the last 30 trading days of such 120-trading day period also meets or exceeds the applicable stock price target. For a stock price target for any given Tranche to be achieved, the last day of the 120-day measurement period must occur on or after the date that the requisite number of business milestones have been achieved for such Tranche.

Vesting Tranches

Each of the five Tranches vests only if the Company first achieves a new business milestone from the eleven identified business milestones, and then achieves the next applicable stock price target within 10 years of the initial grants. Additionally, in order to vest in any Tranche, the participant generally must continue to provide service through the date of vesting in the same position, or a similar or higher role, as when the EPA Program awards are granted.

Tranche	Business Milestone Requirement	Stock Price Target
1	Achievement of 1 business milestone	\$60
2	Achievement of 2 business milestones (inclusive of the business milestone applicable to Tranche 1)	\$120
3	Achievement of 3 business milestones (inclusive of the business milestone applicable to Tranche 2)	\$180
4	Achievement of 4 business milestones (inclusive of the business milestone applicable to Tranche 3)	\$240
5	Achievement of 5 business milestones (inclusive of the business milestone applicable to Tranche 4)	\$300

QuantumScape Corporation
Notes to Consolidated Financial Statements — Continued

December 31, 2024

Change in Control

In the event of a change in control of the Company, a portion of the EPA Program awards may also be eligible to vest; in such event, the business milestone requirement will not be applicable and the Company's stock price for the purposes of the stock price targets will be the price per share paid in such change in control. In the event that the Company's stock price by this measure falls between two stock price targets, linear interpolation between the two applicable stock price targets will be used to determine an additional portion of the EPA Program awards that will vest. Any portion of an EPA Program award that is not vested upon and after giving effect to a change in control will terminate.

The Company accounts for the compensation expense associated with each Tranche when it determines that achievement of a related business milestone is considered probable. As of December 31, 2024, the business milestone for one Tranche had been achieved; however, because the related stock price target has not yet been achieved, no shares have vested to date. As of December 31, 2024, one other Tranche was considered probable.

In February 2024, the 8.4 million stock options granted to Mr. Jagdeep Singh under the Company's EPA Program forfeited in accordance with the contractual terms upon the termination of his employment. For the year ended December 31, 2024, the Company recorded a credit in stock-based compensation expense of \$13.4 million, primarily due to the reversal of the previously recognized expense of \$17.6 million for the options where the requisite service period had not been completed at the time of forfeiture including options which Mr. Jagdeep Singh forfeited. For the years ended December 31, 2023 and December 31, 2022, the Company recorded stock-based compensation expense of \$26.3 million and \$49.4 million, respectively, related to the EPA Program. As of December 31, 2024, the Company had approximately \$7.9 million of total unrecognized stock-based compensation expense for the business milestones currently achieved or considered probable of achievement, which will be recognized over an estimated weighted-average period of 2.1 years. As of December 31, 2024, the Company had approximately \$55.0 million of total unrecognized stock-based compensation expense for the business milestones currently considered not probable of achievement.

Restricted Stock Units Activities

In 2023, the Company granted 4.4 million shares of restricted stock units with service and performance conditions ("PSU") to members of the Company's management team and certain other employees under the Company's 2020 Plan. The performance conditions for these PSUs are related to the Company's product development milestones through May 2026. These PSUs will expire in May 2026 if performance conditions are not met. In 2024, the Company granted 4.2 million shares of PSUs to members of the Company's management team and certain other employees. The performance conditions for these PSUs are related to the Company's product development milestones through May 2027. These PSUs will expire in May 2027 if performance conditions are not met. For the year ended December 31, 2024, the Company recorded stock-based compensation expense of \$24.3 million, related to these PSUs, for the product development milestones currently achieved or considered probable of achievement. For the year ended December 31, 2023, the Company recorded stock-based compensation expense of \$15.8 million, related to these PSUs, for the product development milestones considered probable of achievement.

The Company's 2023 Bonus Plan was settled in the form of restricted stock units to employees upon the achievement of certain service and performance conditions. These performance conditions are related to the Company's product development, operational, and business milestones for 2023. The stock-based compensation expense related to the 2023 Bonus Plan were recorded as liabilities under Accrued compensation and benefits prior to the settlement. During the year ended December 31, 2023, approximately 0.4 million restricted stock units were granted and vested under the 2023 Bonus Plan for the interim settlement, resulting in \$2.9 million in additional paid in capital. Subsequent to 2023, a total of approximately 3.2 million restricted stock units were granted and vested under the 2023 Bonus Plan for the final settlement, resulting in approximately \$20.4 million in additional paid in capital. For the year ended December 31, 2024, the Company recorded stock-based compensation expense of \$2.6 million related to the 2023 Bonus Plan. For the year ended December 31, 2023, the Company recorded stock-based compensation expense of \$20.7 million, related to the 2023 Bonus Plan.

QuantumScape Corporation
Notes to Consolidated Financial Statements — Continued

December 31, 2024

A portion of the Company's 2024 Bonus Plan will be settled in the form of restricted stock units to eligible employees upon the achievement of certain service and performance conditions. For the year ended December 31, 2024, the Company recorded stock-based compensation expense of \$19.7 million, related to the 2024 Bonus Plan for the performance conditions achieved as of December 31, 2024. During the year ended December 31, 2024, approximately 0.4 million restricted stock units were granted and vested under the 2024 Bonus Plan for the interim settlement, resulting in \$2.8 million in additional paid in capital. The remaining stock-based compensation expense of \$16.9 million related to the 2024 Bonus Plan are recorded as liabilities under Accrued compensation and benefits in the Consolidated Balance Sheets as of December 31, 2024, and will be reclassified to additional paid-in capital upon issuance of the restricted stock units.

Restricted stock units with service conditions only ("RSU") and PSU activities under the Plans are as follows:

	RSUs Outstanding		PSUs Outstanding	
	Number of Units (in thousands)	Weighted Average Grant Date Fair Value	Number of Units (in thousands)	Weighted Average Grant Date Fair Value
Balance as of December 31, 2023	23,003	\$ 9.99	4,319	\$ 7.65
Granted	17,068	5.97	7,794	6.42
Vested	(9,919)	10.37	(4,656)	6.70
Forfeited	(3,277)	8.28	(882)	7.21
Balance as of December 31, 2024	26,875	\$ 7.51	6,575	\$ 6.92

The fair value of RSUs which vested during the years ended December 31, 2024, December 31, 2023 and December 31, 2022 was \$58.3 million, \$68.1 million and \$65.5 million, respectively. The fair value of PSUs which vested during the year ended December 31, 2024 was \$29.3 million in total, consisting of the final settlement under the 2023 Bonus Plan, the interim settlement under the 2024 Bonus Plan, and the PSUs granted to members of the Company's management team and certain other employees. The fair value of PSUs which vested during the year ended December 31, 2023 was \$2.9 million, which was the interim settlement under the 2023 Bonus Plan. No PSUs were granted during the year ended December 31, 2022.

As of December 31, 2024, unrecognized compensation costs related to unvested RSUs and PSUs were \$182.4 million and \$13.5 million, respectively, and are expected to be recognized over a weighted average period of 2.5 years and 1.3 years, respectively.

Stock-Based Compensation Expense

Total stock-based compensation expense recognized in the accompanying Consolidated Statements of Operations and Comprehensive Loss for all awards is as follows (amounts in thousands):

	Year Ended December 31,		
	2024	2023	2022
Research and development	\$ 97,947	\$ 94,285	\$ 62,892
General and administrative	46,706	72,012	64,218
Total stock-based compensation expense	\$ 144,653	\$ 166,297	\$ 127,110

QuantumScape Corporation
Notes to Consolidated Financial Statements — Continued

December 31, 2024

Note 9. Earnings (Loss) Per Share

Basic net loss per share is computed by dividing the net loss by the weighted-average number of shares of common stock outstanding during the period. Diluted earnings per share adjusts basic earnings per share for the potentially dilutive impact of stock options. As the Company has reported a loss for the year ended December 31, 2024, potentially dilutive securities, are antidilutive and accordingly, basic net loss per share equals diluted net loss per share.

The following table sets forth the computation of basic and diluted loss per Class A Common Stock and Class B Common Stock (amounts in thousands, except per share amounts):

	Year Ended December 31,		
	2024	2023	2022
Numerator:			
Net loss attributable to common stockholders	\$ (477,857)	\$ (445,145)	\$ (411,907)
Denominator:			
Weighted average Class A and Class B Common Stock outstanding - Basic and Diluted	508,102	462,239	432,973
Net loss per share attributable to Class A and Class B Common stockholders - Basic and Diluted	\$ (0.94)	\$ (0.96)	\$ (0.95)

Basic and diluted earnings per share was the same for each period presented as the inclusion of all potential Class A Common Stock and Class B Common Stock outstanding would have been anti-dilutive.

The following table presents the potential common stock outstanding that was excluded from the computation of diluted net loss per share of common stock as of the periods presented because including them would have been antidilutive (amounts in thousands):

	Year Ended December 31,		
	2024	2023	2022
Options	24,043	42,141	50,124
RSUs	26,875	23,003	16,563
PSUs	10,541	7,259	—
Total	61,459	72,403	66,687

Note 10. Joint Venture and Redeemable Non-Controlling Interest

As described in Note 2, Summary of Significant Accounting Policies, in September 2018, Legacy QuantumScape entered into a JVA, which was amended in 2020, with VWGoA and VGA and formed QSV. The Company determined that the entity was a VIE with a related party, and the Company's operations were more closely associated with QSV. On July 5, 2024, the Company, QS, VWGoA, VGA, and the JV Entity, entered into the JV Termination Agreement to, among other things, terminate the JVA and dissolve the JV Entity. QSV was subsequently dissolved in September 2024. The financial position and results of operations of QSV had been included in the Company's consolidated financial statements from the date of the initial investment up until the dissolution date. Cash and cash equivalents for QSV were approximately \$3.7 million and \$3.5 million, prior to dissolution and as of December 31, 2023, respectively. As part of the dissolution, the Company distributed approximately \$1.8 million in cash to VGA.

QuantumScape Corporation
Notes to Consolidated Financial Statements — Continued

December 31, 2024

The following table sets forth the change in redeemable non-controlling interest for years ended December 31, 2024, 2023 and 2022 (amounts in thousands):

	Redeemable Non-Controlling Interest
Balance as of December 31, 2021	\$ 1,693
Net income attributable to redeemable non-controlling interest in QSV	11
Balance as of December 31, 2022	\$ 1,704
Net income attributable to redeemable non-controlling interest in QSV	66
Balance as of December 31, 2023	\$ 1,770
Net loss attributable to redeemable non-controlling interest in QSV	(85)
Dissolution of joint venture	(1,685)
Balance as of December 31, 2024	\$ —

Pursuant to the JV Termination Agreement, the earmark restrictions on \$134.0 million of funds previously reserved by the Company for future contribution to the JV Entity were removed.

Note 11. Income Taxes

The Company has no domestic provision for income taxes for the years ended December 31, 2024, December 31, 2023 and December 31, 2022. The Company has no domestic current tax expense from losses generated in the U.S. and no deferred expense from the valuation allowance. The Company established a foreign subsidiary in Japan during the year ended December 31, 2021. The foreign tax provision for the years ended December 31, 2024, December 31, 2023 and December 31, 2022 is not material.

A reconciliation from U.S. statutory rate of 21% to the effective rate is as follows:

	Year Ended December 31,		
	2024	2023	2022
Federal Statutory rate	21.0 %	21.0 %	21.0 %
State tax expense	7.0 %	7.0 %	7.0 %
Stock-based compensation	(0.9 %)	0.1 %	1.7 %
Research and development tax credit	1.8 %	3.1 %	2.7 %
Permanent tax items	0.0 %	(0.1 %)	(0.1 %)
Prior year deferred true-up	(0.1 %)	0.0 %	4.6 %
Foreign income taxes at rates other than the US rate	0.1 %	0.0 %	0.0 %
Sec. 162(m) wage limitation	(1.5 %)	(7.3 %)	(2.2 %)
Change to valuation allowance	(27.4 %)	(23.8 %)	(34.7 %)
Effective tax rate	0.0 %	0.0 %	0.0 %

QuantumScape Corporation
Notes to Consolidated Financial Statements — Continued

December 31, 2024

Significant components of the Company's net deferred tax assets as of December 31, 2024 and December 31, 2023, are as follows (amounts in thousands):

	Year Ended December 31,	
	2024	2023
Deferred tax assets:		
Net operating losses	\$ 479,714	\$ 400,678
Tax credits	84,574	72,409
Accruals and stock-based compensation	25,875	20,610
Lease liability	28,714	29,953
Section 174 capitalized research & development	117,456	82,303
Gross deferred tax assets	736,333	605,953
Valuation allowance	(674,155)	(544,408)
Total deferred tax assets	\$ 62,178	\$ 61,545
Deferred tax liabilities:		
Right of use assets	\$ (20,273)	\$ (22,382)
Intangibles	(1,011)	(915)
Fixed assets	(39,803)	(38,248)
Total deferred tax liabilities	(61,087)	(61,545)
Total net deferred tax assets	\$ 1,091	\$ —

Recognition of deferred tax assets is appropriate when realization of such assets is more likely than not. Based upon the weight of available evidence, which includes the Company's historical operating performance, cumulative net losses, and projected future losses, the Company has provided a full valuation allowance against its U.S. deferred tax assets. The Company's valuation allowance increased by \$129.7 million and \$106.2 million for the years ended December 31, 2024 and December 31, 2023, respectively. A reconciliation of the beginning and ending balances of the valuation allowance is as follows (amounts in thousands):

	Year Ended December 31,	
	2024	2023
Beginning of the year	\$ (544,408)	\$ (438,212)
Increase	(129,747)	(106,196)
End of the year	\$ (674,155)	\$ (544,408)

As of December 31, 2024, the Company had U.S. federal and state net operating loss carryforwards of approximately \$1.6 billion and \$1.9 billion, respectively. The U.S. federal net operating loss carryforwards of \$170.2 million generated prior to 2018 will expire at various dates beginning in 2030, if not utilized. The remaining U.S. federal net operating loss carryforwards of \$1.5 billion can be carried forward indefinitely. The state net operating loss carryforwards will expire at various dates beginning in 2030, if not utilized.

In the event of a change in ownership, as defined under federal and state tax laws, the Company's net operating loss and tax credit carryforwards could be subject to annual limitations. The annual limitations could result in the expiration of the net operating loss and tax credit carryforwards prior to utilization.

As of December 31, 2024, the Company also has U.S. federal and California research and development credits of \$101.8 million and \$72.3 million, respectively. The U.S. federal tax credit carryforwards will expire beginning in 2031, if not utilized. The state tax credit carryforwards do not expire.

The Company records unrecognized tax benefits in accordance with ASC 740-10, *Income Taxes*. ASC 740-10 prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of uncertain tax positions taken or expected to be taken in the Company's income tax return and also provides guidance on de-recognition, classification, interest and penalties, accounting in interim periods, disclosure, and transition.

A reconciliation of the beginning and ending balances of unrecognized tax benefits is as follows (amounts in thousands):

QuantumScape Corporation
Notes to Consolidated Financial Statements — Continued

December 31, 2024

	Year Ended December 31,		
	2024	2023	2022
Beginning of the year	\$ 68,057	\$ 52,802	\$ 32,172
Increase—current year positions	14,826	15,113	12,388
Decrease—current year positions	—	—	(5,056)
Increase—prior year positions	—	142	13,298
Decrease—prior year positions	(1,488)	—	—
End of the year	<u>\$ 81,395</u>	<u>\$ 68,057</u>	<u>\$ 52,802</u>

Due to the Company's full valuation allowance, the unrecognized tax benefits would not materially impact the Company's effective tax rate when recognized. The Company does not anticipate the total amounts of unrecognized tax benefits will significantly increase or decrease in the next 12 months.

The Company's policy is to classify interest and penalties associated with uncertain tax positions, if any, as a component of its income tax provision. For the years ended December 31, 2024, 2023 and 2022, the Company had no interest or penalties related to unrecognized tax benefits.

The U.S. federal and state income tax returns are open under the statute of limitations subject to tax examinations for the tax years ended December 31, 2020 through December 31, 2022 and December 31, 2019 through December 31, 2022, respectively. To the extent the Company has tax attribute carryforwards, the tax years in which the attribute was generated may still be adjusted upon examination by the IRS or state tax authorities to the extent utilized in a future period.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.**Limitations on Effectiveness of Controls and Procedures**

In designing and evaluating our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act), management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our principal executive officer and principal financial officer, has evaluated the effectiveness of the design and operation of our disclosure controls and procedures as of December 31, 2024, the end of the period covered by this Report. Based upon that evaluation, our principal executive officer and principal financial officer concluded that, as of the end of the period covered by this Report, our disclosure controls and procedures were effective.

Management's Report on Internal Controls Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over our financial reporting. Our internal control over financial reporting is designed to provide reasonable assurances regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. Our 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 our assets;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. generally accepted accounting principles, and that receipts and expenditures are being made only in accordance with authorizations of our management and directors; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Our internal control systems include the controls themselves, actions taken to correct deficiencies as identified, an organizational structure providing for division of responsibilities, careful selection and training of qualified financial personnel and a program of internal audits.

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.

Our management has assessed the effectiveness of our internal control over financial reporting as of December 31, 2024. In making this assessment, management used the criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) (2013 framework).

Based on this assessment, our management concluded that our internal control over financial reporting was effective as of December 31, 2024.

Attestation of Independent Registered Public Accounting Firm

Ernst & Young LLP, an independent registered public accounting firm, which has audited and reported on the consolidated financial statements contained in this Report, has issued its report on the effectiveness of the Company's internal control over financial reporting which is included in Part II. Item 8 - Financial Statements and Supplementary Data.

Changes in Internal Control Over Financial Reporting

There was no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the quarterly period ended December 31, 2024 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information.**Securities Trading Plans of Directors and Executive Officers**

During our last fiscal quarter, none of our directors or officers, as defined in Rule 16a-1(f), adopted and/or terminated a “Rule 10b5-1 trading arrangement” or a “non-Rule 10b5-1 trading arrangement,” as defined in Regulation S-K Item 408.

Extraordinary Performance Award Waivers

On February 24, 2025, each of the following current named executive officers—Kevin Hettrich, Timothy Holme and Mohit Singh—and certain other senior employees entered into agreements with the Company to waive the stock options granted to them under the Company’s 2021 Extraordinary Performance Award Program. The total number of shares of the Company’s Class A Common Stock underlying such waived stock options was 3,989,584.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections.

None.

PART III

In accordance with General Instruction G.(3) of Form 10-K certain information required by this Part III will either be incorporated into this Report by reference to our definitive proxy statement for our 2025 Annual Meeting of Stockholders filed within 120 days after December 31, 2024 or will be included in an amendment to this Report filed within 120 days after December 31, 2024.

Item 10. Directors, Executive Officers and Corporate Governance.

The information that is responsive to this Item 10 of Form 10-K will be included in our 2025 Proxy Statement and is incorporated herein by reference.

Item 11. Executive Compensation

The information that is responsive to this Item 11 of Form 10-K will be included in our 2025 Proxy Statement and is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The information that is responsive to this Item 12 of Form 10-K will be included in our 2025 Proxy Statement and is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

The information that is responsive to this Item 13 of Form 10-K will be included in our 2025 Proxy Statement and is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services.

The information that is responsive to this Item 14 of Form 10-K will be included in our 2025 Proxy Statement and is incorporated herein by reference.

PART IV

Item 15. Exhibits, Financial Statement Schedules.

(a) List the following documents filed as a part of the report:

(1) Financial Statements:

<u>Report of Independent Registered Public Accounting Firm (PCAOB ID:42)</u>	58
<u>Consolidated Balance Sheets as of December 31, 2024 and 2023</u>	61
<u>Consolidated Statements of Operations and Comprehensive Income (Loss) for the Years ended December 31, 2024, 2023 and 2022</u>	62
<u>Consolidated Statements of Redeemable Non-Controlling Interest and Stockholders' Equity for the Years ended December 31, 2024, 2023 and 2022</u>	63
<u>Consolidated Statements of Cash Flows for the Years ended December 31, 2024, 2023 and 2022</u>	64
<u>Notes to Consolidated Financial Statements</u>	65

(2) Financial Statement Schedules. None.

(3) The exhibits listed below are filed as part of this Report are incorporated herein by reference, in each case as indicated below.

Exhibit Index

Exhibit Number	Description	Incorporated by Reference			
		Form	File No.	Exhibit	Filing Date
2.1	<u>Business Combination Agreement, dated as of September 2, 2020, by and among Kensington Capital Acquisition Corp., Kensington Capital Merger Sub Corp. and Legacy QuantumScape.</u>	S-4/A	333-248930	2.1	November 12, 2020
2.2	<u>Amendment No. 1 to Business Combination Agreement, dated as of September 21, 2020, by and among Kensington Capital Acquisition Corp., Kensington Capital Merger Sub Corp. and Legacy QuantumScape.</u>	S-4/A	333-248930	2.2	November 12, 2020
3.1	<u>Amended and Restated Certificate of Incorporation of the Company, as amended.</u>	10-Q	001-39345	3.1	July 26, 2024
3.2	<u>Amended and Restated Bylaws of the Company.</u>	8-K	001-39345	3.1	October 25, 2022
4.1	<u>Specimen Common Stock Certificate.</u>	8-K	001-39345	4.1	December 2, 2020
4.2	<u>Description of Securities.</u>	10-K	001-39345	4.4	February 28, 2022
10.1#	<u>Collaboration Agreement, dated as of July 5, 2024, by and between QuantumScape Battery, Inc. and PowerCo SE.</u>	8-K	001-39345	10.1	July 11, 2024
10.2	<u>Amended and Restated Letter Agreement, dated as of July 5, 2024, by and among QuantumScape Battery, Inc., the Company and Volkswagen Group of America Investments, LLC.</u>	8-K	001-39345	10.2	July 11, 2024
10.3	<u>Joint Venture Termination and Release Agreement, dated as of July 5, 2024, by and among Volkswagen Group of America, Inc., Volkswagen Group of America Investments, LLC, the Company, QuantumScape Battery, Inc. and QSV Operations LLC.</u>	8-K	001-39345	10.3	July 11, 2024
10.4	<u>Registration Rights and Lock-up Agreement, dated as of September 2, 2020, by and among Kensington Capital Acquisition Corp. and the persons named therein.</u>	8-K	001-39345	10.3	September 3, 2020
10.5	<u>Lease, dated May 31, 2013, by and between SI 55, LLC and Legacy QuantumScape.</u>	S-4/A	333-248930	10.18	November 12, 2020
10.6	<u>Amendment to Lease, dated May 19, 2014, by and between SI 55, LLC and Legacy QuantumScape.</u>	S-4/A	333-248930	10.19	November 12, 2020
10.7	<u>Lease Agreement, dated April 2, 2021, between Exeter 1710 Automation, LLC and Legacy QuantumScape</u>	S-1/A	333-251433	10.34	May 10, 2021
10.8	<u>Second Amendment to Lease, dated June 22, 2021, between Legacy QuantumScape and SI 55, LLC.</u>	8-K	001-39345	10.1	June 28, 2021
10.9	<u>Guaranty of Lease, dated June 22, 2021, between Legacy QuantumScape and SI 55, LLC.</u>	8-K	001-39345	10.2	June 28, 2021
10.10	<u>Lease, dated November 1, 2021, by and between the 1750 Landlord and the Company</u>	8-K	001-39345	10.1	November 5, 2021
10.11	<u>Lease, dated November 1, 2021, by and between the 1756/62 Landlord and the Company</u>	8-K	001-39345	10.2	November 5, 2021
10.12+	<u>Offer Letter from Legacy QuantumScape to Timothy Holme, dated January 1, 2011.</u>	S-4/A	333-248930	10.13	November 12, 2020

10.13+	Offer Letter from Legacy QuantumScape to Kevin Hettrich, dated October 11, 2011.	S-4/A	333-248930	10.14	November 12, 2020
10.14+	Offer Letter from Legacy QuantumScape to Michael McCarthy, dated December 21, 2012.	S-4/A	333-248930	10.16	November 12, 2020
10.15+	Offer Letter from Legacy QuantumScape to Mohit Singh, dated April 3, 2013.	S-4/A	333-248930	10.17	November 12, 2020
10.16+	Offer Letter from QuantumScape Battery, Inc. to Srinivasan Sivaram	10-Q	001-39345	10.2	October 27, 2023
10.17+	Form of Indemnification Agreement by and between the Registrant and its directors and officers.	8-K	001-39345	10.7	December 2, 2020
10.18+	The Registrant's 2020 Equity Incentive Plan.	8-K	001-39345	10.8	December 2, 2020
10.19+	The Registrant's 2020 Equity Incentive Plan — Form of Stock Option Agreement.	8-K	001-39345	10.9	December 2, 2020
10.20+	The Registrant's 2020 Equity Incentive Plan — Form of Restricted Stock Unit Agreement.	8-K	001-39345	10.10	December 2, 2020
10.21+	The Registrant's 2020 Equity Incentive Plan — Form of Restricted Stock Agreement.	8-K	001-39345	10.11	December 2, 2020
10.22+	The Registrant's 2020 Employee Stock Purchase Plan.	8-K	001-39345	10.12	December 2, 2020
10.23+	Form of Performance Stock Option Agreement under the Extraordinary Performance Award Program	DEF 14A	001-39345	Appendix 1	November 8, 2021
10.24+	Employee Incentive Compensation Plan.	8-K	001-39345	10.1	March 15, 2021
10.25+	Form of Change in Control and Severance Agreement.	8-K	001-39345	10.2	March 15, 2021
10.26	Distribution Agreement, dated February 28, 2023 by and between QuantumScape Corporation and J.P. Morgan Securities LLC.	8-K	001-39345	1.1	February 28, 2023
10.27	Distribution Agreement, dated February 28, 2023, by and between QuantumScape Corporation and Cowen and Company, LLC.	8-K	001-39345	1.2	February 28, 2023
10.28	Distribution Agreement, dated February 28, 2023, by and between QuantumScape Corporation and Deutsche Bank Securities Inc.	8-K	001-39345	1.3	February 28, 2023
10.29	Distribution Agreement, dated February 28, 2023, by and between QuantumScape Corporation and UBS Securities LLC.	8-K	001-39345	1.4	February 28, 2023
10.30* + 19.1* 21.1*	The Registrant's Outside Director Compensation Policy QuantumScape Corporation Insider Trading Policy List of Subsidiaries of the Registrant				
23.1*	Consent of Independent Registered Public Accounting Firm, Ernst & Young LLP.				
24.1*	Power of Attorney (included in signature page).				
31.1*	Rule 13a-14(a) /15(d)-14(a) Certification of Principal Executive Officer.				
31.2*	Rule 13a-14(a) /15(d)-14(a) Certification of Principal Financial Officer.				
32.1†	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				

32.2†	Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				
97.1	Compensation Recovery Policy	10-K	001-39345	97.1	February 27, 2024
101.INS	Inline XBRL Instance Document – the instance document does not appear in the Interactive Data File because XBRL tags are embedded within the Inline XBRL document.				
101.SCH	Inline XBRL Taxonomy Extension Schema With Embedded Linkbases Document				
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)				

* Filed herewith.

† These exhibits are furnished with this Annual Report on Form 10-K and are not deemed filed with the Securities and Exchange Commission and are not incorporated by reference in any filing of QuantumScape Corporation under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date hereof and irrespective of any general incorporation language contained in such filings.

Portions of this exhibit have been omitted in accordance with Item 601 of Regulation S-K.

+ Indicates a management or compensatory plan.

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, as amended, the Registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized.

QuantumScape Corporation

Date: February 26, 2025

By: _____ /s/ Siva Sivaram

Siva Sivaram

President and Chief Executive Officer (Principal Executive Officer)

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Siva Sivaram and Kevin Hettrich, and each of them or his attorney-in-fact, each with the power of substitution, for him in any and all capacities, to sign any amendments to this Annual Report on Form 10-K, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that each of said attorneys-in-fact, or his substitutes, may do or cause to be done by virtue of hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this Report has been signed below by the following persons on behalf of the Registrant in the capacities and on the dates indicated.

Name	Title	Date
/s/ Siva Sivaram Siva Sivaram	President, Chief Executive Officer and Director (Principal Executive Officer)	February 26, 2025
/s/ Kevin Hettrich Kevin Hettrich	Chief Financial Officer (Principal Financial and Accounting Officer)	February 26, 2025
/s/ Brad Buss Brad Buss	Director	February 26, 2025
/s/ Jeneanne Hanley Jeneanne Hanley	Director	February 26, 2025
/s/ Susan Huppertz Susan Huppertz	Director	February 26, 2025
/s/ Jürgen Leohold Jürgen Leohold	Director	February 26, 2025
/s/ Gena Lovett Gena Lovett	Director	February 26, 2025
/s/ Günther Mendl Günther Mendl	Director	February 26, 2025
/s/ Fritz Prinz Fritz Prinz	Director	February 26, 2025
/s/ Sebastian Schebera Sebastian Schebera	Director	February 26, 2025
/s/ Dipender Saluja Dipender Saluja	Director	February 26, 2025
/s/ Dennis Segers Dennis Segers	Director	February 26, 2025
/s/ JB Straubel JB Straubel	Director	February 26, 2025

QUANTUMSCAPE CORPORATION

AMENDED AND RESTATED OUTSIDE DIRECTOR COMPENSATION POLICY

QuantumScape Corporation (the “**Company**”) believes that providing cash and equity compensation to its members of the Board of Directors (the “**Board**,” and members of the Board, the “**Directors**”) represents an effective tool to attract, retain and reward Directors who are not employees of the Company (the “**Outside Directors**”). This Outside Director Compensation Policy (the “**Policy**”) is intended to formalize the Company’s policy regarding the compensation to its Outside Directors. Unless otherwise defined herein, capitalized terms used in this Policy will have the meaning given to such terms in the Company’s 2020 Equity Incentive Plan (the “**Plan**”), or if the Plan is no longer in place, the meaning given to such terms or any similar terms in the equity plan then in place. Each Outside Director will be solely responsible for any tax obligations incurred by such Outside Director as a result of the equity and cash payments such Outside Director receives under this Policy.

Subject to Section 7 of this Policy, this Policy, originally approved by the Board on March 10, 2021 and subsequently amended and restated on April 21, 2022, and on February 15, 2024, and is further amended and restated as set forth herein as approved by the Board on February 6, 2025 and effective as of January 1, 2025 (such date, the “**Effective Date**”).

1. CASH COMPENSATION*Annual Cash Retainer*

Each Outside Director will be paid an annual cash retainer of \$80,000. There are no per-meeting attendance fees for attending Board meetings. This cash compensation will be paid quarterly in arrears on a prorated basis.

Committee Annual Cash Retainer

Effective as of the Effective Date, each Outside Director who serves as chair of the Board, lead independent director, or the chair or a member of a committee of the Board listed below will be eligible to earn additional annual cash fees (paid quarterly in arrears on a prorated basis) as follows:

Chair of the Board of Directors: \$75,000

Lead Independent Director (if any): \$22,000

Chair of Audit Committee: \$25,000

Member of Audit Committee: \$12,500

Chair of Compensation Committee: \$18,000

Member of Compensation Committee: \$9,000

Chair of Nominating Committee: \$13,000

Member of Nominating Committee: \$6,500

For clarity, each Outside Director who serves as the chair of a committee shall receive only the additional annual cash fee as the chair of the committee, and not the additional annual cash fee as a member of the committee.

2. EQUITY COMPENSATION

Outside Directors will be eligible to receive all types of Awards (except Incentive Stock Options) under the Plan (or the applicable equity plan in place at the time of grant), including discretionary Awards not covered under this Policy.

All grants of Awards to Outside Directors pursuant to Section 2 of this Policy will be automatic and nondiscretionary, except as otherwise provided herein, and will be made in accordance with the following provisions:

(a) **No Discretion**. No person will have any discretion to select which Outside Directors will be granted any Awards under this Policy or to determine the number of Shares to be covered by such Awards.

(b) **Initial Award**. Each Outside Director joining the Board after the Effective Date shall be automatically granted the following awards upon first joining the Board (such date, the “**Start Date**”):

(i) **Standard Initial Award**. An award of Restricted Stock Units with a Value (as defined below) of \$320,000 (the “**Initial Award**”). The Initial Award will vest as to 1/12 of the Shares quarterly over approximately three years (on each Quarterly Vesting Date after the date 3-months after the Start Date), subject to the Outside Director continuing to be a Service Provider through the applicable vesting date.

(ii) **Pro-Rated Annual Award**. An Outside Director will only receive an Award under this Section 2(b)(ii) (a “**Pro-Rated Annual Award**”) if the Start Date is not on the date of an Annual Meeting (as defined below). If the Outside Director’s Start Date is on the same date as an Annual Meeting, then the Directors shall receive the Annual Award described in Section 2(c) and no Pro-Rated Annual Award. If an Outside Director is eligible for a Pro-Rated Annual Award, then the Outside Director shall be automatically granted on the Start Date an award of Restricted Stock Units with a Value of (x) \$200,000 multiplied by (y) the fraction obtained by dividing (A) the number of full months during the period beginning on the Start Date and ending on the one-year anniversary of the date of the then-most recent Annual Meeting by (B) 12. The Pro-Rated Annual Award will vest on the earlier of the one-year anniversary of the grant date or the day before the next Annual Meeting, subject to the Outside Director continuing to be a Service Provider.

For the avoidance of doubt, if an individual was a member of the Board and also an employee, becoming an Outside Director due to termination of employment will not entitle the Outside Director to an Initial Award or a Pro-Rated Annual Award under Section 2(b). Such an Outside Director would receive an Annual Awards under Section 2(c).

(c) **Annual Award**. On the date of each annual meeting of the Company’s stockholders following the Effective Date (each, an “**Annual Meeting**”), each Outside Director will be automatically granted an award of restricted stock units (an “**Annual Award**”) covering a number of Shares having a Value of \$200,000.

Subject to Section 3 of this Policy, each Annual Award will vest on the earlier of the one-year anniversary of the grant date or the day before the next Annual Meeting, subject to the Outside Director continuing to be a Service Provider.

(d) For purposes of Section 2, the “**Value**” of a Share is twenty (20) trading day volume weighted average stock price for the twenty trading days prior to the applicable grant date (e.g., for the Annual Award, this will be the date of the Annual Meeting).

(e) For purposes of Section 2, the Company’s “**Quarterly Vesting Dates**” are each of February 15, May 15, August 15, and November 15.

3. CHANGE IN CONTROL

In the event of a Change in Control, each Outside Director's outstanding Company equity awards will accelerate and vest.

4. LIMITATIONS

Any cash compensation and Awards granted to an Outside Director shall be subject to the limits provided in Section 11 of the Plan.

5. TRAVEL EXPENSES

Each Outside Director's reasonable, customary and documented travel expenses to Board or Board committee meetings will be reimbursed by the Company. For the avoidance of doubt, such reimbursements will not be treated as cash compensation subject to Section 4 of this Policy.

6. ADDITIONAL PROVISIONS

All provisions of the Plan not inconsistent with this Policy will apply to Awards granted to Outside Directors.

7. SECTION 409A

In no event will cash compensation or expense reimbursement payments under this Policy be paid after the later of (i) 15th day of the 3rd month following the end of the Company's fiscal year in which the compensation is earned or expenses are incurred, as applicable, or (ii) 15th day of the 3rd month following the end of the calendar year in which the compensation is earned or expenses are incurred, as applicable, in compliance with the "short-term deferral" exception under Section 409A of the Internal Revenue Code of 1986, as amended, and the final regulations and guidance thereunder, as may be amended from time to time (together, "**Section 409A**"). It is the intent of this Policy that this Policy and all payments hereunder be exempt from or otherwise comply with the requirements of Section 409A so that none of the compensation to be provided hereunder will be subject to the additional tax imposed under Section 409A, and any ambiguities or ambiguous terms herein will be interpreted to be so exempt or comply. In no event will the Company reimburse an Outside Director for any taxes imposed or other costs incurred as a result of Section 409A.

8. REVISIONS

The Board may amend, alter, suspend or terminate this Policy at any time and for any reason. No amendment, alteration, suspension or termination of this Policy will materially impair the rights of an Outside Director with respect to compensation that already has been paid or awarded, unless otherwise mutually agreed between the Outside Director and the Company. Termination of this Policy will not affect the Board's or the Compensation Committee's ability to exercise the powers granted to it under the Plan with respect to Awards granted under the Plan pursuant to this Policy prior to the date of such termination.

Exhibit 19.1

Effective November 25th, 2020

Amended on June 14th, 2021

Amended on July 22nd, 2021

Amended on February 9th, 2023

QUANTUMSCAPE CORPORATION

INSIDER TRADING POLICY

A. POLICY OVERVIEW

QuantumScape Corporation (together with any subsidiaries, collectively the “**Company**”) has adopted this Insider Trading Policy (the “**Policy**”) to help you comply with the federal and state securities laws and regulations that govern trading in securities and to help the Company minimize its own legal and reputational risk.

It is your responsibility to understand and follow this Policy. Insider trading is illegal and a violation of this Policy. In addition to your own liability for insider trading, the Company, as well as individual directors, officers and other supervisory personnel, could face liability. Even the appearance of insider trading can lead to government investigations or lawsuits that are time-consuming, expensive and can lead to criminal and civil liability, including damages and fines, imprisonment and bars on serving as an officer or director of a public company, not to mention irreparable damage to both your and the Company’s reputation.

For purposes of this Policy, the Company’s Chief Legal Officer serves as the Compliance Officer. The Compliance Officer may designate others, from time to time, to assist with the execution of his or her duties under this Policy.

B. POLICY STATEMENT

1. No Trading on Material Nonpublic Information. It is illegal for anyone to trade in securities on the basis of material nonpublic information. If you are in possession of material nonpublic information about the Company, you are prohibited from:

- a. using it to transact in securities of the Company;
- b. disclosing it to other directors, officers, employees, consultants, advisors, contractors, agents or other service providers whose roles do not require them to have the information;
- c. disclosing it to anyone outside of the Company, including family, friends, business associates, investors or consulting firms, without prior written authorization from the Compliance Officer; or
- d. using it to express an opinion or make a recommendation about trading in the Company’s securities.

In addition, material nonpublic information about another company that you learn through your service with the Company is subject to these same restrictions around disclosure and trading and you cannot use that information to trade securities. Any such action will be deemed a violation of this Policy.

2. No Disclosure of Confidential Information. You may not at any time disclose material nonpublic information about the Company or about another company that you obtained in connection with your service with the Company to friends, family members or any other person or entity that the Company has not authorized to know such information. In addition, you must handle the confidential information of others in accordance with any related non-disclosure agreements and other obligations that the Company has with them and limit your use of the confidential information to the purpose for which it was disclosed.

If you receive an inquiry for information from someone outside of the Company, such as a stock analyst, or a request for sensitive information outside the ordinary course of business from someone outside of the Company, such as a business partner, vendor, supplier or salesperson, then you should refer the inquiry to the Compliance Officer. Responding to a request yourself may violate this Policy and, in some circumstances, the law. Please consult the Company's External Communications Policy for more details.

3. Definition of Material Nonpublic Information. "**Material information**" means information that a reasonable investor would be substantially likely to consider important in deciding whether to buy, hold or sell securities of the Company or view as significantly altering the total mix of information available in the marketplace about the Company as an issuer of the securities. In general, any information that could reasonably be expected to affect the market price of a security is likely to be material. Either positive or negative information may be material.

It is not possible to define all categories of "material" information. However, some examples of information that could be regarded as material include, but are not limited to:

- a. financial results, key metrics, financial condition, earnings pre-announcements, guidance, projections or forecasts, particularly if inconsistent with the Company's guidance or the expectations of the investment community;
- b. restatements of financial results, or material impairments, write-offs or restructurings;
- c. changes in independent auditors, or notification that the Company may no longer rely on an audit report;
- d. business plans or budgets;
- e. creation of significant financial obligations, or any significant default under or acceleration of any financial obligation;
- f. impending bankruptcy or financial liquidity problems;
- g. significant developments involving business relationships, including execution, modification or termination of significant agreements or orders with customers, suppliers, distributors, manufacturers or other business partners;
- h. significant information relating to the operation of product or service, such as new products or services, major modifications or performance issues, defects or recalls, significant pricing changes or other announcements of a significant nature;
- i. significant developments in research and development or relating to intellectual property;
- j. significant legal or regulatory developments, whether positive or negative, actual or threatened, including litigation or resolving litigation;
- k. major events involving the Company's securities, including calls of securities for redemption, adoption of stock repurchase programs, option repricings, stock splits, changes in dividend policies, public or private securities offerings, modification to the rights of security holders or notice of delisting;

- l. significant corporate events, such as a pending or proposed merger, joint venture or tender offer, a significant investment, the acquisition or disposition of a significant business or asset or a change in control of the Company;
- m. major personnel changes, such as changes in senior management or employee layoffs;
- n. data breaches or other cybersecurity events;
- o. updates regarding any prior material disclosure that has materially changed; and
- p. the existence of a special blackout period.

“**Material nonpublic information**” means material information that is not generally known or made available to the public. Even if information is widely known throughout the Company, it may still be nonpublic. Generally, in order for information to be considered public, it must be made generally available through media outlets or SEC filings.

After the release of information, a reasonable period of time must elapse in order to provide the public an opportunity to absorb and evaluate the information provided. As a general rule, at least two full trading days must pass after the dissemination of information before such information is considered public.

As a rule of thumb, if you think something might be material nonpublic information, it probably is. You can always reach out to the Compliance Officer if you have questions.

C. PERSONS COVERED BY THIS POLICY

This Policy applies to you if you are a director, officer, employee, consultant, advisor, contractor, agent or other service provider (for example, auditor or attorney) of the Company, both inside and outside of the United States. To the extent applicable to you, this Policy also covers your immediate family members, persons with whom you share a household, persons who are your economic dependents and any entity whose transactions in securities you influence, direct or control. You are responsible for making sure that these other individuals and entities comply with this Policy.

This Policy continues to apply even if you leave the Company or are otherwise no longer affiliated with or providing services to the Company, for as long as you remain in possession of material nonpublic information. In addition, if you are subject to a trading blackout under this Policy at the time you leave the Company, you must abide by the applicable trading restrictions until at least the end of the relevant blackout period.

D. TRADING COVERED BY THIS POLICY

Except as discussed in Section H (*Exceptions to Trading Restrictions*), this Policy applies to all transactions involving the Company’s securities or other companies’ securities for which you possess material nonpublic information obtained in connection with your service with the Company. This Policy therefore applies to:

- 1. any purchase, sale, loan or other transfer or disposition of any equity securities (including common stock, options, restricted stock units, warrants and preferred stock) and debt securities (including debentures, bonds and notes) of the Company and such other companies, whether direct or indirect (including transactions made on your behalf by money managers), and any offer to engage in the foregoing transactions;
- 2. any disposition in the form of a gift of any securities of the Company;
- 3. any distribution to holders of interests in an entity if the entity is subject to this Policy; and
- 4. any other arrangement that generates gains or losses from or based on changes in the prices of such securities including derivative securities (for example, exchange-traded put or call options, swaps, caps and collars), hedging and pledging transactions, short sales and certain arrangements regarding participation in benefit plans, and any offer to engage in the foregoing transactions.

There are no exceptions from insider trading laws or this Policy based on the size of the transaction or the type of consideration received.

E. TRADING RESTRICTIONS

Subject to the exceptions set forth below, this Policy restricts trading during certain periods and by certain people as follows:

1. Quarterly Blackout Periods. Except as discussed in Section H (*Exceptions to Trading Restrictions*), all directors, officers and employees of the Company and those consultants, advisors, contractors, agents and other service providers identified by the Company must refrain from conducting transactions involving the Company's securities during quarterly blackout periods. To the extent applicable to you, quarterly blackout periods also cover your immediate family members, persons with whom you share a household, persons who are your economic dependents, and any entity whose transactions in securities you influence, direct or control. Even if you are not specifically identified as being subject to quarterly blackout periods, you should exercise caution when engaging in transactions during quarterly blackout periods because of the heightened risk of insider trading exposure.

Quarterly blackout periods will start at the end of the fifteenth day of the third month of each fiscal quarter and will end at the start of the third full trading day following the date of public disclosure of the financial results for that fiscal quarter.

The prohibition against trading during the blackout period also means that brokers cannot fulfill open orders on your behalf or on behalf of your immediate family members, persons with whom you share a household, persons who are your economic dependents, or any entity whose transactions in securities you influence, direct or control, during the blackout period, including "limit orders" to buy or sell stock at a specific price or better and "stop orders" to buy or sell stock once the price of the stock reaches a specified price. If you are subject to blackout periods or pre-clearance requirements, you should so inform any broker with whom such an open order is placed at the time it is placed.

From time to time, the Company may identify other persons who should be subject to quarterly blackout periods, and the Compliance Officer may update and revise Schedule I as appropriate.

2. Special Blackout Periods. The Company always retains the right to impose additional or longer trading blackout periods at any time on any or all of its directors, officers, employees, consultants, advisors, contractors, agents and other service providers. The Compliance Officer will notify you if you are subject to a special blackout period by providing to you a notice in writing or by email. If you are notified that you are subject to a special blackout period, you may not engage in any transaction involving the Company's securities until the special blackout period has ended other than the transactions that are covered by the exceptions below. You also may not disclose to anyone else that the Company has imposed a special blackout period. To the extent applicable to you, special blackout periods also cover your immediate family members, persons with whom you share a household, persons who are your economic dependents, and any entity whose transactions in securities you influence, direct or control.

F. PROHIBITED TRANSACTIONS

You may not engage in any of the following types of transactions other than as noted below, regardless of whether you have material nonpublic information or not.

1. Short Sales. You may not engage in short sales (meaning the sale of a security that must be borrowed to make delivery) or "sell short against the box" (meaning the sale of a security with a delayed delivery) if such sales involve the Company's securities.

2. Derivative Securities and Hedging Transactions. You may not, directly or indirectly, (a) trade in publicly-traded options, such as puts and calls, and other derivative securities with respect to the Company's securities (other than stock options, restricted stock units and other compensatory awards issued to you by the Company) or (b) purchase financial instruments (including prepaid variable forward contracts, equity swaps, collars and exchange funds), or otherwise engage in transactions, that hedge or offset, or are designed to hedge or offset, any decrease in the market value of Company equity securities either (i) granted to you by the Company as part of your compensation or (ii) held, directly or indirectly, by you.

3. Pledging Transactions. You may not pledge the Company's securities as collateral for any loan or as part of any other pledging transaction.

4. Margin Accounts. You may not hold the Company's common stock in margin accounts.

G. PRE-CLEARANCE OF TRADES

The Company's directors, officers, employees and any other persons identified on Schedule I of this Policy as being subject to pre-clearance requirements must obtain pre-clearance prior to trading the Company's securities. From time to time, the Company may identify other persons who should be subject to the pre-clearance requirements, and the Compliance Officer may update and revise Schedule I as appropriate.

If you are subject to pre-clearance requirements, you should submit a pre-clearance request substantially in the form attached as Exhibit A, or as provided by the Compliance Officer, to the Compliance Officer at least one business days prior to your desired trade date. The person requesting pre-clearance will be asked to certify that he or she is not in possession of material nonpublic information about the Company. The Compliance Officer is under no obligation to approve a transaction submitted for pre-clearance and may determine not to permit the transaction.

If the Compliance Officer is the requester, then the Company's Chief Executive Officer, Chief Financial Officer, or their delegate, must pre-clear or deny any trade. All trades must be executed within five business days of any pre-clearance. Even after pre-clearance, a person may not trade the Company's securities if they become subject to a blackout period or aware of material nonpublic information prior to the trade being executed.

H. EXCEPTIONS TO TRADING RESTRICTIONS

There are no unconditional "safe harbors" for trades made at particular times, and all persons subject to this Policy should exercise good judgment at all times. Even when a quarterly blackout period is not in effect, you may be prohibited from engaging in transactions involving the Company's securities because you possess material nonpublic information, are subject to a special blackout period or are otherwise restricted under this Policy.

The following are certain limited exceptions to the quarterly and special blackout period restrictions and pre-clearance requirements imposed by the Company under this Policy:

1. stock option exercises where the purchase price of such stock options is paid in cash and there is no other associated market activity;
2. receipt and vesting of stock options, restricted stock units, restricted stock or other equity compensation awards from the Company;
3. purchases pursuant to the employee stock purchase plan; however, this exception does not apply to subsequent sales of the shares;
4. net share withholding with respect to equity awards where shares are withheld by the Company in order to satisfy tax withholding requirements, (x) as permitted by either the Company's board of directors (or a committee thereof) or the award agreement governing such equity award or (y) as you elect, if permitted by the Company, so long as your election is irrevocable and made in writing at a time when a trading blackout is not in place and you are not in possession of material nonpublic information;

5. sell to cover transactions, where shares are withheld by the Company upon vesting of equity awards and sold in order to satisfy tax withholding requirements, (x) as permitted by either the Company's board of directors (or a committee thereof) or the award agreement governing such equity award or (y) as you elect, if permitted by the Company, so long as the election is irrevocable and made in writing at a time when a trading blackout is not in place and you are not in possession of material nonpublic information; however, this exception does not apply to any other market sale for the purposes of paying required withholding;

6. transactions made pursuant to a valid 10b5-1 trading plan approved by the Company (see Section I – 10b5-1 Trading Plans below);

7. transfers by will or the laws of descent or distribution and, provided that prior written notice is provided to the Compliance Officer, distributions or transfers (such as certain tax planning or estate planning transfers) that effect only a change in the form of beneficial interest in the Company's securities and there is no open market sale, for example, a transfer from your individual ownership to a trust for which you (i) are the trustee or co-trustee, (ii) have the power to appoint and remove the trustee and/or co-trustee(s) at any time or if the trustee and/or co-trustee(s) ceases to act, or (iii) have the voting power with respect to the shares of the Company held by such trust; and

8. changes in the number of the Company's securities you hold due to a stock split or a stock dividend that applies equally to all securities of a class, or similar transactions.

Please be aware that even if a transaction is subject to an exception to this Policy, you will need to separately assess whether the transaction complies with applicable law. Any other Policy exceptions must be approved by the Compliance Officer, in consultation with the Company's board of directors or an independent committee of the board of directors.

I. 10B5-1 TRADING PLANS

The Company permits its directors, officers and, as determined by the Compliance Officer from time to time, certain other senior employees to adopt written 10b5-1 trading plans in order to mitigate the risk of trading on material nonpublic information. These plans allow for individuals to enter into a prearranged trading plan as long as the plan is not established or modified during a blackout period or when the individual is otherwise in possession of material nonpublic information. To be approved by the Company and qualify for the exception to this Policy, any 10b5-1 trading plan adopted by a director, officer or employee must be submitted to the Compliance Officer (or his/her designee) for approval and comply with the requirements set forth in the Requirements for Trading Plans attached as Exhibit B. If the Compliance Officer is the requester, then the Company's Chief Executive Officer, Chief Financial Officer, or their delegate, must approve the written 10b5-1 trading plan.

J. SECTION 16 COMPLIANCE

All of the Company's officers and directors and certain other individuals are required to comply with Section 16 of the Securities and Exchange Act of 1934 and related rules and regulations which set forth reporting obligations, limitations on "short swing" transactions, which are certain matching purchases and sales of the Company's securities within a six-month period, and limitations on short sales.

To ensure transactions subject to Section 16 requirements are reported on time, each person subject to these requirements must provide the Company with detailed information (for example, trade date, number of shares, exact price, *etc.*) about his or her transactions involving the Company's securities. Section 16 reporting persons have additional disclosure obligations with respect to 10b5-1 plans and transactions thereunder, as set forth in Exhibit B, items 18 and 19.

The Company is available to assist in filing Section 16 reports, but the obligation to comply with Section 16 is personal. If you have any questions, you should check with the Compliance Officer.

K. VIOLATIONS OF THIS POLICY

Company directors, officers, employees, consultants, advisors, contractors, agents and other service providers who violate this Policy will be subject to disciplinary action by the Company, including ineligibility for future Company equity or incentive programs or termination of employment or an ongoing relationship with the Company. The Company has full discretion to determine whether this Policy has been violated based on the information available.

There are also serious legal consequences for individuals who violate insider trading laws, including large criminal and civil fines, significant imprisonment terms and disgorgement of any profits gained or losses avoided. You may also be liable for improper securities trading by any person (commonly referred to as a “tippee”) to whom you have disclosed material nonpublic information that you have learned through your position at the Company or made recommendations or expressed opinions about securities trading on the basis of such information.

Please consult with your personal legal and financial advisors as needed. Note that the Company’s legal counsel, both internal and external, represent the Company and not you personally. There may be instances where you suffer financial harm or other hardship or are otherwise required to forego a planned transaction because of the restrictions imposed by this Policy or under securities laws. If you were aware of the material nonpublic information at the time of the trade, it is not a defense that you did not “use” the information for the trade. Personal financial emergency or other personal circumstances are not mitigating factors under securities laws and will not excuse your failure to comply with this Policy. In addition, a blackout or trading-restricted period will not extend the term of your options. As a consequence, you may be prevented from exercising your options by this Policy or as a result of a blackout or other restriction on your trading, and as a result your options may expire by their term. It is your responsibility to manage your economic interests and to consider potential trading restrictions when determining whether to exercise your options. In such instances, the Company cannot extend the term of your options and has no obligation or liability to replace the economic value or lost benefit to you.

L. PROTECTED ACTIVITY NOT PROHIBITED

Nothing in this Policy, or any related guidelines or other documents or information provided in connection with this Policy, shall in any way limit or prohibit you from engaging in any of the protected activities set forth in the Company’s Whistleblower Policy, as amended from time to time.

M. REPORTING

If you believe someone is violating this Policy or otherwise using material nonpublic information that they learned through their position at the Company to trade securities, you should report it to the Compliance Officer or if the Compliance Officer is implicated in your report, then you should report it in accordance with the Company’s Whistleblower Policy.

N. AMENDMENTS

The Company reserves the right to amend this Policy at any time, for any reason, subject to applicable laws, rules and regulations, and with or without notice, although it will attempt to provide notice in advance of any change. Unless otherwise permitted by this Policy, any amendments must be approved by the Board of Directors of the Company.

SCHEDULE I
PERSONS SUBJECT TO QUARTERLY BLACKOUT PERIODS, PRE-CLEARANCE REQUIREMENTS AND SECTION 16 REPORTING AND LIABILITY PROVISIONS

1. DIRECTORS

Name	Subject to Quarterly Blackout? (Y/N)	Subject to Pre-Clearance Requirements? (Y/N)	Subject to Section 16? (Y/N)
All Directors	Y	Y	Y

2. OFFICERS (including officers who are also directors)

Name	Subject to Quarterly Blackout? (Y/N)	Subject to Pre-Clearance Requirements? (Y/N)	Subject to Section 16? (Y/N)
Section 16 Officers	Y	Y	Y
Non-Section 16 Officers	Y	Y	N

3. OTHERS

Name	Subject to Quarterly Blackout? (Y/N)	Subject to Pre-Clearance Requirements? (Y/N)	Subject to Section 16? (Y/N)
All employees or consultants at senior director or officer level	Y	Y	N
Other employees or consultants	Y	N	N
All beneficial owners of more than 10% the Company's equity securities	N	N	Y

**EXHIBIT A
PRE-CLEARANCE CHECKLIST**

Person proposing to trade: _____

Proposed trade (type and amount): _____

Manner of trade/ Name of brokerage: _____

Proposed trade date: _____

Affiliate of the Company: ☐ Yes ☐ No

☐ I am not aware of material nonpublic information regarding the Company; or

☐ I am relying on an explicit exemption to the Company's blackout period restrictions as listed in Section H._ of the Insider Trading Policy to execute the transaction described above.

I am not trading on the basis of any material nonpublic information. The transaction is in accordance with the Insider Trading Policy and applicable law. I intend to comply with any applicable reporting and disclosure requirements on a timely basis. I understand that I must execute the transaction within five business days of the date on which the trade is cleared by the Compliance Officer. I understand that by signing below, I am not obligated to execute the transaction.

Date: _____

(Signature of person proposing to trade)

For Company Compliance Officer Use Only:

☐ **No blackout period.** The proposed trade will not be made during a quarterly or special blackout period.

☐ **No pension fund blackout under Regulation BTR.*** There is no pension fund blackout period in effect.

☐ **No prohibition under Insider Trading Policy.** The person confirmed that the proposed transaction is not prohibited under the Insider Trading Policy.

☐ **Section 16 compliance.*** The person confirmed that the proposed trade will not give rise to any potential liability under Section 16 as a result of matched past (or intended future) transactions.

☐ **Form 4 filing.*** A Form 4 has been or will be completed and will be timely filed with the SEC, if applicable.

☐ **Rule 144 compliance (*Response required only from affiliates of the Company*).**

☐ The "current public information" requirement has been met (*i.e.*, all 10-Ks, 10-Qs and other relevant reports during the last 12 months have been filed);

☐ The shares that the person proposes to trade are not restricted or, if restricted, the applicable holding period has been met;

☐ Volume limitations (greater of 1% of outstanding securities of the same class or the average weekly trading volume during the last four weeks) are not exceeded, and the person is not part of an aggregated group;

☐ The manner of sale requirements will be met (a "brokers' transaction" or directly with a market maker or a "riskless principal transaction"); and

☐ A Form 144, if applicable, has been completed and will be timely filed with the SEC.

☐ **Rule 10b-5 concerns.** The person has been reminded that trading is prohibited when in possession of any material nonpublic information regarding the Company that has not been adequately disclosed to the public. The individual has discussed with the Compliance Officer any information known to the individual or the Compliance Officer that the individual believes may be material.

Exhibit A

* Applies if the individual is a director or an officer subject to Section 16 of the Securities Exchange Act of 1934.

Date: _____

(Signature of Compliance Officer)

(Print name of Compliance Officer)

Exhibit A

EXHIBIT B
REQUIREMENTS FOR TRADING PLANS

For transactions under a trading plan to be exempt from (A) the prohibitions in the Company's Insider Trading Policy (the "**Policy**") of QuantumScape Corporation (together with any subsidiaries, collectively the "**Company**") with respect to transactions made while aware of material nonpublic information and (B) the pre-clearance procedures and blackout periods established under the Policy, the trading plan must comply with the affirmative defense set forth in Exchange Act Rule 10b5-1 and must meet the following requirements:

1. The trading plan must be in writing and signed by the person adopting the trading plan.
2. The trading plan must be adopted at a time when:
 - a. the person adopting the trading plan is not aware of any material nonpublic information; and
 - b. there is no quarterly, special or other trading blackout in effect with respect to the person adopting the plan.
3. The trading plan must be entered in good faith and not as part of a plan or scheme to evade the prohibitions of Rule 10b5-1 and the person adopting the trading plan must act in good faith with respect to the trading plan.
4. The trading plan must include representations that, on the date of adoption of the trading plan, the person adopting the trading plan:
 - a. is not aware of material nonpublic information about the securities or the Company; and
 - b. is adopting the trading plan in good faith and not as part of a plan or scheme to evade the prohibitions of Rule 10b5-1.
5. The person adopting the trading plan may not have entered into or altered a corresponding or hedging transaction or position with respect to the securities subject to the trading plan and must agree not to enter into any such transaction while the trading plan is in effect.
6. The first trade under the trading plan may not occur until the expiration of a cooling-off period consisting of the later of (a) 30 calendar days after the adoption of the trading plan (or 90 days if the person is a director or Section 16 officer) and (b) two business days after the filing by the Company of its financial results in a Form 10-Q or Form 10-K for the completed fiscal quarter in which the trading plan was adopted (but, in any event, this required cooling-off period is subject to a maximum of 120 days after adoption of the trading plan).
7. The trading plan must have a minimum term of one year (starting from the date of adoption of the trading plan).
8. All transactions during the term of the trading plan (except for the "Exceptions to Trading Restrictions" identified in the Policy and *bona fide* gifts) must be conducted through the trading plan. In addition, the person adopting the trading plan may not have an outstanding (and may not subsequently enter into any additional) trading plan except for the following plans or as otherwise permitted by Rule 10b5-1, in any case, subject to approval by the Compliance Officer and the same conditions as new trading plans as set forth in Sections 1 through 8 herein:
 - a. plans with different brokers that are identical with respect to the prices of securities to be purchased or sold, dates of the purchases or sales to be executed, and amount of securities to be purchased or sold;
 - b. plans that are effective at the same time so long as trading under the later-commencing plan is not authorized to begin until after all trades under the earlier-commencing plan are completed or expire without execution; and
 - c. a plan for eligible sell-to-cover transactions to satisfy tax withholding obligations arising exclusively from the vesting of a compensatory award.
9. Any modification or change to the amount, price or timing of transactions under the trading plan is deemed the termination of the trading plan, and the adoption of a new trading plan ("**Modification**"). Therefore, a Modification is subject to the same conditions as a new trading plan as set forth in Sections 1 through 8 herein.

10. Within the six months preceding the adoption or Modification of a trading plan, a person may not have otherwise adopted or done a Modification to a plan more than once.

11. A person may adopt a trading plan designed to cover a single trade only once in any consecutive 12-month period except as permitted by Rule 10b5-1.

12. If the person that adopted the trading plan terminates the plan prior to its stated duration, he or she may not trade in the Company's securities until after the expiration of 30 calendar days following termination, and then only in accordance with the Policy.

13. The Company must be promptly notified of any Modification or termination of the trading plan, including any suspension of trading under the trading plan.

14. The Company must have authority to require the suspension or cancellation of the trading plan at any time.

15. If the trading plan grants discretion to a stockbroker or other person with respect to the execution of trades under the trading plan:

- a.** trades made under the trading plan must be executed by someone other than the stockbroker or other person that executes trades in other securities for the person adopting the trading plan;
- b.** the person adopting the trading plan may not confer with the person administering the trading plan regarding the Company or its securities; and
- c.** the person administering the trading plan must provide prompt notice to the Company of the execution of a transaction pursuant to the plan.

16. All transactions under the trading plan must be in accordance with applicable law.

17. The trading plan (including any Modification) must meet such other requirements as the Compliance Officer may determine.

18. Any trading plans adopted or modified prior to February 9, 2023 (the "Effective Date") are permitted to continue in place until all trades are executed thereunder, or they expire or are terminated by their terms ("Grandfathered Plans"). If the person undertakes a Modification of a Grandfathered Plan on or after the Effective Date, then the Modification must meet all of the requirements set forth herein.

19. Section 16 reporting persons must (a) identify on Forms 4 and 5 whether a reported transaction was under a trading plan and disclose date of adoption of such plan and (b) report gifts on Form 4 within two business days.

20. The Company will disclose in its periodic filings on forms 10-K and 10-Q any adoptions, material amendments or termination of trading plans by Section 16 officers and directors during the applicable reporting period, including the material terms thereof.

Exhibit B

Subsidiaries of QuantumScape Corporation

Name:	Jurisdiction of Incorporation or Formation:
QuantumScape Battery, Inc.	Delaware
QuantumScape Japan GK	Japan

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

- (1) Post-Effective Amendment No. 5 to Registration Statement (Form S-1 on Form S-3 No. 333-251433) of QuantumScape Corporation,
 - (2) Registration Statement (Form S-3 No. 333-262659) of QuantumScape Corporation,
 - (3) Registration Statement (Form S-3 No. 333-266419) of QuantumScape Corporation,
 - (4) Registration Statement (Form S-8 No. 333-252606) pertaining to the 2020 Equity Incentive Plan, 2020 Employee Stock Purchase Plan, and 2010 Equity Incentive Plan of QuantumScape Corporation,
 - (5) Registration Statement (Form S-8 No. 333-270117) pertaining to the 2020 Equity Incentive Plan and 2020 Employee Stock Purchase Plan of QuantumScape Corporation, and
 - (6) Registration Statement (Form S-8 No. 333-277401) pertaining to the 2020 Equity Incentive Plan of QuantumScape Corporation;
- of our reports dated February 26, 2025, with respect to the consolidated financial statements of QuantumScape Corporation and the effectiveness of internal control over financial reporting of QuantumScape Corporation included in this Annual Report (Form 10-K) of QuantumScape Corporation for the year ended December 31, 2024.

/s/ Ernst & Young LLP

San Jose, California
February 26, 2025

**CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Siva Sivaram, certify that:

1. I have reviewed this Annual Report on Form 10-K of QuantumScape Corporation;
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: February 26, 2025

By: /s/ Siva Sivaram

Siva Sivaram
President and Chief Executive Officer
(Principal Executive Officer)

**CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Kevin Hettrich, certify that:

1. I have reviewed this Annual Report on Form 10-K of QuantumScape Corporation;
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: February 26, 2025

By: /s/ Kevin Hettrich
 Kevin Hettrich
 Chief Financial Officer (Principal Financial and Accounting Officer)

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

By: /s/ Siva Sivaram
Siva Sivaram
President and Chief Executive Officer
(Principal Executive Officer)

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

By: /s/ Kevin Hettrich
Kevin Hettrich
Chief Financial Officer (Principal Financial and Accounting Officer)