

 **OSES**

# **ANNUAL REPORT 2022**



## Dear Shareholders,

As a leader in Li-Metal batteries, SES AI Corporation (SES) continues to evolve and innovate. Despite all the challenges that come with new battery development, we made exciting progress in 2022.

We built three A-sample lines: one in Shanghai, China and two in Chungcheongbuk-do, South Korea, including one for each of our three OEM JDA partners GM, Hyundai and Honda. The necessary level of dedicated engineering, quality and production output required us to have lines for each OEM. Importantly, we achieved ready-to-use status for our A-sample lines under budget and ahead of time. This experience strongly supports our strategy of building Li-Metal cells using Li-ion manufacturing processes and building A/B-samples in Asia so we can come back to the United States for C-samples and commercial production in the most efficient way possible.

SES was the first battery company in the world to introduce 100Ah Li-Metal cells, the first to enter automotive A-sample JDA with a major OEM, and the first to encounter all the start-up issues that come with producing 100Ah Li-Metal cells at pilot scale. As we detailed throughout the year, we encountered countless issues ranging from:

- ultra-thin lithium anode wrinkling and tearing during large format rolling and lamination
- novel electrolyte solvent scale up
- electrode stacking misalignment and overhang
- powder formation during electrode punching
- formation pressure and voltage stability
- finding efficient ways to do image scanning on large format cells
- developing proper ways to store, handle, test and recycle Li-Metal cells

One really important thing we have learned over the past decade of development is that when our team can identify a specific issue, we are often not far from solving the problem. Over the past year, we have leveraged the deep Li-ion stacked pouch cell engineering, manufacturing and quality experience of our own team and our OEM partners and made a lot of progress. Identifying and solving these issues has provided great know-how and knowledge for our human engineers and scientists and Avatar, our advanced AI-powered safety software and battery management system, which monitors the state-of-health of the battery cells. By the end of 2022, Avatar could predict 100Ah cell safety and life with more than 60% accuracy compared to 0% in the beginning of 2022. In comparison, Avatar could predict 4Ah cell safety and life with 99% accuracy after 3 years of data training.

Our three A-sample lines provided a platform for us to work closely with each of our OEM partners and get hands-on live feedback. Our partners were stationed in our facilities for months at a time and we attracted top engineering talent and worked with top vendors from around the world. It was accelerated learning for us in manufacturing and quality control, and we plan to continue to work with our OEM partners to eventually build facilities for C-sample batteries.





During 2022, we also made significant investments in Chungcheongbuk-do South Korea to achieve full operations by the fourth quarter. Our investments followed LG Energy Solution investment in the same province, making Chungcheongbuk-do the province with the highest battery production capacity in South Korea. In September, I met with the President of South Korea -- Suk-Yeol Yoon -- to thank him for supporting the industry and helping to build a robust supply chain around the world. I am extremely honored that we were recently awarded cash grants from the South Korean Central Government – represented by the Ministry of Trade, Industry and Energy – Chungcheongbuk-do Province and Chung-Ju City which will help us expand our capabilities in South Korea.

The thing I am most proud of over the past year is how the entire SES team has worked as one. Our Boston team is developing new electrolytes and anode materials, our Chungcheongbuk-do team focuses on assembly equipment and cathode processes, and our Shanghai team focuses on electrolytes, anode manufacturing processes and cell assembly processes. All of these contributions from our global team are being integrated into a system for our 100Ah Li-Metal cells.

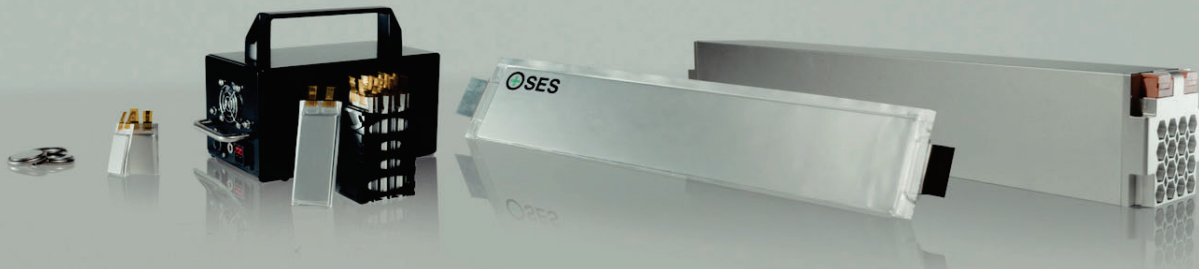
We summarized our latest large cell test data and published the results on our website, [www.ses.ai](http://www.ses.ai). We believe this is the most complete data report on large format Li-Metal cells and we will continue to publish similar data reports to keep the industry updated. We believe in transparency and are confident that a year from now when we publish additional reports on our large cells, the data will be even stronger as we continue to improve everything from materials to engineering to manufacturing quality.

As the pioneer in Li-Metal, we are also writing new protocols for the proper way to store, handle and test Li-Metal cells and interpret data. We are sharing this information with the battery community to help set new industry standards.

We expect 2023 to be an exciting year for SES. As we are upgrading our manufacturing lines, here are a few things we are working on internally and with our OEM partners.

- We are adding CT and X-ray imaging tools custom-built for our large 100Ah cells
- We are adding new powder removal tools to remove all metal powders rising from the electrode punching process
- We are developing entirely new anode processes from ingot to thick foils to thin foils and to the final anode to better control quality and performance
- We are coating cathodes inhouse to better control quality and experiment with new formulations
- We are scaling up novel solvent and salt production lines to better control quality and speed up the feedback cycle from designing new solvent molecules to getting data and making conclusions

Perhaps the most important thing for 2023 is that we are preparing for B-samples. This year we plan to take our collective knowledge and experiences from our A-sample lines, and we will design and build new B-sample lines. Our



A-sample lines are semiautomated with capacity of about 0.2cpm (cells per minute) or 5 minutes per cell. B-sample lines will be fully automated with about 5cpm or 5 cells per minute. We believe that having the ability to produce more cells and generating more meaningful data on a far greater universe of experiments will further accelerate our human and machine learning which will also allow Avatar's prediction accuracy for cell life and safety to increase quickly. Importantly, these new lines are expected to also go a long way to proving the manufacturing feasibility and scalability of our practical approach to making Li-Metal cells.

As part of our preparation for B-samples, we plan to double our material R&D team, double our cell engineering team, double our manufacturing team, and nearly triple our quality team. This increase in our headcount is a natural evolution of our growth as a company. We recently hired a new Chief Manufacturing Officer with experience managing cell engineers, manufacturing and quality and working with global OEMs to commercialize new battery technology. Compared to the major Li-ion producers like CATL and LG Energy Solution that have more than 3,000 quality checkpoints, we currently have about 200 quality checkpoints.

Once we enter B-sample agreements with our OEM partners, we will be held to the same standards that the OEMs currently use for commercial Li-ion producers. With the dedication of our global team, the accelerated learning of Avatar, and the support of our OEM partners and vendors, we are confident in our ability to face the new challenges and overcome them as we continue to enter uncharted territory.

SES is profoundly American with its roots in a basement lab of MIT back in 2012. At the same time, SES is also profoundly global with its talent and partners from around the world. As we prepare for B-samples and commercial production beyond that, we are preparing to expand back home in the United States. This includes preparing for production capability for Li-Metal cells, novel lithium salts and electrolytes, and lithium-metal anodes. SES plans to leverage the



experiences from global Li-ion players, new material innovations, new machine learning tools for safety and life prediction and quality management, and the abundant natural resources in North America.

In 2021, we were the world's first to enter automotive A-samples for Li-Metal. In 2022, we laid the groundwork for transitioning to B-samples. In 2023, we expect to transition to B-samples, and lay the groundwork for C-samples, commercial production beyond that, and building a robust next generation EV battery supply chain here in North America.

We appreciate the support we have received from all of our shareholders and OEM partners and look forward to providing updates on our progress throughout 2023.

Qichao Hu  
Founder, CEO and Chairman



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, 2022

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: 001-39845

**SES AI Corporation**

(Exact name of registrant as specified in its Charter)

**Delaware**

(State or other jurisdiction of incorporation or organization)

**88-0641865**

(I.R.S. Employer Identification No.)

**35 Cabot Road Woburn, MA**  
(Address of principal executive offices)

**01801**  
(Zip Code)

Registrant's telephone number, including area code: (339) 298-8750

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

<u>Title of Each Class</u>	<u>Trading Symbol(s)</u>	<u>Name of Exchange on which registered</u>
Class A common stock, par value \$0.0001 per share	SES	The New York Stock Exchange
Warrants to purchase one share of Class A common stock, each at an exercise price of \$11.50	SES WS	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 Exchange Act). Yes  No

The aggregate market value of the voting and non-voting stock held by non-affiliates of the registrant as of June 30, 2022, the last business day of the registrant's most recently completed second fiscal quarter, was approximately \$1.0 billion, calculated by using the closing price of the registrant's Class A common stock on such date on the New York Stock Exchange of \$3.93.

As of March 10, 2023, there were 305,930,731 shares of the registrant's Class A common stock and 43,881,251 shares of the registrant's Class B common stock outstanding.

**DOCUMENTS INCORPORATED BY REFERENCE**

The registrant intends to file a proxy statement pursuant to Regulation 14A within 120 days of the end of the fiscal year ended December 31, 2022. Portions of such proxy statement are incorporated by reference into Part III of this Annual Report on Form 10-K.

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## EXPLANATORY NOTE

Unless otherwise stated or unless the context otherwise requires, the terms “we,” “us,” “our,” “SES,” and the “Company” refer to SES AI Corporation, a Delaware corporation (f/k/a Ivanhoe Capital Acquisition Corp., a Cayman Islands exempted company (“Ivanhoe”)) and its consolidated subsidiaries, after giving effect to the Business Combination (as defined below).

We were originally formed as a Cayman Islands exempted company in July of 2020 for the purpose of effecting a merger, share exchange, asset acquisition, stock purchase, reorganization, recapitalization or other similar business combination with one or more businesses. On January 11, 2021, we consummated our initial public offering (the “IPO”), following which our securities began trading on the New York Stock Exchange (the “NYSE”).

On February 3, 2022 (the “Closing Date”), Ivanhoe consummated its previously announced business combination (the “Business Combination”) with SES Holdings Pte. Ltd., a Singapore private company limited by shares (“Old SES”), pursuant to the terms of that certain Business Combination Agreement (as amended, the “Business Combination Agreement”) by and among Ivanhoe, Old SES, and Wormhole Amalgamation Sub Pte. Ltd., a Singapore private company limited by shares, and a direct, wholly-owned subsidiary of Ivanhoe (“Amalgamation Sub”).

Pursuant to the terms of the Business Combination Agreement and in connection with the closing of the Business Combination (the “Closing”), (i) Ivanhoe migrated out of the Cayman Islands and domesticated as a Delaware corporation (the “Domestication”) by way of continuation and deregistration under Part XII of the Cayman Islands Companies Act and domestication under Section 388 of the Delaware General Corporation Law (“DGCL”), (ii) Ivanhoe changed its name to “SES AI Corporation” (“SES,” or the “Company”), and (iii) Amalgamation Sub merged with and into Old SES, with Old SES as the surviving company (the “Amalgamation”) (the time that the Amalgamation became effective is referred to as the “Effective Time”). As a result of the Amalgamation, Old SES became our wholly-owned subsidiary.

## CAUTIONARY NOTE REGARDING FORWARD LOOKING STATEMENTS AND RISK FACTORS SUMMARY

This Annual Report on Form 10-K (this Annual Report”) contains statements that the Company believes are “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements include, without limitation, statements relating to expectations for future financial performance, business strategies or expectations for our business. These statements are based on the beliefs and assumptions of the management of the Company. Although the Company believes that its plans, intentions and expectations reflected in or suggested by these forward-looking statements are reasonable, it cannot provide assurance that it will achieve or realize these plans, intentions or expectations. These statements constitute projections, forecasts and forward-looking statements, and are not guarantees of performance. Such statements can be identified by the fact that they do not relate strictly to historical or current facts. When used in this Annual Report, words such as “anticipate,” “believe,” “can,” “continue,” “could,” “estimate,” “expect,” “forecast,” “intend,” “may,” “might,” “plan,” “possible,” “potential,” “predict,” “project,” “seek,” “should,” “strive,” “target,” “will,” “would” and similar expressions may identify forward-looking statements, but the absence of these words does not mean that a statement is not forward-looking.

You should not place undue reliance on these forward-looking statements. Should one or more of a number of known and unknown risks and uncertainties materialize, or should any of our assumptions prove incorrect, 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, but are not limited to the risks below, which also serves as a summary of the principal risks of an investment in our securities:

- We face significant challenges in developing a Lithium-Metal (“Li-Metal”) battery that can be commercialized for use in electric vehicles (“EVs”) and other applications, and the pace of development is often unpredictable and subject to delays.
- We have a history of no revenues and of net losses, and expect to continue to incur losses for the foreseeable future. While we expect to become profitable eventually, our projections are based on internal assumptions that may prove incorrect, and we may never achieve or maintain profitability.
- We will need substantial additional capital in the future to fund our business, and may be unable to meet our future capital requirements, impairing our financial position and results of operations.
- Our Li-Metal technology is untested in actual EVs, and may ultimately prove unworkable.
- If our batteries fail to perform as expected, our ability to develop, market and sell our batteries could be harmed.



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- Delays in the pre-manufacturing development of our battery cells could adversely affect our business and prospects.
- We may not be able to engage target original equipment manufacturers (“OEMs”) customers successfully and to convert such contacts into meaningful orders in the future.
- If we are unable to integrate our products into EVs manufactured by OEM customers, our results of operations could be impaired.
- We may not be able to establish new, or maintain existing, supply relationships for necessary raw materials, components or equipment or may be required to pay costs for raw materials, components or equipment that are more expensive than anticipated, which could delay the introduction of our product and negatively impact our business.
- Our ability to manufacture our Li-Metal batteries at scale depends on our ability to build, operate and staff our facilities successfully.
- We have pursued and may continue to pursue joint development agreements (“JDAs”) and other strategic alliances, which could have an adverse impact on our business if they are unsuccessful.
- Certain components of our batteries pose safety risks that may cause accidents. We may be subject to financial and reputational risks due to product recalls and product liability claims, and we could face substantial liabilities that exceed our resources.
- Our business depends substantially on the continuing efforts of our senior executives and other key personnel as well as the ability to attract, train and retain highly skilled employees and key personnel.
- The uncertainty in global economic conditions and the risks relating to health epidemics, including the COVID-19 pandemic, could have a material adverse effect on our business and results of operations. Our ability to operate in any respect may be interrupted by the current COVID-19 pandemic.
- Developments in alternative technology or other fossil fuel alternatives may adversely affect the demand for our battery products.
- Our patent applications may not result in issued patents or our patent rights may be challenged, invalidated or limited in scope, any of which could have a material adverse effect on our ability to prevent others from competing or interfering with the commercialization of our products.
- We rely heavily on our intellectual property portfolio, including unpatented proprietary technology. If we are unable to protect our intellectual property rights from unauthorized use, our business and competitive position would be harmed.
- The international scope of our business exposes us to business, regulatory, political, operational, financial and economic risks associated with doing business outside of the United States.
- We have incurred and will continue to incur increased costs related to becoming and operating as a public company, and our management will be required to devote substantial additional time to new compliance initiatives and corporate governance practices.
- The price of our common stock has been and may continue to be volatile.
- Our public warrants may never be in the money, and they may expire worthless.
- We are controlled or substantially influenced by the SES Founder Group, whose interests may conflict with other stockholders. The concentrated ownership of our dual class common stock could prevent stockholders from influencing significant decisions.
- the other factors described in “Part I, Item 1A” in this Annual Report.

## **PART I**

### **Item 1. Business**

#### **Overview**

SES AI Corporation (“we,” “us,” “SES” or the “Company”) is a global leader in the development and production of high-performance, Lithium-Metal (“Li-Metal”) rechargeable battery technologies for electric vehicles (“EVs”), electric vehicle take-off and landing (“eVTOL”) and other applications. SES Holdings Pte. Ltd., and Subsidiaries (“Old SES”) was founded in 2012, and our mission is to facilitate the widespread adoption of sustainable electric transportation, both on land and in air, by creating best-in-class, high energy density Li-Metal batteries centered around long-range performance and safety.

We have developed what we believe to be the world’s most advanced Li-Metal battery technology, and we have the management team in place to become a leading provider of batteries. Our third-party tested, differentiated battery technology has been designed to combine the high energy density of Li-Metal with the cost-effective, large-scale manufacturability of conventional Lithium-ion (“Li-ion”) batteries and will help to promote the transition from the global dependence on fossil fuel-based automotive vehicles to clean and efficient EVs.

We believe that our Li-Metal batteries demonstrate industry-leading energy density and performance and will:

- deliver a lightweight and compact battery, and substantially reduce range anxiety of EV consumers;
- provide fast-charge capability to charge the battery to 80% in less than 15 minutes, significantly reducing charging times;
- incorporate advanced artificial intelligence (“AI”) software and battery management systems (“BMS”), which will accurately monitor the state of health of the battery and apply appropriate self-healing protocols;
- achieve rapid market adoption due to our strategic partnerships, including with leading global original equipment manufacturers (“OEMs”), such as General Motors (“GM”), Hyundai Motor Company (“Hyundai”), and Honda Motor Company, Ltd. (“Honda”);
- capitalize on the innovation occurring in Li-ion, including improvements in energy density, manufacturing efficiency and cost reduction, as our manufacturing processes are similar to Li-ion.

#### **Limitations of Current Battery Technology**

Conventional Li-ion technology is currently being used in most commercially available EVs. Li-ion typically uses a metal oxide-based or phosphate-based cathode and graphite or graphite/silicon-based anodes. The anode and cathode are separated by a polymer-based separator. Finally, the whole cell is filled with a liquid electrolyte that conducts lithium ions from the anode to the cathode as the vehicle is being driven (or battery is being discharged), and from the cathode to the anode as the vehicle (or the battery) is being charged. Conventional Li-ion cells have been instrumental in kick starting the current EV market, and are being manufactured at scale at capacities of hundreds of GWh today. However, the automotive industry desires a battery with higher energy density to improve the electric driving range (the distance that a vehicle can be driven on a single charge) while reducing battery cost to enable mass-adoption.

#### ***Li-Metal Batteries***

Li-Metal is widely considered and accepted as the EV battery technology capable of achieving the highest energy density. In fact, switching the current Li-ion graphite/silicon anode with Li-Metal will currently result in the highest possible energy density for any given cathode in lithium chemistry. Li-Metal is the lightest un-engineered pure metal on earth and since the lithium ions do not have to diffuse in and out of the anode host material (like in the case of graphite or silicon in conventional Li-ion), the battery cells made with Li-Metal anode can be very compact and light. This combination of a lightweight and compact anode results in the highest possible gravimetric (Watt-hour (“Wh”)/kg) and volumetric (Wh/liter) energy density, respectively, for any given cathode in lithium chemistry.

One approach to Li-Metal, known as “solid-state Li-Metal,” primarily relies on solid-state materials. The solid-state material refers to the phase (solid) within which lithium ions transport from anode to cathode (during discharge) or from cathode to anode (during charge). Conventional Li-ion technology uses liquid electrolytes (not solid electrolytes), and such lithium ion transport is in the liquid phase. Approaches that use solid electrolytes generally suffer from either not having sufficient conductivity at room and lower than room temperatures, poor interface between electrolyte and electrode, inability to suppress lithium dendrites when the solid electrolyte film is thin, and lack of demonstrated manufacturability of thin, large format films and multi-layer cells at scale.

## ***Our Technology***

SES's approach to Li-Metal preserves the high energy density benefits of Li-Metal while utilizing a cell design that primarily uses a liquid electrolyte in the cathode and separator to transport the lithium ions. There is also a protective anode coating between the anode and the separator, which consists of solid-state electrolyte materials. Hence, we call our approach "Li-Metal," as it utilizes both liquid and solid electrolyte in the cell simultaneously. This approach results not only in improved energy density due to using a Li-Metal anode, but also superior performance at room and lower than room temperatures, and enables manufacturing at scale just like Li-ion, which is manufactured at scale today. In fact, we have been successfully making multi-Amp-hour ("Ah"), multi-layer cells using our Li-Metal approach for many years.

The key breakthrough in SES's Li-Metal cells is its proprietary and patented liquid electrolyte. This electrolyte is developed internally at SES with many years of scientific research and development. We use a high-concentration, solvent-in-salt electrolyte. While liquid electrolytes used in conventional Li-ion cells are volatile and flammable, SES's liquid electrolyte has low volatility and is self-extinguishing. Conventional liquid electrolytes are primarily made up of organic solvents with low concentrations of salt to aid lithium ion conduction. SES's liquid electrolyte primarily consists of salt with a very minute amount of proprietary solvent molecules. This new type of high-concentration solvent-in-salt liquid electrolyte is fundamentally different from conventional liquid electrolyte. It maintains the manufacturability advantage of liquid electrolytes in conventional Li-ion manufacturing, but can enable Li-Metal due to its stability on lithium metal.

SES's Li-Metal technology also helps resolve an issue that has plagued Li-Metal adoption and progress for decades. With repeated charge and discharge cycles, lithium metal anodes are known to develop needle-like mossy structures known as dendrites, which can penetrate the separator and short-circuit the battery cell. The use of our liquid electrolyte changes the morphology of dendrite formation in our Li-Metal battery cells from needle-like mossy structures to a smooth lithium metal surface or dense deposition. Our proprietary anode coating provides an added layer of protection against separator penetration by making lithium plating denser during charging. Additionally, our advanced AI-powered safety software and BMS monitors the state-of-health of the battery cells and can accurately detect any safety issues much earlier. The combination of these elements significantly increases cell cycle life and safety.

The rest of the cell is assembled using our proprietary ultra-thin wide-width Li-Metal anode, a conventional state-of-the-art separator and a cathode. With the exception of the Li-Metal anode, all materials and components utilized in our battery cells are either already being manufactured at scale or have the capability to be easily manufactured at scale without the need for intensive research and development, or development of new equipment.

To our knowledge, SES Li-Metal battery cells are the only Li-Metal cells demonstrated to meet or exceed the preliminary OEM target requirements for energy density, low temperature discharge, room temperature fast charge and discharge, cycle life and safety.

Our unique high-energy density Li-Metal battery is expected to be:

- light and compact, with high energy density of at least 400 Wh/kg and 1000 Wh/liter;
- durable and safe, with the ability to meet stringent cycle life, overall lifetime and safety targets for next generation EVs;
- capable of fast charge, charging up to 80% in less than 15 minutes;
- capable of high power discharge, at room and low temperatures;
- low-cost, taking advantage of existing Li-ion manufacturing scale and best-practices to enable cost-reduction;
- capitalizing on the innovation occurring in Li-ion, in terms of incremental improvement in energy density, supply chain development, cost reduction and manufacturing efficiency, since the cathode and cell manufacturing process are the same as in Li-ion; and
- smarter, with AI-powered safety software and BMS that can predict safety incidents in real time and make appropriate diagnostic recommendations.

## **Our Competitive Strengths**

### ***Differentiated Battery Technology***

As described above, our Li-Metal batteries are expected to be lighter, more energy dense, safer, faster-charging, and lower cost solution than Li-ion batteries, and to include smart technology. Our Li-Metal battery technology has projected energy density of 400 Wh/kg / 1,000 Wh/L in our large 100 Ah cells, compared to approximately 265 Wh/kg / 535 Wh/L in Li-ion battery cells using a high nickel content cathode. This higher energy density is expected to translate into significantly more range, which we believe will help to enable the expansion of an electrified world. Currently, our 100 Ah multi-layer battery cells have demonstrated energy density of 380 Wh/kg / 850 Wh/L in third-party testing, along with fast charging up to an 80% charge in less than 15 minutes, bolstering our confidence in our ability to achieve industry-leading performance. Our batteries are expected to be cheaper in the long-term, while providing fast-charge capabilities, best-in-class durability and a high degree of safety.

### ***Designed For Manufacturing At Scale***

Over the last 10 years of research and development, we have strived to develop a technology that is not only differentiated, but also scalable and manufacturable. We are producing our large 50 and 100 Ah cells using Li-ion production lines.

### ***Strategic Partnerships***

We believe that our products will experience swift market adoption due to our current strategic partnerships with leading global OEMs GM, Hyundai and Honda. To our knowledge, we are the only company working on Li-Metal technology that has entered into A-Sample joint development agreements (“JDAs”) with major OEMs for EVs. We plan to collaborate with other OEMs to expedite such adoption and increase market acceptance of our Li-Metal battery over time.

## **Our Growth Strategy**

***Battery Development for OEMs.*** We are currently working to develop and initially produce A-Sample batteries with specifications required by OEMs for their EVs, with the goal of achieving the development and initial production of B-Sample batteries in 2023 and C-Sample batteries in 2024, which we expect to enable us to commence commercial production of our technology in 2025. For more information on collaborations with these OEMs, see “*Our Partnerships*” below. A-Sample batteries are functional prototypes developed for OEMs based on their technical specifications. These are in contrast with B-Sample batteries, which are A-sample batteries manufactured under much higher throughput and tested in actual vehicles, and C-Sample batteries, which would be fully functional, mature samples for mass production and tested for full drivability in actual vehicles. As we remain focused on A-Sample battery development, we do not yet have any arrangements with OEMs to manufacture consumer-ready batteries for their EVs.

***Battery Manufacturing At Scale.*** We will continue to enhance our production processes to enable volume manufacturing in a cost-effective manner. Phase I of our pilot facility in Shanghai was completed and ready-to-use in March 2022 and fully operational in the third quarter of 2022, and our pilot facility in South Korea was completed and ready-to-use in September 2022. We expect to expand our facilities in Shanghai and South Korea in 2023, and work with our OEM partners to build facilities for eventual C-Sample battery development and production ahead of this planned commercial production.

***Partnership Development and Expansion.*** We will continue to strengthen our partnerships with GM, Hyundai and Honda in the use of our battery technology. Also, we intend to work closely with other OEMs and other strategic partners to develop and produce our Li-Metal battery cells, with the aim of making them widely available in EVs and other applications over time.

***Supply Chain.*** As we plan to transition from A-sample to B-sample, we are exploring opportunities for partial vertical integration both upstream and downstream to ensure scalability. Vertical integration is used by Li-ion battery cell makers to reduce their costs, increase their competitiveness and streamline product development and commercialization for OEMs, by acquiring upstream and downstream participants in their supply chains. Upstream, we intend to explore integrating vendors of key materials of our cells and providers of key equipment and engineering capabilities, such as cell assembly, anode processing, chemical processing and safety testing. Downstream, we plan to explore integrating providers of key engineering capabilities, such as battery state-of-health monitoring software, charging optimization software, battery module development and recycling.

***Continued Battery Innovation.*** We intend to continue leveraging our world-class science, engineering and manufacturing expertise to innovate future products that will continue to provide leading technology coupled with manufacturability. We continue to invest in research

and development in areas such as cell chemistry and structure, battery materials, AI software and advanced manufacturing, to build on our intellectual property portfolio.

## **Our Partnerships**

We intend to work closely with OEMs and other strategic partners to develop and produce our Li-Metal battery cells, with the aim of making them widely available in EVs over time.

### ***Existing JDAs***

We have maintained a strong partnership with GM since 2015, when GM led our Series B financing, and since then, GM has invested approximately \$70.0 million in our company, including a \$50.0 million investment in our Series D funding round and a \$10.0 million investment in the private placement transaction in connection with the Business Combination (the “PIPE Financing”), via GM’s affiliates and subsidiaries. GM is one of the world’s largest car companies, and has voiced its desire to be a leader in EVs. GM has announced plans to launch more than 30 new EV models by 2025 and only sell zero-emission vehicles by 2035. Our partnership initially involved close technical and research and development collaboration on SES’s battery technology. In February 2021, we entered into a JDA with GM, valued at over \$50.0 million, under which we are collaborating to jointly develop an A-Sample battery cell with a capacity of almost 100 Ah.

We have also fostered a partnership with Hyundai, another global automobile leader and in December 2020, we entered into a pre-A-Sample JDA. In May 2021, Hyundai made an investment of \$50.0 million in our Series D plus funding round and signed an A-Sample JDA, under which we are collaborating to jointly develop an A-Sample battery cell. We believe the Hyundai JDAs align our interests with those of Hyundai and will facilitate further collaboration in designing and developing our technology and products. Hyundai also purchased \$50.0 million of our Class A common stock in the PIPE Financing.

In December 2021, Honda became the third global automobile leader to enter into an A-Sample JDA with us, under which we are collaborating to develop an A-Sample battery cell. Honda also purchased \$75.0 million of our Class A common stock in the PIPE Financing as the single largest PIPE Financing investor.

The JDAs with GM, Hyundai and Honda do not represent commitments by these OEMs to purchase our Li-Metal battery cells, and are focused on development. Although the JDAs set timeframes for the attainment of certain development milestones, these timeframes are objectives only and may be subject to ongoing collaboration and change by the parties. The JDAs also do not prohibit GM, Hyundai, Honda or SES from entering into additional agreements with other third parties. To our knowledge, neither GM, Hyundai nor Honda has entered into new agreements with other automotive or battery companies for the development of A-Sample Li-Metal batteries.

## **Our Research and Development**

We conduct research and development at our facilities in Woburn, Massachusetts in the United States, Shanghai, China, and Chungju, South Korea, and we expect to eventually build additional facilities in other parts of the world. Research and development activities concentrate on making further improvements to our battery technology, including improvements to battery performance and cost.

Major development efforts include, but are not limited to, programs in the following areas.

- ***Scale-up:*** Our design is further being customized with and validated by several OEMs. Based on our collaborations with OEMs, we believe that a roughly 100 Ah cell-size manufactured at GWh scale (five to seven cells-per-minute) is needed to achieve commercialization in EVs at a large, global scale. We are developing processes and equipment to scale up the manufacturing of our current cell design from three to nine Ah capacity to 50 Ah and 100 Ah.
- ***Module and Pack Design:*** Li-Metal cells must be integrated into modules and packs as part of their integration into vehicles. Our active development efforts are focused on the integration of our Li-Metal cells into modules to enable our Li-Metal cells to perform as intended once they are integrated into modules and vehicles.
- ***Advanced AI Software and BMS:*** Software is critical to the ongoing monitoring of battery health and safety. We continue to develop advanced AI algorithms to diagnose battery cell-related health issues, develop advanced control algorithms and charging methods to enhance cycle life and safety, and port such software on to a BMS that can be integrated into a battery pack.

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- **Advanced Materials and Coatings:** We continue to research and develop advanced electrolyte and anodes to further improve cycle life and safety. In addition, we continue to develop novel methods of laminating or depositing lithium metal onto current collector that can be deployed at commercial GWh scale.
- **Cathode Materials and Design:** We develop our Li-Metal cells for a variety of different cathode materials, cathode design and cathode processing methods that can provide ultra-high energy density and/or significant cost-reduction.
- **Li-Metal Recycling:** Along with other battery components that are already being recycled today, Li-Metal foil will also need to be recycled in the future. We continue to explore methods of recycling that are productive and cost-effective.

### **Our Intellectual Property**

To maintain a competitive advantage, we believe we must develop and preserve the proprietary aspect of our technologies. We rely on a combination of copyright, patent, trademark, trade secret, license and other intellectual property laws in the United States and other jurisdictions, as well as license agreements and other contractual protections, including non-disclosure agreements and other measures to establish, maintain, enforce and protect our proprietary rights. Our policy is to require our employees, consultants, and advisers to execute non-disclosure agreements in connection with their employment, consulting, or advisory relationships with us, where appropriate. We also have a policy that requires employees, consultants, and advisers who work on our products to agree to disclose and assign to us all inventions conceived during their work with us that are developed using our property or relate to our business. In addition, we seek to protect our proprietary and intellectual property position by, in addition to filing patent applications in various jurisdictions related to our proprietary technology, relying on trade secrets, know-how and continuing technological innovation. Despite measures taken to protect our intellectual property, unauthorized parties may attempt to copy aspects of our proprietary technology or obtain and use information that we regard as proprietary, which could harm our business and competitive position. For a more comprehensive discussion of the risks related to our intellectual property, please see “Risk Factors—Risks Relating to Our Business and Technology” and “Risk Factors—Risks Relating to Our Intellectual Property.”

#### **Patents**

As of December 31, 2022, we have been granted 63 patents, with expiration dates ranging from 2032 through 2041, and have over 80 patent applications pending in the United States and in other jurisdictions. We also rely substantially on unpatented proprietary technology, including know-how and 28 trade secrets as of December 31, 2022. The issued and pending patents, licenses, know-how and trade secrets cover the following:

- **Cell design**, including physical format, component layout, application tuning, cell formation and support structures.
- **Materials**, including salt preparation and purification, design of synthetic solvents, state-of-the art electrolyte formulations, lithium foil production, separator composition and anodes.
- **Battery management**, including charge/discharge profiles, rapid charging, safety systems and algorithms, telemetry harvesting and big data analysis.
- **Environmental**, including low-impact production of cell materials and recyclability of spent materials.

#### **Trademarks**

We have registered various trademarks associated with our business with the United States Patent and Trademark Office on the Principal Register and in other appropriate jurisdictions. As of December 31, 2022, we have 62 registered or allowed trademarks, with 42 trademark applications pending. Depending upon the jurisdiction, trademarks are valid as long as they are in use and/or their registrations are properly maintained.

### **Our Suppliers**

Currently, we are in product development and our product design has yet to be finalized, so our volume demand is limited and we do not have long-term supply arrangements. As volume demand grows, we expect to negotiate long-term supply contracts. For our current product development needs, we source from third-party suppliers for raw materials, components and equipment necessary to develop and manufacture our Li-Metal battery cells.

## **Human Capital Resources**

### ***Employees***

Our people are our most valuable asset and we believe they are among the best in the EV battery industry. We strive to attract and retain team members who are passionate about electric transportation and battery technologies, and have the humility and discipline to be building blocks in our fast-paced and challenging business operations. We seek the best talent with competitive compensation and benefits, opportunities for growth and development, and a culture that emphasizes fair and equitable treatment and diversity and inclusion. As of December 31, 2022, we had approximately 200 full-time employees, representing a 60% increase over the prior year. Approximately 40% of our employees, including all of our executive management team, are located in the United States, with the remaining located in China, South Korea and Singapore. The workforce in our China and South Korea locations primarily consists of operators for our prototype manufacturing lines. Currently, approximately 75% of our employees worldwide are engaged in research and development and related functions, with expertise in all aspects of the development process, including materials science, chemistry, engineering and software. Many of these employees have extensive experience from large Li-ion companies and hold advanced engineering and scientific degrees, including many from the world's top universities.

### ***Training and Development***

We are committed to fostering an environment in which our employees continuously learn and develop and we offer extensive training programs.

### ***Pay and Benefits***

Our compensation program is designed to align employee compensation with performance and to provide the proper incentives to attract, retain, and motivate employees to achieve superior results. The structure of our compensation program balances incentive earnings for both short-term and long-term performance and is designed to be competitive and consistent with employee positions, skill levels, experience, knowledge, and geographic location.

We are also committed to providing comprehensive benefit options that allow our employees and their families to live healthier and more secure lives.

### ***Health and Safety***

We maintain an occupational health and safety management system that covers all our employees and contractors, because we are committed to the safety and well-being of our workforce. By minimizing risks at our facilities and implementing training to enhance awareness of hazards, we are able to promote safe practices and preserve the health of our employees.

## **Our Facilities**

We have leased facilities located in Woburn, Massachusetts in the United States, Shanghai, China, and Chungju and Seoul, South Korea. Our Woburn facility, which also serves as the Company's headquarters, focuses on chemistry, material and algorithm research and development, as well as engaging with our OEM and strategic partners. Our Shanghai facility focuses on supply chain development, manufacturing process development, battery cell development and production, AI software, BMS and module development. Phase I of our pilot facility in Shanghai was completed and ready-to-use in March 2022 and fully operational in the third quarter of 2022. Our Chungju pilot facility focuses on manufacturing process development and battery cell product development and was completed and ready-to-use in September 2022 and fully operational in the fourth quarter of 2022. We have also set up an office in Seoul focused on supply chain, customer relations and our collaboration with partners in the region.

As the joint development of Li-Metal batteries with our OEM partners continues to progress, we also expect to launch future research facilities and, eventually, commercial production manufacturing facilities in the United States, while also significantly increasing our headcount.

## **Competition**

The battery market, like the EV market it services, is fast-growing, extremely competitive and driven by the innovation of both large incumbents and emerging entrants like SES. 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.

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Our prospective competitors include major manufactures supplying the industry, automotive OEMs and potential new entrants to the industry. Existing suppliers of batteries to the EV industry include Contemporary Amperex Technology Co. Limited, SK Innovation, LG Energy Solutions, Panasonic Corporation and Samsung SDI. Although their offerings tend to be conventional Li-ion, they could develop Li-Metal batteries that would directly compete with our offerings. Additionally, many automotive OEMs, including Tesla, Nio, Rivian and Toyota, are researching and investing in efforts to develop their own EV battery production capabilities.

Newer entrants, including Northvolt, Sila Nanotechnologies, Solid Power, QuantumScape, Ganfeng Lithium and WeLion, are also seeking to improve conventional lithium-ion batteries or to develop new technologies, including lithium-metal and solid-state batteries, or 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 acknowledge that incumbents and emerging entrants may have greater resources to invest in advancing their technologies, access to more potential customers, or strategic relationships with OEMs (or other third parties) that may give them a competitive edge. We further acknowledge that these disparities, where they exist, have the potential to harm our business, results of operations or financial condition.

### **Government Regulation and Compliance**

There are government regulations pertaining to battery safety, transportation of batteries, use of batteries in vehicles, factory safety and disposal of hazardous materials. We will ultimately have to comply with these regulations to sell our batteries into the market. For more information, see “Risk Factors—Risks Relating to Regulations and Our Compliance With Such Regulations” discussing regulations and regulatory risks related to export controls (including our export controls compliance program), environmental, health and safety, anti-corruption, anti-bribery, data collection, trade and tax law compliance.

### **Company Information**

Information that we furnish to or file with the SEC, including the Company’s annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to, or exhibits included in, these reports are made available for download, free of charge, through the Company’s website at [www.ses.ai](http://www.ses.ai) as soon as reasonably practicable. The Company’s SEC filings, including exhibits filed therewith, are also available directly on the SEC’s website at [www.sec.gov](http://www.sec.gov).

The Company may use its website as a distribution channel of material company information. Financial and other important information regarding the Company is routinely posted on and accessible through the Company’s website. Accordingly, investors should monitor this channel, in addition to following the Company’s press releases, SEC filings and public conference calls and webcasts. Information contained on the Company’s website is not part of this report.

### **Item 1A. Risk Factors**

We have identified the following risks and uncertainties that may have a material adverse effect on our business, financial condition, results of operations or reputation. The risks described below are not the only risks we face. Additional risks not presently known to us or that we currently believe are not material may also significantly affect our business, financial condition, results of operations or reputation. Our business could be harmed by any of these risks. The risk factors described below should be read together with the other information set forth in this Annual Report, including our consolidated financial statements and the related notes, as well as in other documents that we file with the SEC.

#### **Risks Relating to Our Business and Technology**

*We face significant challenges in developing a Li-metal battery that can be commercialized for use in EVs and other applications, and the pace of development is often unpredictable and subject to delays.*

To our knowledge, Li-Metal batteries have never been successfully used in automobiles. Li-Metal batteries have been successfully used for other applications, but their use in other vehicles, including eVTOLs, has been limited thus far. We are still in the development stages for our Li-Metal batteries and face significant scientific challenges that will need to be solved prior to commercializing our Li-Metal batteries for use in EVs and other applications such as eVTOLs. If we are not able to overcome these challenges, our Li-Metal batteries may not be able to be commercialized and our business may fail.



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In particular, we need to build Li-Metal battery cells which meet OEM requirements for use in EVs. While we have been making progress toward these requirements, significant engineering and mechanical barriers remain which must be solved before our Li-Metal batteries will meet OEM requirements. It is difficult to predict with certainty the pace of scientific development which will allow us to solve these challenges, and delays in meeting these challenges, or the introduction of new, unforeseen challenges, could impact the timing of the commercialization of our Li-Metal batteries, or our ability to reach commercialization at all.

***We have a history of no revenues and of net losses, and expect to continue to incur losses for the foreseeable future. While we expect to become profitable eventually, our projections are based on internal assumptions that may prove incorrect, and we may never achieve or maintain profitability.***

We incurred net losses of approximately \$51.0 million, \$31.3 million, and \$13.9 million for the years ended December 31, 2022, 2021 and 2020, and had an accumulated deficit of approximately \$145.3 million and \$94.3 million from our inception through December 31, 2022 and 2021, respectively. As discussed in “Business - Our Technology,” to date, we have only validated the capabilities of our Li-Metal battery cell technology and have not produced Li-Metal batteries for sale. As a result, we have yet to generate any revenue from our business operations, and since inception, we have not achieved profitable operations or positive cash flows from our operations.

Our plan is to achieve the development and initial production of B-Sample batteries in 2023 and C-Sample batteries in 2024, which we expect to enable us to commence commercial production of our technology in 2025. For more information, see “Business—Our Growth Strategy.” As a result, we believe that we will continue to incur operating and net losses each quarter until at least 2026, the year following the one in which we expect to begin generating revenue as part of the commercialization of our Li-Metal battery technology. This plan and the related revenue and other financial projections reflect current estimates of future performance, based on certain financial and operational assumptions. Given our limited operating history, there can be no assurance that the actual results will be in line with our expectations. As discussed in other risk factors in this section, factors that could impact the timing and levels of our profitability include, but are not limited to: our ability to solve the scientific engineering and mechanical challenges to commercialize our products; the level of demand for our products; the performance of our products; the projected supply materials for our products; a reduction in the cost of Li-ion; average selling prices of EVs and our products; projected production capacities of our facilities; our collaboration with OEMs; the projected gross margin achievable upon sale of our products; and the extent to which growth of EV markets and continued shift in consumer preference will conform with projections.

Additionally, 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, including any significant unplanned or accelerated expenses and new strategic investments to expand our research and development activities in science, engineering, and technician personnel; invest in manufacturing capabilities; build up inventories of components for our batteries; invest in supply chain; 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, thus affecting the value of your investment.

***We will need substantial additional capital in the future to fund our business, and may be unable to meet our future capital requirements, impairing our financial position and results of operations.***

The development, design, manufacture and sale of batteries is a capital-intensive business. We expect to sustain substantial operating expenses, without generating sufficient revenues to cover expenditures, for a number of years. To date, we have funded our operations through a combination of proceeds from the Business Combination and PIPE Financing and funding received through the sales of our redeemable convertible preferred stock. These funds are expected to finance our principal sources of liquidity and ongoing costs, such as research and development relating to our Li-Metal batteries and the construction of additional manufacturing facilities. In the future, if we are not able to fund our operations from cash flows generated from anticipated product sales, we expect that we will need to raise additional funds through a variety of possible methods, including, but not limited to, entry into joint ventures or other strategic arrangements, issuance of equity, equity-related or debt securities or through obtaining credit from financial institutions, as well as anticipated future revenue from product sales.

We believe that our cash on hand and marketable securities will be sufficient to meet our working capital and capital expenditure requirements for a period of at least 12 months from the date of this Report, and also sufficient to fund us to commercialization. However, additional funding may be required for a variety of reasons, including opportunities to build an integrated supply chain in the United States and delays in expected development of our Li-Metal battery cells. 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 and/or debt financing and, over time, our ability to generate positive cash flows from operations.

We cannot be certain that additional capital will be available on attractive terms, if at all, when needed, which could be dilutive to stockholders. 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. Furthermore, the cost of debt could be higher than anticipated, which could negatively affect our earnings.

***Our Li-Metal technology is untested in actual EVs, and may ultimately prove unworkable.***

The results of third-party tests show that our multi-layer cells meet or exceed the preliminary OEM target requirements for energy density, low temperature discharge, room temperature fast charge and discharge, cycle life and safety. Additionally, Li-Metal is widely considered and accepted as the EV battery technology capable of achieving the highest energy density. However, we have not produced Li-Metal batteries for use by an actual EV, and no one has successfully demonstrated use of high energy density Li-Metal batteries in EVs. Our Li-Metal battery cell technology may prove unworkable when used in actual EVs, which would substantially undercut our business, operating results, financial condition and prospects, and could effectively eliminate the value of your investment.

***If our batteries fail to perform as expected, our ability to develop, market and sell our batteries could be harmed.***

Once commercial production of our Li-Metal battery technology 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 battery cells 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. For more information, see “Business—Our Technology.” Due to our limited operating history, we have a restricted frame of reference from which to evaluate the long-term performance of our Li-Metal batteries. There can be no assurance that we will be able to detect and fix any defects in our batteries prior to the sale to potential consumers. If our batteries fail to perform as expected, 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, financial condition, operating results and prospects.

***We are unable to predict user behavior when driving EVs with Li-Metal technology.***

While conventional Li-ion battery technology has been tested in many applications for several decades, Li-Metal batteries have yet to be commercialized for use in EVs. Even if we work with OEMs to thoroughly test Li-Metal cells using pre-determined conditions, there is no guarantee that users in the field will not drive outside of recommended driving conditions and unintentionally abuse the batteries. In such events, performance and safety may be compromised, thus having a materially negative impact on our business, financial condition, operating results and prospects.

***Delays in the pre-manufacturing development of our battery cells could adversely affect our business and prospects.***

We have entered into JDAs with GM, Hyundai and Honda to jointly develop A-Sample Li-Metal batteries, with the expectation that such development will culminate in the widespread use of our technology in future EVs with these major OEMs, and eventually with other large OEMs. For more information, see “Business—Our Partnerships.” However, as we are still in the developmental stages with each of GM, Hyundai and Honda, we do not currently have existing arrangements to produce our Li-Metal cells for their vehicles, and production-ready models of our batteries will not be available until sufficiently tested and approved for inclusion in future OEMs’ EVs. Each time we produce a battery with a higher output, the product must undergo extensive pre-manufacturing development and testing. Anything that delays the consistent development and testing of pre-manufacturing battery cells samples at increasingly higher outputs, such as technology or engineering issues, could alter our prospects and adversely affect our business.

***We may not be able to engage target OEM customers successfully and to convert such contacts into meaningful orders in the future.***

Our success, and our ability to increase revenue and operate profitably, depends in part on our ability to identify OEM target customers and convert such contacts into meaningful orders or expand on current customer relationships. In some cases, our battery cells may be delivered to certain customers on a sampling basis, where they have the ability to evaluate whether our products meet their performance requirements before committing to joint development and meaningful orders. Our ongoing success depends on whether our target customers are willing to begin and continue using our battery technology, as well as whether their product lines continue to incorporate our products. Thus, our efforts to expand our manufacturing and sales to GM, Hyundai and Honda (with whom we have JDAs) or to other OEMs may not be

successful, and may never result in products that achieve market acceptance, create additional revenue or become profitable, thus harming our financial results and prospects.

Our research and development efforts strive to create products that are on the cutting edge of technology and meeting the evolving requirements of our customers, but competition in our industry is high. To secure acceptance of our products, we must also constantly develop and introduce cost-effective, increasingly more scalable Li-Metal batteries with enhanced functionality and performance to meet evolving industry standards. If we are unable to retain target customers, or convert early trial deployments into meaningful orders, our business, financial condition, operating results and prospects could be materially adversely affected. In addition, we may not receive adequate assistance from OEMs to commercialize our products successfully, which could impair our results of operations.

***If we are unable to integrate our products into EVs manufactured by OEM customers, our results of operations could be impaired.***

Our batteries will be composed of modules assembled from battery cells, which we produce and intend to manufacture at scale. OEMs often require unique configurations or custom designs for batteries for their EVs. Once we enter into contracts with OEMs to produce batteries for their EVs, we expect to tailor the design of our batteries specifically to the EVs that these OEM customers manufacture. This development process requires not only substantial lead time between the commencement of design efforts for customized batteries and the commencement of volume shipments of the battery cells to the customer, but also the cooperation and assistance of the OEMs in order to determine the requirements for each specific application. Technical problems may arise that affect the acceptance of our product by the OEMs. If we are unable to design and develop products that meet the OEMs' requirements, we may lose opportunities to obtain purchase orders, and our reputation and prospects may be damaged.

***We may not be able to establish new, or maintain existing, supply relationships for necessary raw materials, components or equipment or may be required to pay costs for raw materials, components or equipment that are more expensive than anticipated, which could delay the introduction of our product and negatively impact our business.***

Currently, we are in product development and our product design has yet to be finalized, so our volume demand is limited and we do not have long-term supply arrangements. As volume demand grows, we expect to negotiate long-term supply contracts. For our current product development needs, we source from third-party suppliers for raw materials, components and equipment necessary to develop and manufacture our Li-Metal battery cells. For more information, see "Business—Our Suppliers."

To the extent that, when our volume demand so requires, if we are unable to enter into long-term agreements with our current or future suppliers on beneficial terms, or such suppliers experience difficulties ramping up their supply to meet our long-term requirements at reasonable cost, we may need to seek alternative sources for necessary raw materials, components or equipment necessary to develop and manufacture our Li-Metal battery cells, produce the raw materials or additional components in-house, or redesign our proposed products to accommodate available substitutes. To the extent that our suppliers experience any delays in providing or developing their products, we could also experience delays in delivering on our timelines.

Moreover, the price of raw materials, components and equipment could fluctuate significantly due to circumstances beyond our control. Substantial increases in prices would increase our operating costs and negatively impact our prospects. Any disruption in supply could also temporarily disrupt future research and development activities or production of our batteries until an alternative supplier is able to meet our requirements.

Changes in business conditions, unforeseen circumstances and governmental changes, as well as other factors beyond our control or which we do not presently anticipate, could affect our suppliers' ability to deliver raw materials, components or equipment to us on a timely basis. For instance, we may be impacted by currency fluctuations, trade barriers, tariffs or shortages and other general economic or political conditions, such as the ongoing military conflict between Russia and Ukraine, which may limit our ability to obtain key raw materials or components for our Li-Metal batteries or significantly increase freight charges and other costs and expenses associated with our business. Any of the foregoing could materially and adversely affect our business, financial condition, operating results and prospects.

***Our ability to manufacture our Li-Metal batteries at scale depends on our ability to build, operate and staff our facilities successfully.***

We expect to expand our China and South Korea facilities in 2023 and to build additional facilities in the United States to meet the expected demand for our products. For more information, see "Business—Our Growth Strategy and —Our Facilities." Because we expect to rely heavily on complex machinery, well-trained personnel and well-managed supply chain for our operations in these facilities, our production will involve a significant degree of uncertainty and risk in terms of operational performance and costs.

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Our manufacturing facilities are expected to consist of large-scale machinery combining many components. Such machinery will require us to make intensive capital expenditures prior to our ability to earn any revenues. The manufacturing facility machinery may suffer unexpected malfunctions from time to time and will depend on repairs and spare parts to resume operations, which may not be available when needed. Additionally, unexpected malfunctions of the manufacturing facility machinery may significantly affect the intended operational efficiency, thus materially and adversely affecting our business, financial condition and operating results.

The production of our facilities will also require us to hire and train highly-skilled personnel to operate such facilities, including engineers, workers, and indirect laborers. Recruiting and training such skilled staff will take significant cost and time, and an inability to do so timely or at all will inhibit the successful operation of these facilities, thus negatively affecting our business. In addition, the manufacturing of our Li-Metal batteries at facilities will require us to obtain various production licenses and permits, receive the necessary internal approvals from our customers regarding specifications and enter into agreements for the supply of raw materials, components and manufacturing tools and supplies. If we do not complete such steps timely, our manufacturing timeline or output could be significantly delayed or inhibited.

Finally, the production of our Li-Metal batteries at scale and competitive cost, compared to conventional Li-ion cells, will require us to achieve rates of throughput, use of electricity and consumables, yield, and rate of automation demonstrated for mature batteries and battery material. As we have not produced Li-Metal batteries at scale, our ability to achieve such rates is untested and subject to significant constraints and uncertainties. Operational performance and costs can be difficult to predict and are often influenced by factors outside of our control, such as, but not limited to, environmental hazards and remediation, costs associated with commissioning of machines, damages or defects in electronic systems, industrial accidents, fire and seismic activity and natural disasters, and problems with equipment vendors. Should operational risks materialize, they may result in lower yield, which would negatively affect our revenue growth and profitability as projected. Additionally, they could cause personal injury to or death of workers, the loss of manufacturing equipment, damage to manufacturing facilities, monetary losses, delays and unanticipated fluctuations in production, environmental damage, administrative fines, increased insurance costs and potential legal liabilities, all of which could have a material adverse effect on our business, financial condition, operating results and prospects.

***We have pursued and may continue to pursue JDAs and other strategic alliances, which could have an adverse impact on our business if they are unsuccessful.***

We have entered into strategic alliances, and may in the future enter into additional strategic alliances. For example, as further discussed in “Business—Our Partnerships,” we have JDAs with GM, Hyundai and Honda. We expect to form other strategic joint ventures in the future to support our supply chain as well as the build out of manufacturing facilities aimed at the commercialization of our batteries.

While offering potential benefits, these current and future strategic alliances with battery manufacturers, OEMs and others could subject us to a number of risks, including risks associated with sharing proprietary information, non-performance by our partners and costs of establishing and maintaining new strategic alliances, any of which may materially and adversely affect our business. We may have limited ability to monitor or control the actions of our partners and, to the extent any of them suffers negative publicity or harm to their reputation from events relating to their business, we may also suffer negative publicity or harm to our reputation by virtue of our association with them. For example, if we rely on our partners’ manufacturing facilities, those operations would be outside of our control. We could experience delays if our partners do not meet agreed-upon timelines or experience capacity constraints, and in turn, we could lose customers and face reputational harm.

Further, there is risk of potential disputes with any partners with whom we collaborate, and we could be affected by adverse publicity related to our partners, whether or not such publicity is related to their collaboration with us. Our ability to build a premium brand successfully could also be adversely affected by perceptions about the quality of our partners’ products. In addition, because we rely on our partners and third parties to meet our quality standards, there can be no assurance that we will successfully maintain quality standards. Any of the foregoing could adversely affect our business, financial condition, operating results and prospects.

***The EV battery market continues to evolve and is highly competitive, and certain other battery manufacturers have significantly greater resources than we do.***

The EV battery market, like the EV market it services, is fast-growing, extremely competitive and driven by the innovation of both large incumbents and emerging entrants like SES. For more information, see “Business—Competition.” Li-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 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, Li-ion battery manufacturers may continue to reduce cost and expand supply of conventional batteries and therefore reduce the prospects for our business or negatively impact our ability to sell our products at a market-competitive price and yet with sufficient margins.

A number of development-stage companies are also seeking to develop new technologies for Li-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 OEMs and are in varying stages of development. Additionally, many OEMs are researching and investing in conventional Li-ion batteries and/or Li-Metal battery efforts and, in some cases, in battery development and production. Furthermore, other companies are developing alternative technologies such as advanced diesel, ethanol, fuel cells or compressed natural gas, as well as potential improvements in the fuel economy of the internal combustion engine. We expect competition in battery technology and EVs to intensify due to increased demand for these vehicles and a regulatory push for EVs, continuing globalization, and consolidation in the worldwide automotive industry. Developments in alternative technologies or improvements in battery technology made by competitors may materially adversely affect the sales, pricing and gross margins of our batteries. If a competing technology is developed that has superior operational or price performance, our business will be harmed. Similarly, 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 Li-Metal batteries, our business will be harmed.

***We may not be able to estimate accurately 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 predict accurately 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 may 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 or potential liability for late delivery. In addition, lead times for raw materials, components and manufacturing equipment may vary significantly and depend on factors such as the specific supplier, contract terms and demand for each raw material, component or manufacturing equipment at a given time. Any of the foregoing could result in delays in the delivery of batteries to our potential customers, which would harm our business, financial condition, operating results and prospects.

***Certain components of our batteries pose safety risks that may cause accidents. We may be subject to financial and reputational risks due to product recalls and product liability claims, and we could face substantial liabilities that exceed our resources.***

Due to the high energy density inherent in lithium-based batteries, our batteries can pose certain safety risks, including the risk of fire. Our state-of-the-art software is designed to accurately monitor and predict most safety incidents. Nevertheless, accidents causing death or personal injury or property damage can occur, and no high energy density battery will ever be 100% safe. For example, with repeated charge and discharge cycles, Li-Metal anodes are known to develop needle-like mossy structures known as dendrites, which can penetrate the separator and short-circuit the battery cell. Although we incorporate safety procedures in the research, development, manufacture and transportation of batteries that are designed to minimize safety risks - for example, our Li-Metal battery technology is designed to change the morphology of dendrite formation - the manufacture or use of our products may still cause accidents. Any accident, whether occurring at the manufacturing facilities or from the use of our products, may result in significant production interruption, delays or claims for substantial damages caused by personal injuries or property damage.

Product liability claims, even those without merit or those that do not involve our products, could harm our business, financial condition, operating results and prospects. The automobile industry in particular experiences significant product liability claims, and we face inherent risk of exposure to claims in the event that our battery products do not perform or are claimed not to have performed as expected. As is true for other commercial vehicle suppliers, we expect in the future that our battery products will be installed on vehicles that will be involved in crashes resulting in death or personal injury. Additionally, product liability claims that affect our competitors may cause indirect adverse publicity for us and our products.

A successful product liability claim against us could require us to pay a substantial monetary award. We may not be able to cover any substantial monetary judgment against us. Moreover, a product liability claim against us or our competitors could generate substantial

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negative publicity about our products and business and could have a material adverse effect on our brand, business, prospects, financial condition and operating results.

***We may incur significant costs based on the warranties we may supply in our products and services.***

Battery manufacturers are expected to give warranties that are reflective of the warranties given by manufacturers to users of the end product (e.g., from an OEM to a buyer of a vehicle). With respect to our battery products, we expect to offer warranties against any defects due to product malfunction or workmanship. We expect to provide a reserve for these potential warranty expenses, which is based on an analysis of historical warranty issues. There will be no assurance that future warranty claims will be consistent with past history, and in the event we experience a significant increase in warranty claims, there is no assurance that our reserves will be sufficient. This could have a material adverse effect on our business, financial condition and operating results.

***If we fail to effectively manage eventual growth, then our business, results of operations and financial condition could be adversely affected.***

Our future success depends upon our ability to grow, and if we are unable to manage our growth effectively, we may incur unexpected expenses and be unable to meet our eventual customers' requirements, all of which could materially adversely affect our business, financial condition, operating results and prospects. To manage our current and anticipated future growth effectively, we must continue to maintain and enhance our infrastructure, financial and accounting systems and controls. We must also attract, train and retain a significant number of scientists, engineers, sales and marketing personnel, customer support personnel, professional services personnel, technical personnel and management personnel, and the availability of such personnel may be constrained.

As we continue to grow, including from the integration of employees and businesses acquired in connection with future acquisitions, we may find it difficult to maintain important aspects of our corporate culture, which could negatively affect our profitability and our ability to retain and recruit qualified personnel who are essential for our future success. If we do not effectively manage our growth, we may not be able to execute on our growth plan, respond to competitive pressures, take advantage of market opportunities, satisfy customer requirements or manufacture high-quality products. Additionally, we may not be able to expand and upgrade our infrastructure to accommodate future growth.

Failure to effectively manage our growth could also lead us to over-invest or under-invest in development and operations; result in weaknesses in our infrastructure, systems or controls; give rise to operational mistakes, financial losses, loss of productivity or business opportunities; and result in loss of employees and reduced productivity of remaining employees. Our growth is expected to require significant capital expenditures, which may lower our earnings, and may divert financial resources from other projects such as the development of new products and services. If we are unable to manage our growth effectively, our expenses may increase more than expected, our revenue may not increase or may grow more slowly than expected and we may be unable to implement our business strategy.

***Our business depends substantially on the continuing efforts of our senior executives and other key personnel as well as the ability to attract, train and retain highly skilled employees and key personnel.***

Our success depends on our ability to attract and retain our executive officers, key employees and other qualified personnel, and our operations may be severely disrupted if we lost their services. As we build our brand and become better known, there is increased risk that competitors or other companies will seek to hire our personnel. All of our executives and engineering staff are subject to non-competition agreements, but we may face challenges in enforcing these non-competition agreements, and such agreements may become illegal if the Federal Trade Commission's proposed Non-Compete Clause Rule is implemented. The failure to attract, integrate, train, motivate and retain these personnel could seriously harm our business and prospects.

To execute our business plan, we must attract and retain highly qualified personnel in research and development, sales and marketing, production and other leadership roles. Competition for these employees is intense, and we may not be successful in attracting and retaining qualified personnel. We have from time to time in the past experienced, and we expect to continue to experience, difficulty in hiring and retaining highly skilled employees with appropriate qualifications in relevant industries. Many of the companies with which we compete for experienced personnel have greater resources than we have. In addition, in making employment decisions, particularly in high-technology industries, job candidates often consider the value of the equity they are to receive in connection with their employment. Employees may be more likely to leave us if the shares they own or the shares underlying their equity incentive awards have significantly appreciated or significantly reduced in value. A significant talent pool consists of nationals from countries that may require a license from the United States Bureau of Industry and Security to work with our technology, which raises the cost of hiring due to the uncertainty that a

license may not be granted and the candidate would be unemployable in the role envisioned. If we fail to attract new personnel, or fail to retain and motivate our current personnel, our business and growth prospects could be harmed.

In addition, we are highly dependent on the services of Dr. Qichao Hu, our Founder and Chief Executive Officer, and other senior technical and management personnel, including our executive officers, who may take significant amounts of time to replace. If Dr. Hu or other key personnel were to depart, we may not be able to successfully attract and retain senior leadership necessary to grow our business.

If we do not maintain and continue to develop our corporate culture as we grow and evolve, it could also harm our ability to foster the innovation, creativity and teamwork we believe that we need to support our growth. Additions of executive-level management, significant numbers of new employees, our workforce reduction and higher employee turnover could significantly and adversely impact our culture.

***The uncertainty in global economic conditions and the risks relating to health epidemics, including the COVID-19 pandemic, could have a material adverse effect on our business and results of operations. Our ability to operate in any respect may be interrupted by the current COVID-19 pandemic.***

We face various risks relating to public health issues, including epidemics, pandemics, and other outbreaks, including the ongoing COVID-19 pandemic. The effects and potential effects of COVID-19 include, but are not limited to, its impact on general economic conditions, trade and financing markets and changes in customer behavior, and significant uncertainty in the overall continuity in business operations. COVID-19 has also disrupted the manufacturing, delivery and overall supply chain of EV manufacturers and suppliers and EV batteries. In particular, COVID-19 may cause an increase in costs resulting from the efforts of manufacturers of EVs or EV batteries to mitigate the effects of COVID-19 and delays in EV manufacturers' schedules to full commercial production of EVs and disruptions to these supply chains, among other negative effects.

Following the re-opening of non-essential businesses and the easing of restrictions on non-essential in-person work, we have ramped up research and development hiring and increased our investment in in-person work. However, measures that have been relaxed may be reimplemented if COVID-19 continues to spread. If, as a result of these measures, we have to limit the number of employees and contractors at any research and development or manufacturing facility at a given time, it could cause a delay in our development, testing and manufacturing efforts and a delay in our product schedule. For example, previous spikes in COVID-19 cases in Shanghai resulted in a government mandated temporary shutdown of our Shanghai facility in April 2022, causing a delay of over a month in our development, testing and manufacturing efforts, our product schedule and our ability to obtain materials from our suppliers in the affected area. The government-mandated shutdown was lifted on June 1, 2022 and the Shanghai facility has re-opened. There can be no assurances that other temporary shutdowns will not be imposed in the future. If our workforce is unable to work effectively, or if we are required to shut down our facilities on a more permanent basis, including due to illness, quarantines, government actions or other restrictions in connection with COVID-19, our operations will be adversely affected.

We continue to monitor closely the impact of COVID-19 on all aspects of our business and geographies, including its impact on our employees, suppliers, business partners and potential distribution channels and customers. The extent to which the COVID-19 pandemic may continue to affect our business will depend on continued developments, such as the emergence of new variants and status of governmental measures to combat it, which are uncertain and cannot be predicted. Even after the COVID-19 pandemic has subsided, we may continue to suffer an adverse effect on our business due to possible longer-term global economic effects of COVID-19, including any economic recession. If the immediate or prolonged effects of the COVID-19 pandemic have a significant adverse impact on government finances, it would create uncertainty as to the continuing availability of incentives related to EV purchases and other governmental support programs. In addition, a recurrence of COVID-19 cases or an emergence of additional variants or strains could cause other widespread or more severe impacts depending on where infection rates are highest.

## **Risks Relating to the EV Industry**

***Our future growth and success depend on the willingness of vehicle operators and consumers to adopt EVs.***

Our growth is highly dependent upon the adoption of EVs by commercial vehicle and specialty vehicle operators and consumers. If the markets for EVs do not develop as we expect or develop more slowly than we expect, our business, prospects, financial condition and operating results will be harmed, because demand for our products and services will not increase as expected or may even be reduced. The market for alternative fuel vehicles is relatively new, rapidly evolving, characterized by rapidly changing technologies, price competition, numerous competitors, evolving government regulation and industry standards, frequent new vehicle announcements and changing consumer demands and behaviors.

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Other factors may influence the adoption of EVs, including, but not limited to:

- perceptions about EV quality, design and performance, especially if adverse events or accidents occur that are linked to the quality or safety of EVs;
- volatility in sales of EVs;
- the costs of purchasing and maintaining EVs;
- perceptions about vehicle safety in general, namely, safety issues that may be attributed to the use of advanced technology, including vehicle electronics;
- negative perceptions of EVs, such as that they are more expensive than nonelectric vehicles and are only affordable with government subsidies or that they have failed to meet customer expectations;
- the limited range over which EVs may be driven on a single battery charge and the effects of weather on this range;
- the decline of an EV's range resulting from deterioration over time in the battery's ability to hold a charge;
- concerns about electric charging infrastructure availability and reliability, which could derail past and present efforts to promote EVs as a practical solution to vehicles which require gasoline;
- concerns about charging station standardizations, convenience and cost influencing consumers' perceptions regarding the convenience of EV charging stations;
- concerns of potential customers about the susceptibility of battery packs to damage from improper charging, as well as the lifespan of battery packs and the cost of their replacement;
- concerns regarding comprehensive vehicular insurance coverage related to EVs;
- developments in alternative technologies, such as advanced diesel, ethanol, fuel cells or compressed natural gas, or improvements in the fuel economy of the internal combustion engine, which could adversely affect sales of EVs;
- the environmental consciousness of consumers;
- the availability and volatility in the cost of natural gas, diesel, coal, oil, gasoline and other fuels relative to electricity, such as the sharp reduction in prices for gasoline in 2020 and the sharp increase in such prices from 2021 to mid-2022;
- the availability of tax and other governmental incentives to purchase and operate EVs or future regulation requiring increased use of nonpolluting vehicles;
- concerns regarding the value and costs for upkeep of EVs in the used car market;
- the availability of enough skilled labor in after-sale maintenance and repair services of EVs; and
- macroeconomic factors.

Any of these factors could impair the development of the EV market, lowering demand. In anticipation of an expected increase in the demand for EVs in the next few years, we plan to develop, test, manufacture and commercialize our Li-Metal battery technology. However, the markets we expect to target, primarily those in North America, Europe and Asia, may not achieve the level of growth we expect. If any market fails to achieve our expected level of growth, we may have excess manufacturing capacity and may not be able to generate enough revenue to achieve or sustain our profitability.

### ***Developments in alternative technology or other fossil fuel alternatives may adversely affect the demand for our battery products.***

Significant developments in alternative technologies, such as fuel cell technology, advanced diesel, ethanol or natural gas, or breathing batteries, may materially and adversely affect our business, financial condition, operating results and prospects in ways that we may not currently anticipate. Existing and other battery technologies, fuels or sources of energy may emerge as customers' preferred alternatives to our battery products. Any failure by us to develop new or enhanced technologies or processes, or to react to changes in existing technologies, could materially delay our development and introduction of new and enhanced alternative products, which could result in decreased revenue and a loss of market share to our competitors.

Our research and development efforts may not be sufficient to adapt to changes in alternative fuel and EV technology. As technologies evolve, we plan to upgrade or adapt our energy solutions with the latest technology, in particular lighter weight modules and packs, advanced cooling methods, more sophisticated safety management software, more efficient manufacturing process, and advanced battery chemistry, which may also negatively impact the adoption of our other products. However, we may not compete effectively with alternative systems if we are not able to develop, source and integrate the latest technology into our battery products.



***If the EVs in which our batteries are installed do not meet certain motor vehicle standards, our business, operating results and prospects could be adversely affected.***

Our products are expected to be used as components in EVs. All vehicles sold must comply with applicable international, federal, and state motor vehicle safety standards, which vary by national and other jurisdictions. In the United States, vehicles that meet or exceed all federally mandated safety standards are certified under the federal regulations. Rigorous testing and the use of approved materials and equipment are among the requirements for achieving federal certification. Failure by our eventual EV manufacturing customers to satisfy motor vehicle standards could have a material adverse effect on our business and operating results.

Moreover, we may incur our own significant costs in complying with these regulations. Laws and regulations related to the EV industry and alternative energy are currently evolving and we face risks associated with changes to these laws and regulations.

To the extent laws and regulations become more stringent or otherwise change, our products or the vehicles into which they are incorporated may not comply with applicable international, federal, state or local laws, which would have an adverse effect on our business. Compliance with changing laws and regulations could be burdensome, time consuming and expensive. To the extent compliance with new laws and regulations is cost prohibitive, our business, financial condition, operating results and prospects would be adversely affected.

Internationally, there may be laws and regulations in jurisdictions we have not yet entered or laws of which we are unaware in jurisdictions we have entered that may restrict our sales or other business practices. Even for those jurisdictions we have analyzed, the laws and regulations in this area can be complex, difficult to interpret and may change over time. Continued regulatory limitations and other obstacles interfering with our or our eventual customers' ability to sell products could have a negative and material impact on our business, financial condition, operating results and prospects.

***Our ability to successfully market our products will depend on the establishment of charging station networks meeting the needs of EVs using our products. If any of the charging station networks are not compatible with such products and technologies, our sales could be adversely affected.***

We design, develop, and manufacture electric power batteries for EVs. However, we do not manufacture chargers or charging poles that are necessary for using our products. In addition, we will rely on third parties, such as city governments, utility providers and private investors, to build charging stations for EVs using our products. If no charging station networks are built in markets in which OEMs using our products target their EVs, there would be little demand for electric battery products in those areas.

Further, existing charging station networks have not been established under a uniform standard and it could diminish our sales if any of the networks are not compatible with EVs using our products and technologies. In order for our fast-charging batteries to become widely adopted in electric passenger cars, a critical mass of compatible fast-charging stations must be installed and in operation in any given urban area where our OEM customers plan to enter. Establishing a network of fast-charging stations requires significant capital investment and government approvals. It also requires government regulators to believe that the merits of fast-charging stations support the costs of such construction. If a sufficient number of charging stations that accommodate EVs using our products and technologies cannot be built up and be functional in a timely manner, it will be difficult for us to retain our existing customers and to attract new customers. As a result, our business, financial condition, operating results and prospects may be materially and adversely affected.

If emerging standards in charging station networks are not compatible with our current products or in development products and technologies, we may miss market opportunities and our financial performance will suffer. If other EV battery companies' products and services, including industry-standard technologies or other new standards, emerge or become dominant in any of these areas, or differing standards emerge in global markets, demand for our technology and products could diminish. As standards emerge, such as those in China including specifications for hardware, connecting equipment and service networks, and standards for communication and inspection, compatibility of prior fast-charging stations could be made obsolete.

***The Biden Administration has put forth ambitious goals for advancing new battery technology, which may lead to a shortage of the metals required for manufacturing batteries.***

The Biden Administration has put forth ambitious goals for investing in "clean energy," including goals to replace gasoline-operated vehicles with EVs, and recently signed into law the Inflation Reduction Act of 2022, which includes multiple incentives to promote clean energy, electric vehicles, battery and energy storage manufacture or purchase. In order to meet these ambitious goals, a secure supply chain of raw materials, including lithium, copper and nickel, will need to be obtained. Developing mines for these materials can take a significant

amount of time. If production of battery technology increases faster than this supply chain can be secured, it may lead to a shortage of these raw materials, which could negatively affect our business.

### **Risks Relating to Our Intellectual Property**

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

Our key technological innovations, including innovations that are currently commercialized in our products and innovations that we plan to deploy in the future, are described in our issued patents and pending patent applications, as well as patent applications that we plan to file in the future. For more information, see “Business—Intellectual Property.” The process of applying for and obtaining a patent is expensive, time consuming and does not always result in patent claims as expected or needed. We may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost, in a timely manner, or in all jurisdictions where protection may be commercially advantageous, or we financially may not be able to protect our proprietary rights at all. There is also no assurance that the pending applications will result in issued patents.

In addition, the issuance of a patent does not give us the right to practice the patented invention. Third parties may have blocking patents that could prevent us from marketing our products and practicing our technology. Alternatively, third parties may seek to market their products similar to or otherwise competitive with our products. In these circumstances, we may need to defend and/or assert our patents, including by filing lawsuits alleging patent infringement. In any of these types of proceedings, a court or agency with jurisdiction may find our patents invalid and/or unenforceable. Even if we have valid and enforceable patents, these patents still may not provide protection against competing products or processes sufficient to achieve our business objectives. Under the terms of our JDAs, and as part of our sponsored research projects with universities, we may file patent applications with third parties and end up co-owning certain of our patents. Co-ownership of a patent may require us to enter into license agreements with third parties, which are less favorable than if we were the sole owner of the patent. Furthermore, if the other owners are unwilling to join us in an enforcement action, we may be unable to enforce our jointly owned patent rights against infringers. Such co-owners may be able to license their rights to other third parties, including our competitors, and our competitors could market competing products and technology. If one or more of our patents are held to be invalid or unenforceable, or if claims of those patents are interpreted narrowly, or if patents fail to issue from our pending applications, our competitiveness and value may also be undermined. Any of the foregoing could have a material adverse effect on our competitive position, business, financial conditions, results of operations, and prospects.

***We rely heavily on our intellectual property portfolio, including unpatented proprietary technology. If we are unable to protect our intellectual property rights from unauthorized use, 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 patent, trademark and trade secret laws 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.

We also rely substantially on unpatented proprietary technology, including know-how or trade secrets. We seek to protect our intellectual property rights in various ways, including through nondisclosure and invention assignment agreements with our employees and consultants and through non-disclosure agreements with business partners and other third parties. We cannot ensure that these agreements will provide meaningful protection for our trade secrets, know-how or other proprietary information in the event of any unauthorized use, misappropriation, or disclosure of such trade secrets, know-how or other proprietary information. There can be no assurance that employees, consultants, vendors and customers have executed such agreements or have not breached or will not breach their agreements with us, that we will have adequate remedies for any breach, or that our trade secrets will not otherwise become known or independently developed by competitors. The theft or unauthorized use or publication of our trade secrets and other confidential business information could reduce the differentiation of our products and harm our business, the value of our investment in development or business acquisitions could be reduced and third parties might make claims against us related to losses of their confidential or proprietary information. Any of the foregoing could materially and adversely affect our business.

Additionally, despite our efforts to protect our proprietary rights, third parties may attempt to copy or otherwise obtain and use our intellectual property. Monitoring unauthorized use 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, 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.

***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 for us to operate our business. From time to time, we may receive claims or inquiries from holders of patents or trademarks claiming that and/or inquiring whether we are infringing their proprietary rights and/or seeking court declarations that they do not infringe upon our intellectual property rights. Companies holding patents or other intellectual property rights relating to batteries, electric motors or electronic power management systems may bring suits alleging infringement of such rights or otherwise asserting their rights and seeking licenses. In addition, if we are determined to have infringed upon a third party's intellectual property rights, we may be required to do one or more of the following:

- cease selling, incorporating or using products that incorporate the challenged intellectual property;
- pay damages;
- obtain a license from the holder of the infringed intellectual property right, which license may not be available on reasonable terms or at all; or
- redesign our batteries.

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

***We may face risks relating to protecting our intellectual property in various countries.***

Patent, trademark and trade secret laws vary significantly throughout the world. Filing, prosecuting, and defending patents in all countries throughout the world would be prohibitively expensive, and the laws of foreign countries may not protect our rights to the same extent as the laws of the United States. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where we have patent protection or licenses but enforcement is not as strong as that in the United States.

A number of foreign countries do not protect intellectual property rights to the same extent as do the laws of the United States. Therefore, our intellectual property rights 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 rights, technology, and other proprietary rights may be more expensive and difficult outside of the United States. Some courts inside and outside the United States may be less willing or unwilling to protect trade secrets and agreement terms that address non-competition are difficult to enforce in many jurisdictions and might not be enforceable in certain cases. Failure to adequately protect our intellectual property rights 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, financial condition, operating results and prospects.

### **Risks Relating to our International Operations**

***The international nature of our business exposes us to business, regulatory, political, operational, financial and economic risks associated with doing business outside of the United States.***

While we are incorporated as a Delaware corporation, we have significant operations outside the United States. Battery manufacturing is capital intensive, and to reduce dilution and financial burden, SES has been applying for appropriate government financial support. We currently have an operating facility in Shanghai, China, focused on supply chain development, manufacturing process development, battery cell development and production, AI software, BMS and module development, and an operating facility in Chungju, South Korea, focused on manufacturing process development and battery cell product development. We have received financial support from the Government of South Korea to partially offset the expense of facility construction and plan to seek additional government financial support to the extent possible. Also, due to geopolitical considerations, we may be required to introduce certain commercial inefficiencies into our operations.

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We are subject to, and could become further subject to, various legal, political, regulatory and social requirements and economic conditions both inside and outside the United States. Expansion into new markets requires significant resources and management's attention, as well as significant expenditures, including for the establishment of local operating entities, hiring of local employees and establishment of facilities in advance of generating any revenue. Some of the risks associated with international operations in China, South Korea and/or other countries, such as in the development, manufacturing, marketing or sale of our products, include, but are not limited to:

- general trade tensions between the United States and China have been escalating, and new legislation or regulations in either jurisdiction could impose additional restrictions and costs on our ability to operate in one or both jurisdictions, or even foreclose operations entirely;
- general political tension between South Korea and North Korea, including the ongoing risk of armed conflict between the two countries, which could disrupt our manufacturing operations in South Korea or foreclose our operations entirely;
- non-U.S. countries have enacted and could enact legislation or impose regulations or other restrictions, including unfavorable labor regulations or tax policies (such as Chinese regulations prohibiting our operating company from paying dividends out of accumulated distributable profits unless 10% of such profits (up to half of the company's registered capital) are set aside annually, under Article 166 of China's Company Law), which could have an adverse effect on our ability to conduct business in or expatriate profits from those countries;
- tax rates in certain non-U.S. countries may exceed those in the United States and non-U.S. earnings may be subject to withholding requirements or the imposition of tariffs, exchange controls, or other restrictions, including restrictions on repatriation;
- the regulatory or judicial authorities of non-U.S. countries may not enforce legal rights and recognize business procedures in a manner to which we are accustomed or would reasonably expect;
- we may have difficulty complying with a variety of laws and regulations in non-U.S. countries, some of which may conflict with laws in the United States;
- changes in political and economic conditions may lead to changes in the business environment in which we operate, as well as changes in currency exchange rates;
- in the case of China, the degree of significant government control over China's economic growth through restrictions and limitations on foreign investment in certain industries, control over the allocation of resources, control over payment of foreign currency-denominated obligations, implementation of monetary policy, data localization and privacy requirements, technology transfer requirements, national security laws, influence over the courts and preferential treatment of particular industries or companies, could materially affect our liquidity, access to capital, intellectual property and ability to operate our business in China. If we are unable to operate our business in China, it would require us to redirect research and development efforts to facilities in other jurisdictions, which could result in additional expenditures which would negatively impact our business and results of operations;
- in the case of China, data localization requirements and restrictions on the use of foreign technology applications have already been enacted by the Chinese government, and restrictions on the use of Chinese technology and applications that have been or may be adopted in the future by the United States, may make it difficult to efficiently coordinate complex manufacturing supply chains in a global setting;
- in the case of China, new laws and regulations may require us to obtain additional permits or licenses, or complete or update registrations with regulatory authorities, and we may be unable to conduct our operations in China if we are unable to obtain required permits, licenses or registrations in a timely manner;
- restrictions or denials on visas for our personnel, may limit our ability to train and pass along proprietary information efficiently;
- differences in software usage and export controls, may make it difficult to share certain engineering documents and resources between global subsidiaries;
- changes to export controls and/or failure to obtain export licenses in the United States, China or other countries in which we do business could adversely affect our access to raw materials, ability to manufacture and ship our products or increase our costs to conduct research and development; and
- natural disasters or international conflict, including terrorist acts, could interrupt our research and development, manufacturing or commercialization or endanger our personnel.

Our ability to deal with these issues could be affected by existing or new U.S. laws and the need to protect our intellectual property and assets. The materialization of any such risks could have an adverse impact on our business, financial condition, operating results and prospects.

***We could experience losses associated with our intellectual property in relation to our operations in China.***

We rely upon the fair interpretation and enforcement of patent, copyright, trademark and trade secret laws in the U.S., similar laws in other countries, and agreements with employees, customers, suppliers, licensors and other parties. Such reliance serves to establish and maintain the intellectual property rights associated with the technology that we develop and ultimately sell. However, the laws and courts of certain countries at times do not protect intellectual property rights or respect contractual agreements to the same extent as the laws of the U.S. Therefore, in certain jurisdictions we may not be able to protect our intellectual property rights against counterfeiting or enforce our contractual agreements with other parties. Specifically, as discussed above, the Company conducts research and development operations in China. Article VII of the National Intelligence Law of China requires every commercial entity in China, by simple order of the Chinese government, to act as an agent of the government by committing espionage, technology theft, or whatever else the government deems to be in the national interest of China. If the Chinese government were to require the appropriation of certain of our intellectual property in the national interest, this could lead to material adverse effects on our operations and competitive positions.

***Implementation of labor laws and regulations in China may adversely affect our business and results of operations.***

Pursuant to the labor contract law of China that took effect in January 2008, its implementation rules that took effect in September 2008 and its amendment that took effect in July 2013, employers are subject to stricter requirements in terms of signing labor contracts, minimum wages, paying remuneration, determining the term of employees' probation and unilaterally terminating labor contracts. Due to lack of detailed interpretative rules and uniform implementation practices and broad discretion of the local competent authorities, it is uncertain as to how the labor contract law and its implementation rules will affect our current employment policies and practices. Our employment policies and practices may violate the labor contract law or its implementation rules, and we may thus be subject to related penalties, fines or legal fees. Compliance with the labor contract law and its implementation rules may increase our operating expenses, in particular our personnel expenses. In the event that we decide to terminate some of our employees or otherwise change our employment or labor practices, the labor contract law and its implementation rules may also limit our ability to effect those changes in a desirable or cost-effective manner, which could adversely affect our business and results of operations.

As the interpretation and implementation of these laws and regulations are still evolving, we cannot assure you that our employment practice will at all times be deemed in full compliance with labor-related laws and regulations in China, which may subject us to labor disputes or government investigations. If we are deemed to have violated relevant labor laws and regulations, we could be required to provide additional compensation to our employees and our business, financial condition and results of operations could be adversely affected.

Further, labor disputes, work stoppages or slowdowns at our operations facilities or any of our third-party service providers could significantly disrupt daily operation or our battery development plans and have materially adverse effects on our business.

***The unavailability, reduction or elimination of, or uncertainty regarding, government and economic incentives or subsidies available to us, end-users or OEMs could have a material adverse effect on our business, financial condition, operating results and prospects.***

In 2019, in connection with our establishment of our Shanghai facility, the first two years of rent on the facility totaling approximately RMB7.1 million was borne by the Jiading district local government which also took on certain renovations to the facility at the cost of approximately RMB 4.3 million such that it is suitable for our use. In 2020, we received an incentive award of RMB10,000 under the Jiading Industrial Zone Development Potential Award from the Jiading district local government. In 2022, we also received an incentive award from certain South Korean government agencies. We intend to apply for further grants in the future in the jurisdictions in which we operate. Government incentives and subsidies are granted in connection with government's efforts to promote the development of the local economy and other policies. Some local government incentives and subsidies may be challenged by higher-level government authorities. Therefore, government incentives and subsidies may be modified, terminated or subject to clawback at the sole discretion of the relevant governmental authorities. Additionally, because laws, regulations and policies with respect to incentives and subsidies may change, we cannot be sure that government incentives and subsidies will continue to be available. In the event that we cease to receive any government incentives or subsidies, any current or future incentive or subsidy is reduced, or any of our current or future incentives or subsidies are challenged, our business, financial condition and operating results may be adversely affected. See Note 10 "Government Grant" of the Notes to the Financial Statements for discussion of our accounting for government incentives.

Additionally, we believe that, currently, the availability of government incentives and subsidies available to end-users and OEMs is an important factor considered by customers when purchasing EVs, and that growth in the battery market will depend in part on the availability and amounts of these subsidies and incentives for EVs. Any further reduction or elimination of government and economic incentives or subsidies may result in the diminished competitiveness of the alternative fuel vehicle industry generally or EVs that use our batteries in particular.

Currently, government programs, including in China and Europe, favor the purchase of EVs, including through disincentives that discourage the use of gasoline-powered vehicles. In the United States, the Inflation Reduction Act of 2022 provides tax credits for the purchase of electric vehicles, and the states of California, Massachusetts, Oregon and Washington have recently banned the sale of new gas-powered vehicles by 2035, and other states may follow. If such government laws or programs are reduced or eliminated, or the available benefits thereunder are exhausted earlier than anticipated, demand for EVs may decrease and our anticipated sales of EV battery products could be adversely affected. In addition, OEM customers may delay taking delivery of our battery products if they believe that certain EV incentives will be available at a later date, which may adversely affect our business, financial condition, operating results and prospects.

***Our incentives from various governments are conditional upon achieving or maintaining certain performance obligations and are subject to reduction, termination, or clawback.***

We have received, and may in the future continue to receive, benefits and incentives from national, state, and local governments in various regions of the world designed to encourage us to establish, maintain, or increase investment, workforce, or production in those regions. These incentives may take various forms, including grants, loan subsidies, and tax arrangements, and typically require us to achieve or maintain certain levels of investment, capital spending, employment, technology deployment, or research and development activities to qualify for such incentives or could restrict us from undertaking certain activities. We may be unable to obtain significant future incentives to continue to fund a portion of our capital expenditures and operating costs, without which our cost structure would be adversely impacted. We also cannot guarantee that we will successfully achieve performance obligations required to qualify for these incentives or that the granting agencies will provide such funding. These incentive arrangements typically provide the granting agencies with rights to audit our compliance with their terms and obligations. Such audits could result in modifications to, or termination of, the applicable incentive program. The incentives we receive could be subject to reduction, termination, or clawback, and any decrease or clawback of government incentives could have a material adverse effect on our business, results of operations, or financial condition.

#### **Risks Relating to Regulations and Our Compliance With Such Regulations**

***Our operations expose us to litigation, environmental and other legal compliance risks. Compliance with laws and regulations can be expensive, and our failure to comply with these laws and regulations may result in monetary damages and fines, adverse publicity and a material adverse effect on our business.***

We are subject to a variety of litigation, environmental, health and safety and other legal compliance risks. These risks include, among other things, possible liability relating to product liability matters, personal injuries, intellectual property rights, contract-related claims, health and safety liabilities, environmental matters and compliance with U.S. and foreign laws, competition laws and laws governing improper business practices.

Our operations in the United States, China, and South Korea may be subject environmental laws and regulations, including laws and regulations relating to water, discharges, emissions, chemicals, hazardous materials, natural resources, remediation and contamination. Compliance with these laws can be difficult and costly. For example, battery life cycle management regulations and regulations governing the transport of batteries may impose substantial requirements on our operations in the United States. Our operations may be required to obtain and comply with environmental permits, many of which may be difficult and expensive to obtain and must be renewed on a periodic basis. A failure to comply with these laws, regulations or permits could result in substantial liabilities, including fines, penalties, the suspension or loss of permits, and possibly orders to cease the non-compliant operations.

As a business with international reach, we are subject to complex laws and regulations in jurisdictions in which we operate. Those laws and regulations may be interpreted in different ways. They may also change from time to time, as may related interpretations and other guidance. Changes in laws or regulations could result in higher expenses and payments, and uncertainty relating to laws or regulations may also affect how we conduct our operations and structure our investments and could limit our ability to enforce our rights.

Changes in environmental and climate laws or regulations, including laws relating to greenhouse gas emissions, could lead to new or additional investment in manufacturing designs, subject us to additional costs and restrictions, including increased energy and raw materials costs, and could increase environmental compliance expenditures. We are subject to various environmental laws and regulations on air emission, waste water discharge, solid waste, noise and the disposal of hazardous materials. Cobalt and lithium are toxic materials that are important raw materials in our batteries. We also use, generate and discharge other toxic, volatile and hazardous chemicals and wastes in our research, development and manufacturing activities. Under Chinese, South Korean, and U.S. environmental regulations, we are required to maintain the pollutant emission levels at the facility within the levels prescribed by the relevant governmental authorities and obtain a pollution discharge permit for water and air emissions. In addition, certain laws and regulations require enterprises like us that generate

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hazardous wastes to engage companies which are licensed and qualified to process the hazardous wastes, and to collect, store, dispose of and transfer the hazardous waste.

If we fail to comply with national and local environmental protection laws and regulations, the relevant governmental authorities may impose fines or deadlines to cure instances of noncompliance, and may even order us to cease operations if we fail to comply with their requirements. In particular, any breach by us in connection with requirements relating to the handling of hazardous wastes may subject us to monetary damages and fines. In addition, if any third party suffers any loss as a result of our pollutant emission practices, our improper handling of hazardous wastes or our noncompliance with environmental regulations, such third parties may seek damages from us.

There can be no assurance that we will be able to comply with all environmental laws and regulations at all times as the environmental legal regime is evolving and becoming more stringent, especially in China, South Korea, and the United States. Therefore, if these or other governments where we do business impose more stringent regulations in the future, we will have to incur additional substantial costs and expenses in order to comply with new regulations, which may negatively affect our results of operations. If we fail to comply with any of the present or future environmental regulations in any material aspect or cause any loss to any third parties due to our pollutant emission practices, improper handling of hazardous wastes or other environmental noncompliance, we may suffer from negative publicity and may be required to pay substantial fines, pay damages to such third parties, or suspend or even cease operations. Failure to comply with environmental laws and regulations may materially and adversely affect our business, financial condition, operating results and prospects.

***Failure to comply with certain health and production safety laws and regulations governing hazardous materials could materially adversely affect our business and results of operations.***

In the sourcing of our products throughout the world, we process, store, dispose of and otherwise use large amounts of hazardous materials. As a result, we are subject to extensive and evolving health and production safety laws and regulations governing, among other things: the health of our employees and safety production requirements regarding the generation, handling, storage, use and transportation of hazardous materials. Compliance with these laws and regulations results in ongoing costs. Failure to comply with these laws or regulations, or to obtain or comply with the relevant permits, could result in fines, criminal charges or other sanctions by regulators. Furthermore, we may be ordered to rectify a noncompliance within a stipulated deadline; and if we fail to do so, we may be ordered to cease operations. Our ongoing compliance with health and safety laws, regulations and permits could require us to incur significant expenses, limit our ability to modify or expand our facilities or continue manufacturing and make other capital improvements. In addition, private parties, including current or former employees, could bring personal injury or other claims against us due to the presence of, or exposure to, hazardous substances used, stored or disposed of by us or contained in our products.

***We are subject to U.S. and foreign anti-corruption, anti-bribery, anti-money laundering, financial and economic sanctions and similar laws and regulations. We can face criminal liability and other serious consequences for violations, which can harm our business.***

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.K. Bribery Act 2010, and other anti-corruption laws and regulations in countries in which we conduct activities. Anti-corruption laws prohibit us and our officers, directors, employees, contractors and business partners acting on our behalf, including agents, from corruptly offering, promising, authorizing or providing, directly or indirectly, anything of value to a “foreign official” for the purposes of influencing official decisions or obtaining or retaining business or otherwise obtaining favorable treatment. These laws also require 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 accounting controls. These laws also prohibit non-governmental “commercial” bribery and soliciting or accepting bribes. A violation of any of these laws or regulations could result in substantial civil and criminal fines and penalties, imprisonment, the loss of export or import privileges, debarment, tax reassessments, breach of contract and fraud litigation, reputational harm and other consequences and adversely affect our business, financial condition, operating results and reputation. Our policies and procedures designed to ensure compliance with these laws and regulations may not be sufficient and our directors, officers, employees, representatives, consultants, agents, and business partners could engage in improper conduct for which we may be held responsible.

As we increase our international cross-border business and expand our operations abroad, we may continue to engage with business partners, suppliers and third-party intermediaries to market our services and to obtain necessary permits, licenses and other regulatory approvals. In addition, we or our third-party intermediaries may have direct or indirect interactions with officials and employees of government agencies or state-owned or affiliated entities. We can be held liable for the corrupt or other illegal activities of these third-party intermediaries, our employees, representatives, contractors, partners and agents, even if we do not explicitly authorize such activities. There can be no assurance

that our employees and agents will not take actions in violation of our policies and applicable law, for which we may be ultimately held responsible. As we increase our international business, our risks under these laws may increase.

Detecting, investigating and resolving actual or alleged violations of anti-corruption, anti-bribery, anti-money laundering or financial and economic sanctions laws can require a significant diversion of time, resources and attention from management. Non-compliance with these laws could subject us to whistleblower complaints, adverse media coverage, investigations, subpoenas received, enforcement actions, prosecution and severe fines, damages and administrative, civil and criminal sanctions, collateral consequences, remedial measures and legal expenses, all of which could materially and adversely affect our business, financial condition, operating results and reputation. In addition, changes in these laws in the future could adversely impact our business and investments in our securities.

***Governmental trade controls, including export and import controls, sanctions, customs requirements and related regimes, could subject us to liability or loss of contracting privileges, limit our ability to transfer technology or compete in certain markets and affect our ability to hire qualified personnel.***

Our technology and products, including components of our products, are subject to export control and import laws and regulations, including those by the U.S. Export Administration Regulations, U.S. Customs regulations, various economic and trade sanctions regulations administered by the U.S. Treasury Department's Office of Foreign Assets Control, and similar regulations by the South Korean government. These jurisdictions' export control laws and regulations and economic sanctions prohibit the shipment of certain products, technologies and services to embargoed or sanctioned countries, governments and persons, as well as to various countries and persons due to national security and foreign policy concerns. In particular, U.S. and South Korean export control laws apply to cells with an energy density greater than 350 Wh/kg, and require a license for the export of technology and cells exceeding that threshold to many locations outside of each respective jurisdiction, including China and Singapore. Some of our technology and products are thus presently subject to these license requirements under export controls.

Complying with export control and sanctions regulations for a particular sale may be time-consuming and result in the delay or loss of sales opportunities. We have set up an export controls compliance program internally. If we fail to comply with these laws and regulations, we and even some of our employees could be subject to substantial civil and/or criminal penalties, including the possible loss of export or import privileges, fines, which may be imposed on us and responsible employees or managers and, in extreme cases, the incarceration of responsible employees or managers.

A significant talent pool is comprised of nationals from countries that may require a license from the Bureau of Industry and Security to work with our technology (such as China, India, Russia, South Korea, Taiwan and Japan), which raises the cost of hiring due to the uncertainty that a license may not be granted and the candidate would be unemployable in the role envisioned. In addition, changes in our products or solutions or changes in applicable export or import laws and regulations may create delays or prohibitions in the introduction and sale of our products and solutions in international markets, increase costs due to changes in import and export duties and taxes, prevent our customers from deploying our products and solutions or, in some cases, prevent the export or import of our products and solutions to certain countries, governments or persons altogether. Any change in export or import laws and regulations, shift in the enforcement or scope of existing laws and regulations, or change in the countries, governments, persons or technologies targeted by such laws and regulations, could also result in decreased use of our products and solutions, decreased ability to export or sell our products and solutions to customers, and decreased ability to import components or parts critical to the manufacture of our products. Any decreased use of our technology and products, limitation on our ability to export or sell our technology and products, or limitation on our ability to import raw materials, components or equipment would likely adversely affect our business, financial condition, operating results and prospects.

***We have incurred and will continue to incur increased costs related to operating as a public company, especially now that we are no longer an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act"), and our management will be required to devote substantial additional time to new compliance initiatives and corporate governance practices.***

We have incurred and will continue to incur significant legal, accounting and other expenses that Old SES did not incur as a private company. We are subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Protection Act, as well as rules adopted, and to be adopted, by the SEC and the NYSE. Our management is required to certify financial and other information in our quarterly and annual reports, as well as to establish and evaluate periodically disclosure controls and procedures and internal control over financial reporting. Additionally, in light of our loss of "emerging growth company" status when we became a "large accelerated filer" as of December 31, 2022, we are subject to expanded disclosure obligations regarding executive compensation in our periodic reports and proxy statements and the requirements to hold nonbinding advisory vote on executive compensation and stockholder



approval of any golden parachute payments not previously approved, and can no longer take advantage of an extended transition period for complying with new or revised accounting standards.

Our management and other personnel have devoted and will need to continue to devote a substantial amount of time to these compliance initiatives. Moreover, we expect these rules and regulations to continue to increase substantially our legal and financial compliance costs, especially now that we are no longer an “emerging growth company,” and to make certain activities more time-consuming and costly, which will increase our operating expenses. These rules and regulations applicable to public companies may make and have made it more difficult and more expensive for us to obtain director and officer liability insurance, and we will likely incur additional costs to maintain sufficient insurance coverage as a public company going forward.

This Annual Report is the first annual report in which we are required to include a management report on the effectiveness of the internal control over our financial reporting and obtain an attestation report from our independent registered public accounting firm on the effectiveness of our internal control over financial reporting. As later discussed in this Annual Report, our management and independent registered public accounting firm have concluded that we did not maintain effective internal control over financial reporting as of December 31, 2022. For more information on the risks associated with the compliance cost of remediating the material weaknesses in, and establishing and maintaining, effective internal control over financial reporting, as well as other related risks, see “—We have identified material weaknesses in our internal control over financial reporting, which could, if not effectively remediated, result in material misstatements in our financial statements, and a failure to meet our reporting and financial obligations.” If in the future, we are unable to record, process, summarize and report financial information accurately and within the time periods specified in the rules and forms of the SEC, our ability to meet these additional requirements in a timely manner will be adversely affected. This failure could negatively affect the market price and trading liquidity of our common stock, restrict our access to the capital markets, cause investors to lose confidence in our reported financial information, subject us to civil and criminal investigations and penalties, and generally materially and adversely impact our business and financial condition.

***We have identified material weaknesses in our internal control over financial reporting, which could, if not effectively remediated, result in material misstatements in our financial statements, and a failure to meet our reporting and financial obligations.***

Effective internal controls are necessary for us to provide reliable financial reports, prevent fraud and errors in our financial statements and operate successfully as a public company. As later discussed in this Annual Report, our management and independent registered public accounting firm have concluded that we did not maintain effective internal control over financial reporting as of December 31, 2022. We are actively engaged in developing and implementing a remediation plan designed to address these material weaknesses and are committed to remediating them as promptly as possible. For more information, see “Part II, Item 9A. Controls and Procedures.” However, we cannot be certain that all current material weaknesses in internal control will be remediated and our internal control over financial reporting considered effective going forward. Because of its inherent limitations, our system of internal control over financial reporting may not prevent or detect every misstatement.

If we are unable to remediate the existing material weaknesses in our internal controls of financial reporting and achieve effective internal control, or if we identify additional material weaknesses in our internal control over financial reporting, we may be unable to accurately report our financial results, or report them within the timeframes required by the SEC. If this occurs, we also could become subject to sanctions or investigations by the SEC or other regulatory authorities. In addition, if we are unable to assert that our internal control over financial reporting is effective, or if our independent registered public accounting firm is unable to express an opinion as to the effectiveness of our internal control over financial reporting, or expresses an adverse opinion, investors may lose confidence in the accuracy and completeness of our financial reports, we may face restricted access to the capital markets and our stock price may be adversely affected.

We also face risks associated with the cost of establishing effective internal control over financial reporting, insofar as we expect to continue to incur increased costs related to our internal control over financial reporting to remediate the above-described material weaknesses and improve further our internal control environment. We have expended, and expect to continue to undertake various actions, such as implementing additional internal controls and procedures and hiring additional compliance, accounting and financial staff with appropriate public company experience and technical knowledge, to develop and maintain the necessary documentation and testing procedures required by Section 404 of the Sarbanes-Oxley Act. The measures we take to remediate the deficiency in our internal control over financial reporting and to implement and maintain effective internal controls may also not be sufficient to satisfy our obligations as a public company and produce reliable financial reports, and we may not be able to implement the required controls in a timely fashion, which could have the additional adverse consequences described above.

***Changes in U.S. and foreign tax laws, particularly under the current U.S. presidential administration, could have a material adverse effect on our business, cash flow, results of operations or financial conditions.***

We (as well as certain of our subsidiaries, including our subsidiary that is organized as a Singapore company) are subject to federal, state and local taxes in the United States and are also subject to tax in certain foreign jurisdictions. Changes to U.S. tax laws, including limitations on the ability of taxpayers to claim and utilize foreign tax credits and the deferral of certain tax deductions until earnings outside of the United States are repatriated to the United States, as well as changes to U.S. federal income tax laws, such as the recently enacted Inflation Reduction Act of 2022, and others that may be enacted in the future, could impact the tax treatment of our foreign earnings. Due to our international business activities, any changes in the taxation of such activities may increase our worldwide effective tax rate and adversely affect our financial position and results of operations.

Significant judgment is required in evaluating our tax positions and our worldwide provision for taxes. During the ordinary course of business, there are many activities and transactions for which the ultimate tax determination is uncertain. In addition, our tax obligations and effective tax rates could be adversely affected by changes in the relevant tax, accounting and other laws, regulations, principles and interpretations, including those relating to income tax nexus, if our earnings are lower than anticipated in jurisdictions where we have lower statutory rates and higher than anticipated in jurisdictions where it has higher statutory rates, by changes in foreign currency exchange rates, or by changes in the valuation of its deferred tax assets and liabilities. We may be audited in various jurisdictions, and such jurisdictions may assess additional taxes against us. Although we believe our tax estimates are reasonable, the final determination of any tax audits or litigation could be materially different from our historical tax provisions and accruals, which could have a material adverse effect on our operating results or cash flows in the period or periods for which a determination is made.

Additionally, changes in corporate tax rates, the realization of net deferred tax assets relating to our operations, the taxation of foreign earnings, and the deductibility of expenses under future tax reform legislation could have a material impact on the value of our deferred tax assets, could result in significant one-time charges in the current or future taxable years, and could increase our future tax expense, which could have a material adverse effect on our business, financial condition, operating results, and prospects.

***Certain U.S. state tax authorities may assert that we have a state nexus and seek to impose state and local income taxes which could harm our results of operations.***

There is a risk that certain state tax authorities where we do not currently file a state income tax return could assert that we are liable for state and local income taxes based upon income or gross receipts allocable to such states. States are becoming increasingly aggressive in asserting a nexus for state income tax purposes. If a state tax authority successfully asserts that our activities give rise to a nexus, we could be subject to state and local taxation, including penalties and interest attributable to prior periods. Such tax assessments, penalties and interest may adversely impact our results of operations.

**Risks Relating to Privacy and Security**

***If we experience a significant cybersecurity breach or disruption in our information systems or any of our partners' information systems, our business could be adversely affected.***

Malicious actors may be able to penetrate our network and misappropriate or compromise our confidential information or that of third parties, create system disruptions or cause shutdowns. Malicious actors also may be able to develop and deploy viruses, worms and other malicious software programs that attack our products or otherwise exploit any security vulnerabilities of our products. We manage and store various proprietary information and sensitive or confidential data relating to our business as well as information from our suppliers and customers. While we employ a number of protective measures, including firewalls, network infrastructure vulnerability scanning, anti-virus and endpoint detection and response technologies, these measures may fail to prevent or detect attacks on our systems due to the frequent evolving nature of cybersecurity attacks. Although these measures are designed to ensure the confidentiality, integrity and availability of our information and technology systems, there is no assurance that these measures will detect all threats or prevent a cybersecurity attack in the future. If there are any breaches of our or any of our third party suppliers' security measures or the accidental loss, inadvertent disclosure or unapproved dissemination of proprietary information or sensitive or confidential data about us or our employees, contractors, customers, suppliers, or other third parties, including the potential loss or disclosure of such information or data as a result of fraud, trickery or other forms of deception, it could expose us or our employees, contractors, customers, suppliers, or other third parties to a risk of loss or misuse of this information, disruption of business operations, result in litigation, regulatory scrutiny, and potential liability for us, damage our brand and reputation or otherwise harm our business.

In addition, our hardware and software or third party components and software that we utilize in our products may contain defects in design or manufacture, including “bugs” and other problems that could unexpectedly interfere with the operation or security of the products. The costs to us to eliminate or mitigate cyber or other security problems, bugs, viruses, worms, malicious software programs and security vulnerabilities could be significant and, if our efforts to address these problems are not successful, could result in interruptions, delays, cessation of service and loss of existing or potential customers that may impede our sales, manufacturing, distribution or other critical functions.

To the extent we experience cybersecurity incidents in the future, our relationships with our partners, suppliers and eventual customers may be materially impacted, our brand and reputation may be harmed and we could incur substantial costs in investigating, responding to and remediating the incidents, and in resolving any regulatory investigations or disputes that may arise with respect to them, any of which would cause our business, operations, or products to be adversely affected. In addition, the cost and operational consequences of implementing and adding further data protection measures could be significant.

### **Risks Relating to Our Common Stock and Warrants**

***Our CEO and certain entities affiliated with the CEO (the “SES Founder Group”) is a large and significant stockholder and, as a result, we are a “controlled company,” which exempts us from certain obligations to comply with certain corporate governance requirements.***

As of March 10, 2023, the SES Founder Group owned approximately 12.5% of our outstanding common stock and 58.9% of the total voting power. Accordingly, we are a “controlled company” for purposes of the NYSE listing requirements. As such, we are exempt from the obligation to comply with certain corporate governance requirements, including the requirements that a majority of our board of directors must consist of independent directors, and that we have nominating and compensation committees that are each composed entirely of independent directors. These exemptions do not modify the requirement for a fully independent audit committee. If we cease to be a “controlled company,” we must comply with the independent board committee requirements as they relate to the nominating and compensation committees, subject to certain “phase-in” periods.

***We are controlled or substantially influenced by the SES Founder Group, whose interests may conflict with other stockholders. The concentrated ownership of our dual class common stock could prevent stockholders from influencing significant decisions.***

The SES Founder Group has the ability to control the outcome of most matters requiring stockholder consent. As our Chief Executive Officer, Dr. Hu has control over our day-to-day management and the implementation of major strategic investments, subject to authorization and oversight by our board of directors. As a board member and officer, Dr. Hu also owes a fiduciary duty to our stockholders and must act in good faith in a manner he reasonably believes to be in the best interests of our stockholders. However, Dr. Hu is still entitled to vote his shares, and has the ability to control the outcome of most matters requiring stockholder consent. This was designed to shepherd our long-term growth amidst significant near term fluctuations and uncertainty in the market.

Moreover, for so long as the SES Founder Group holds at least a majority of SES’s outstanding common stock, it has the ability, through the Board, to control decision-making with respect to SES’s business direction and policies. Matters over which the SES Founder Group can, directly or indirectly, exercise control include:

- the election of SES’s board of directors and the appointment and removal of our officers;
- mergers and other business combination transactions requiring stockholder approval, including proposed transactions that would result in our stockholders receiving a premium price for their shares; and
- amendments to SES’s certificate of incorporation or increases or decreases in the size of our board of directors.

Even if the SES Founder Group’s ownership subsequently falls below 50%, the SES Founder Group may continue to be able to strongly influence or effectively control our decisions.

***Provisions in our Certificate of Incorporation (the “Charter”) and Delaware law may inhibit a takeover attempt which could limit the price investors might be willing to pay in the future for our common stock and could entrench management.***

Our Charter and Bylaws contain provisions to limit the ability of others to acquire control of us or cause us to engage in change-of-control transactions, including, among other things:

- provisions that authorize our board of directors (the “Board”), without action by our stockholders, to authorize by resolution the issuance of shares of preferred stock and to establish the number of shares to be included in such series, along with the preferential rights determined by our Board; provided that, our Board may also, subject to the rights of the holders of preferred stock, authorize

shares of preferred stock to be increased or decreased by the approval of the Board and the affirmative vote of the holders of a majority in voting power of the outstanding shares of capital stock of the corporation;

- provisions that permit only a majority of our Board, the Chairperson of the Board or the Chief Executive Officer to call special stockholder meetings; provided, that for so long as Dr. Qichao Hu and certain entities affiliated with Dr. Hu beneficially own at least 50% of the voting power of the then outstanding shares of our capital stock, special meetings of stockholders may also be called by or at the request of stockholders holding a majority of the voting power of the issued and outstanding shares of our capital stock;
- provisions that impose advance notice requirements and other requirements and limitations on the ability of stockholders to propose matters for consideration at stockholder meetings; and
- a staggered board whereby our directors are divided into three classes, with each class subject to retirement and reelection once every three years on a rotating basis.

These provisions could have the effect of depriving our stockholders of an opportunity to sell their shares at a premium over prevailing market prices by discouraging third parties from seeking to obtain control of us in a tender offer or similar transaction. With our staggered Board, at least two annual meetings of stockholders will generally be required in order to effect a change in a majority of our directors. Our staggered Board can discourage proxy contests for the election of our directors and purchases of substantial blocks of our shares by making it more difficult for a potential acquirer to gain control of our Board in a relatively short period of time.

***Our Charter provides, subject to limited exceptions, that the Court of Chancery of the State of Delaware will be the sole and exclusive forum for certain stockholder litigation matters, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, employees or stockholders.***

Our Charter requires, to the fullest extent permitted by law, that derivative actions brought in our name, actions against directors, officers and employees for breach of fiduciary duty and other similar actions may be brought only in the Court of Chancery in the State of Delaware (the "Chancery Court") and, if brought outside of Delaware, the stockholder bringing the suit will be deemed to have consented to the personal jurisdiction of the Chancery Court and having service of process made upon such stockholder in any such action on such stockholder's counsel. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and consented to these forum provisions. Notwithstanding the foregoing, our Charter provides that the exclusive forum provision does not apply to suits brought to enforce a duty or liability created by the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Section 27 of the Exchange Act creates exclusive federal jurisdiction over all suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder. Additionally, unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act of 1933, as amended (the "Securities Act") against us or any of our directors, officers, other employees or agents. However, there is uncertainty as to whether a court would enforce the exclusive forum provisions relating to causes of actions arising under the Securities Act.

Although we believe this exclusive forum provision benefits us by providing increased consistency in the application of Delaware law in the types of lawsuits to which it applies, it may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or any of our directors, officers, other employees or stockholders, which may discourage lawsuits with respect to such claims. Alternatively, if a court were to find the choice of forum provision contained in our Charter 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.

***The price of our common stock has been and may continue to be volatile.***

The market price of our Class A common stock is affected by a number of factors, including:

- actual or anticipated fluctuations in our quarterly financial results or the quarterly financial results of companies perceived to be similar to us;
- changes in the market's expectations about our operating results;
- success of competitors;
- our operating results failing to meet market expectations in a particular period;
- changes in financial estimates and recommendations by securities analysts concerning SES or the industry and market in general;
- operating and stock price performance of other companies that investors deem comparable to SES;
- our ability to market new and enhanced products on a timely basis;
- changes in laws and regulations affecting our business;

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- commencement of, or involvement in, litigation;
- changes in our capital structure, such as future issuances of securities or the incurrence of additional debt;
- the volume of shares of our Class A common stock available for public sale;
- any significant change in our Board or management;
- sales of substantial amounts of our Class A common stock by our directors, executive officers or significant stockholders or the perception that such sales could occur; and
- general economic and political conditions such as recessions, interest rates, fuel prices, international currency fluctuations and acts of war or terrorism including disruptions resulting from the conflict between Russia and Ukraine.

Broad market and industry factors may depress the market price of our Class A common stock irrespective of our operating performance. The stock market in general and the NYSE have 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 these stocks, and of our securities, may not be predictable. A loss of investor confidence in the market for EV battery stocks or the stocks of other companies which investors perceive to be similar to SES could depress our stock price regardless of our business, prospects, financial conditions or results of operations. A decline in the market price of our Class A common stock also could adversely affect our ability to issue additional securities and our ability to obtain additional financing in the future.

***Our public warrants may never be in the money, and they may expire worthless.***

The exercise price for our warrants is \$11.50 per-share, subject to adjustment, which exceeds the market price of our Class A common stock, which was \$2.79 per-share based on the closing price of our Class A common stock on the NYSE on March 10, 2023. There can be no assurance that the public warrants will ever be in the money prior to their expiration and, as such, the warrants may expire worthless.

***We may redeem unexpired public warrants prior to their exercise at a time that is disadvantageous to the warrant holders, thereby making the warrants worthless.***

We may redeem outstanding warrants (excluding any private placement warrants held by the Ivanhoe Capital Sponsor LLC (the “Sponsor”) or its permitted transferees) at any time after they become exercisable and prior to their expiration, at \$0.01 per warrant, provided that the last reported sales price (or the closing bid price of our Class A common stock in the event our Class A common stock is not traded on any specific trading day) of our Class A common stock equals or exceeds \$18.00 per-share for any 20 trading days within a 30 trading-day period ending on the third business day prior to the date we send proper notice of such redemption, provided that on the date we give notice of redemption and during the entire period thereafter until the time we redeem the warrants, there is an effective registration statement under the Securities Act covering the shares of our Class A common stock issuable upon exercise of the warrants and a current prospectus relating to them is available. If and when the warrants become redeemable by us, we may exercise our redemption right even if we are unable to register or qualify the underlying securities for sale under all applicable state securities laws. Redemption of the outstanding warrants could force a warrant holder: (i) to exercise its warrants and pay the exercise price therefore at a time when it may be disadvantageous for it to do so, (ii) to sell its warrants at the then-current market price when it might otherwise wish to hold its warrants or (iii) to accept the nominal redemption price which, at the time the outstanding warrants are called for redemption, will be substantially less than the market value of its warrants.

***Warrants to purchase SES common stock became exercisable on March 3, 2022, which could increase the number of shares eligible for future resale in the public market and result in dilution to stockholders.***

As of the closing of the Business Combination, there were 14,213,280 warrants outstanding. Each warrant entitles its holder to purchase one share of Class A common stock at an exercise price of \$11.50 per-share and will expire at 5:00 p.m., New York time, five years after the closing of the Business Combination or earlier upon redemption of our Class A common stock or our liquidation. To the extent warrants are exercised, additional shares of Class A common stock will be issued, which will result in dilution to our then existing stockholders and increase the number of shares eligible for resale in the public market. Sales of substantial numbers of such shares in the public market could depress the market price of our Class A common stock.

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

The share price of our Class A common stock has been and may continue to be volatile and, in the past, companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation. SES may be the target of this type of litigation in the future. Litigation of this type could result in substantial costs and diversion of management’s attention and resources, which

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could have a material adverse effect on its business, financial condition, results of operations and prospects. Any adverse determination in litigation could also subject us to significant liabilities.

**Item 1B. Unresolved Staff Comments**

None.

**Item 2. Properties**

We have leased facilities located in Woburn, Massachusetts in the United States, Shanghai, China, and Chungju and Seoul, South Korea. Our Woburn facility, which also serves as the Company's headquarters, focuses on chemistry, material and algorithm research and development, as well as engaging with our OEM and strategic partners. Our Shanghai facility focuses on supply chain development, manufacturing process development, battery cell development and production, AI software, BMS and module development. Our Chungju facility focuses on manufacturing process development and battery cell product development. We have also set up an office in Seoul focused on supply chain, customer relations and our collaboration with partners in the region.

**Item 3. Legal Proceedings**

The information required by this Item is provided under "Legal Contingencies" in Note 14 to the consolidated financial statements included in Item 8 of this Form 10-K and is incorporated herein by reference.

**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 traded on The New York Stock Exchange (the "NYSE") under the symbol "SES." Our public warrants are traded on the NYSE under the symbol "SES WS."

***Holders of Record***

As of March 10, 2023, there were 130 holders of record of our Class A common stock and one holder of record of our public warrants. Such numbers do not include Depository Trust Company ("DTC") participants or beneficial owners holding shares through nominee names.

There is no public market for our Class B common stock and one holder of record of our Class B common stock as of March 10, 2023.

***Dividends***

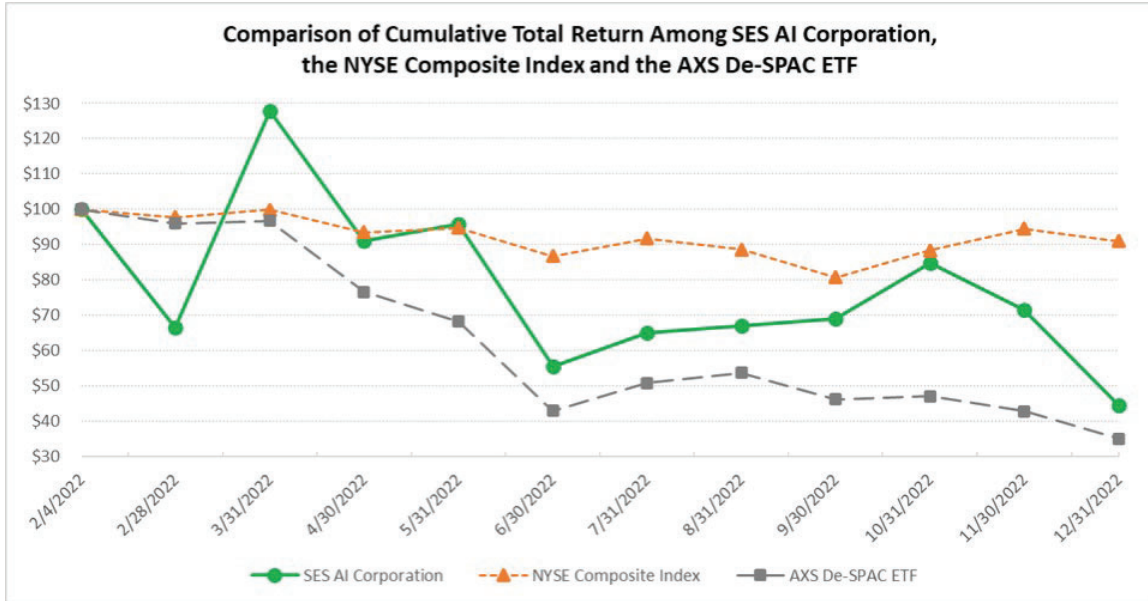
We have not paid any cash dividends on our shares of Class A common stock to date and do not anticipate paying any cash dividends for the foreseeable future. The payment of cash dividends in the future will be dependent upon our revenues and earnings, if any, capital requirements and general financial condition as well as general business conditions. The payment of any cash dividends will be within the discretion of the Board at such time.

***Recent Sales of Unregistered Securities***

None other than as previously reported in our Current Report on Form 8-K filed with the SEC on February 8, 2022.

**Stock Performance Graph**

The following graph shows the changes in cumulative total return on \$100 invested in each of our Class A common stock, the NYSE Composite Index and the AXS De-SPAC ETF for the period beginning on February 4, 2022 (the first date that our Class A common stock began trading on the NYSE under the ticker symbol "SES") and ending on December 31, 2022, assuming reinvestment of all dividends. The comparisons in this graph are required by the SEC and are not intended to forecast or be indicative of the possible future performance of our common stock.



The material in this performance graph shall not be deemed to be filed with the SEC and is not incorporated by reference in any filing of SES AI Corporation under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made on, before or after the date of this filing and irrespective of any general incorporation language in such filing.

**Item 6. [Reserved]**

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

On February 3, 2022 (the “Closing Date”), SES consummated its previously disclosed business combination (the “Business Combination”). Prior to the closing of the Business Combination, Ivanhoe Capital Acquisition Corp. (“Ivanhoe”), a Cayman Islands exempted company, migrated out of the Cayman Islands and domesticated as a Delaware corporation (the “Domestication”) and changed its name to “SES AI Corporation.” On the Closing Date, SES AI Corporation and Wormhole Amalgamation Sub Pte. Ltd., a Singapore private company limited by shares and a direct, wholly-owned subsidiary of Ivanhoe (“Amalgamation Sub”), consummated the Business Combination, which was accounted for as a reverse recapitalization. Under this method of accounting, SES AI Corporation was treated as the “acquired” company for financial reporting purposes. Except as otherwise provided herein, our financial statement presentation includes (i) the historical operating results of Old SES prior to the Business Combination; (ii) the combined results of SES and Old SES following the Closing; (iii) the assets and liabilities of Old SES at their historical cost; and (iv) SES’s equity structure for all periods presented. See “Note 3 – Business Combination” set forth in Part II, Item 8 of this Annual Report on Form 10-K, for additional information.

The following discussion and analysis provides information which our management believes is relevant to an assessment and understanding of our consolidated results of operations and financial condition. The following discussion and analysis should be read in conjunction with our audited consolidated financial statements as of and for the years ended December 31, 2022 and 2021 and the accompanying notes included in this Annual Report on Form 10-K. The following discussion may contain forward-looking statements that reflect our plans, estimates and beliefs, which are subject to risks, uncertainties and assumptions. Our actual results and the timing of events may differ materially from those expressed or implied as a result of various factors, including those set forth in the sections titled “Risk Factors” and “Cautionary Note Regarding Forward-Looking Statements.”

### Overview

We are engaged in the development and production of high-performance, Lithium-Metal (“Li-Metal”) rechargeable battery technologies for electric vehicles (“EVs”), electric vehicle take-off and landing (“eVTOL”) and other applications. Our third-party tested, differentiated battery technology has been designed to combine the high energy density of Li-Metal with the cost-effective, large-scale manufacturability of conventional Lithium-ion (“Li-ion”) batteries and will help to promote the transition from the global dependence on fossil fuel-based automotive vehicles to clean and efficient EVs.

Our mission is to facilitate the widespread adoption of sustainable electric transportation, both on land and in air, by creating best-in-class, high energy density Li-Metal batteries centered around long-range performance and safety. To assist in achieving this mission, we have partnered with leading global original equipment manufacturers (“OEMs”), GM, Hyundai and Honda, among other strategic partners, under joint development agreements (“JDAs”) to jointly develop and produce our Li-Metal battery cells and technology. We are also conducting research and development activities to further improve the performance, quality and cost of our battery technology by focusing on the following key areas, all of which we expect to help us achieve our commercialization goal, at our facilities in Woburn, Massachusetts in the United States, Shanghai, China, and Chungju, South Korea.

- *Scale-up:* Our design is further being customized with and validated by several OEMs. Based on our collaborations with OEMs, we believe that a roughly 100 Ah cell-size manufactured at GWh scale (five to seven cells-per-minute) is needed to achieve commercialization in EVs at a large, global scale. We are developing processes and equipment to scale up the manufacturing of our current cell design from three to nine Ah capacity to 50 Ah and 100 Ah.
- *Module and Pack Design:* Li-Metal cells must be integrated into modules and packs as part of their integration into vehicles. Our active development efforts are focused on the integration of our Li-Metal cells in modules to enable our Li-Metal cells to perform as intended once they are integrated into modules and vehicles.
- *Advanced Artificial Intelligence (“AI”) Software and Battery Management Systems (“BMS”):* Software is critical to ongoing monitoring of battery health and safety. We continue to develop advanced AI algorithms to diagnose battery cell-related health issues, develop advanced control algorithms and charging methods to enhance cycle life and safety, and port such software on to a BMS that could be integrated into a battery pack.
- *Advanced Materials and Coatings:* We continue to research and develop advanced electrolyte and anodes to further improve cycle life and safety. In addition, we continue to develop novel methods of laminating or depositing lithium metal onto current collector that can be deployed at commercial GWh scale.



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- *Cathode Materials and Design*: We develop our Li-Metal cells for a variety of different cathode materials, cathode design and cathode processing methods that can provide ultra-high energy density and/or significant cost-reduction.
- *Li-Metal Recycling*: Along with other battery components that are already being recycled today, Li-Metal foil will also need to be recycled in the future. We continue to explore methods of recycling that are productive and cost-effective.

During 2022, we continued to work towards developing and initially producing A-Sample batteries with specifications required by our OEM partners for their EVs. Our efforts resulted in 7 and 18 newly granted patents and trademarks and the construction of our pilot facilities in Shanghai, China and Chungju, South Korea. The Shanghai pilot facility was ready-to-use in March 2022 and fully operational in the third quarter of 2022, while the Chungju pilot facility ready-to-use in September 2022 and fully operational in the fourth quarter of 2022.

As we plan to transition the development and initial production of our Li-Metal batteries from A-sample to B-sample in 2023, we expect to significantly increase our headcount and the footprint of our research and pre-production pilot facilities by expanding our existing facilities and entering into new facilities. As a result, our materials consumption and the rate of cash utilization, as a function of time, will increase significantly.

After B-Sample, we plan to transition to C-Sample in 2024, which we then expect to enable us to commence commercial production of our technology in 2025. As the joint development of Li-Metal batteries with our OEM partners continues to progress, we also expect to launch future research facilities and, eventually, commercial production manufacturing facilities in the United States.

Finally, we expect to explore opportunities for partial vertical integration, both upstream and downstream, to ensure scalability of our battery and battery technology. Upstream, we intend to explore integrating vendors of key materials of our cells and providers of key equipment and engineering capabilities, such as cell assembly, anode processing, chemical processing and safety testing. Downstream, we plan to explore integrating providers of key engineering capabilities, such as battery state-of-health monitoring software, charging optimization software, battery module development and recycling.

### **Results of Operations**

The discussion of our results of operations for the year ended December 31, 2021 can be found in Exhibit 99.2 Management's Discussion and Analysis of Financial Condition and Results of Operations under our Amendment No. 1 Form 8-K (the "Super 8-K Amendment") for the fiscal year ended December 31, 2021 filed with the Securities and Exchange Commission on March 31, 2022, which is incorporated herein by reference.

### **Factors Affecting Operating Results**

We are an early-stage growth company in the pre-commercialization stage of development, and conduct our business through one operating segment. We have not generated any revenue from sales to customers to date, have spent \$42.2 million, \$31.5 million, and \$9.4 million on research and development activities, which is prior to credits received by our OEM partners under the JDAs, and have incurred net losses of \$51.0 million, \$31.3 million, and \$13.9 million for the years ended December 31, 2022, 2021 and 2020, respectively, and had an accumulated deficit of \$145.3 million and \$94.3 million from our inception through December 31, 2022 and 2021, respectively. Our historical results may not be indicative of our future results for reasons that may be difficult to anticipate and our ability to generate revenue in the future that is sufficient enough to achieve profitability will depend largely on the successful development of our products. Accordingly, the drivers of our future financial results, as well as the components of such results, may not be comparable to our historical results of operations.

During 2021 and 2022, we were subject to challenging conditions stemming from the COVID-19 pandemic. Previous spikes in COVID-19 cases in Shanghai resulted in government-mandated temporary shutdowns at our Shanghai facility in April 2022, causing a delay of over a month in our development, testing and manufacturing efforts and in our product schedule and our ability to obtain materials from our suppliers in the affected area. The government-mandated shutdown was lifted on June 1, 2022 and the Shanghai facility has re-opened. If our workforce is unable to work effectively, including due to illness, quarantines, government actions or other restrictions in connection with COVID-19, our operations will be adversely affected. See "Risk Factors" in Part I, Item 1A of this Annual Report on Form 10-K for further discussion of the possible impact of the COVID-19 pandemic on our business.

The following table sets forth our historical operating results for the periods indicated:

## Operating Expenses

(in thousands)	Years Ended December 31,		\$ Change	% Change
	2022	2021		
Research and development	\$ 27,967	\$ 15,514	\$ 12,453	80 %
General and administrative	51,606	16,492	35,114	213 %
<b>Total operating expenses</b>	<b>\$ 79,573</b>	<b>\$ 32,006</b>	<b>\$ 47,567</b>	<b>149 %</b>

### Research and Development

Research and development expenses consist primarily of costs incurred for salaries and personnel-related expenses, including stock-based compensation expense, for scientists, experienced engineers and technicians, expenses for materials and supplies used in product research and development, process engineering efforts and testing, as well as payments to consultants, patent related legal costs, depreciation, and allocated facilities and information technology costs.

Research and development expenses for the year ended December 31, 2022 increased \$12.5 million, or 80%, to \$28.0 million, compared with \$15.5 million for the year ended December 31, 2021. The increase primarily resulted from a \$8.2 million increase in personnel costs mainly attributable to our growth in headcount in support of our ongoing research and development efforts for battery cell development, which included \$6.3 million of stock-based compensation expense that primarily relates to restricted earnout shares issued as part of the Business Combination in February 2022 and restricted and performance stock units issued in April 2022. Further, there was a \$4.5 million increase in software development costs related to our advanced AI software and BMS, a \$1.8 million increase in facility costs due to rent, utilities and depreciation expenses, and a \$1.4 million increase in expenses for lab consumables and material supplies. These increases were partly offset by a \$3.2 million increase in credits to research and development expense, which are amounts invoiced pursuant to the JDAs, and a \$0.3 million decrease in fees associated with external consulting. We expect research and development expenses to significantly increase in 2023 compared with 2022 as we attempt to develop a battery cell with acceptable performance, yields and costs due to expansion of our science, engineering, and technician personnel and investments in additional plant and equipment for product development, building prototypes and testing of battery cells.

### General and Administrative

General and administrative expenses consist primarily of costs incurred for salaries and personnel-related expenses, including stock-based compensation expense, for our finance, legal and human resource functions, expenses for director and officer insurance, outside contractor and professional service fees, audit and compliance expenses, legal, accounting and other advisory services, as well as allocated facilities and information technology costs including depreciation. Upon commencement of commercial operations, we also expect to incur customer and sales support and advertising costs.

General and administrative expenses for the year ended December 31, 2022 increased \$35.1 million, or 213%, to \$51.6 million, compared with \$16.5 million for the year ended December 31, 2021. This increase primarily resulted from a \$17.5 million increase in personnel costs mainly attributable to our growth in headcount to support our operations as a public company, which included \$11.9 million of stock-based compensation expense that primarily relates to restricted earnout shares issued as part of the Business Combination in February 2022 and restricted and performance stock units issued in April 2022. Further, there was a \$7.5 million increase in insurance expense to cover potential liabilities under our indemnification obligations to our directors and certain officers of the Company, a \$4.6 million increase in fees associated with external consulting, legal, marketing, public relations, audit and accounting services, a \$3.4 million increase due to deferred offering costs associated with the Business Combination, a \$1.1 million increase in facility costs due to rent, utilities and depreciation, a \$0.6 million increase in travel costs primarily related to the opening of the South Korea facility, and a \$0.4M increase in computer and software related costs. We expect general and administrative expenses to increase in 2023 compared with 2022 due to expansion of our personnel headcount to support our growth and operations as a public company.

## Non-Operating Items

### Interest Income, Net

Interest income primarily consists of interest earned on our cash and cash equivalents, which are primarily invested in money market funds, and short-term investments in marketable securities, which are invested in U.S. treasury securities, and accretion income from the marketable securities.

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During the year ended December 31, 2022, we had interest income of \$6.2 million compared with \$0.2 million for the year ended December 31, 2021. This \$6.0 million increase was primarily due an increased investment in money market funds, a shift of a portion of our investment portfolio in the current year from cash and cash equivalents to higher yielding investments in U.S. treasury securities, and a general increase in interest rates during 2022.

### *Change of Fair Value of Earn-Out Liability, Net*

During the year ended December 31, 2022, we incurred a \$25.4 million gain associated with the change in fair value of the Sponsor Earn-Out liability. With the fair value of the Sponsor Earn-Out liability tied to the Company's stock price, continued volatility in the stock price could result in further gains or losses resulting from the change in fair value. See "Note 11 – Sponsor Earn-Out Liability" to the consolidated financial statements for additional information.

### *Other (Expense) Income, Net*

During the year ended December 31, 2022, we had other expense of \$1.8 million, compared with other expense of \$0.3 million for the year ended December 31, 2021. This \$1.5 million increase in other expense was primarily the result of the accounting for certain postemployment benefits and a gain recorded in the prior year from the forgiveness of the PPP note received in 2020, partially offset by unrealized and realized foreign currency gains primarily due to the strengthening of the U.S. dollar compared with the Chinese renminbi and South Korean won.

### *Provision for Income Taxes*

Income tax expense was \$1.3 million on pre-tax loss of \$49.7 million for the year ended December 31, 2022 compared with an immaterial income tax expense on pre-tax loss of \$31.2 million for the year ended December 31, 2021. Our effective tax rate was (2.5)% and (0.1%) for the years ended December 31, 2022 and 2021, respectively. The difference between our effective tax rate and the U.S. federal statutory rate of 21% was primarily driven by non-recognized deferred tax benefits due to a full valuation allowance. See to "Note 18 – Income Taxes" to the consolidated financial statements for additional information on our income tax expense.

## **Liquidity and Capital Resources**

On February 3, 2022, as a result of the aforementioned Business Combination and PIPE Financing, we raised \$282.9 million in net proceeds. Prior to that, since our inception we raised approximately \$269.9 million of funding through the sales of our redeemable convertible preferred stock. As of December 31, 2022, we had total cash and cash equivalents of \$106.6 million, short-term investments in marketable securities of \$283.5 million, and an accumulated deficit of \$145.5 million. As an early-stage growth company in the pre-commercialization stage of development, the net operating losses we have incurred since inception are consistent with our strategy and budget.

As a result of the capital-intensive nature of our business, we expect to sustain substantial operating expenses, without generating sufficient revenues to cover expenditures, for a number of years. To date, we have funded our operations through a combination of proceeds from the Business Combination and PIPE Financing and funding received through the sales of our redeemable convertible preferred stock. These funds are expected to finance our principal sources of liquidity and ongoing costs, such as research and development relating to our Li-Metal batteries and the construction of additional manufacturing facilities. In the future, if we are not able to fund our operations from cash flows generated from anticipated product sales, we expect that we will need to raise additional funds through a variety of possible methods, including, but not limited to, entry into joint ventures or other strategic arrangements, issuance of equity, equity-related or debt securities or through obtaining credit from financial institutions, as well as anticipated future revenue from product sales.

We believe that our cash on hand and marketable securities will be sufficient to meet our working capital and capital expenditure requirements for a period of at least 12 months from the date of this Report, and also sufficient to fund us to commercialization. However, additional funding may be required for a variety of reasons, including opportunities to build an integrated supply chain in the United States and delays in expected development of our Li-Metal battery cells. 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 and/or debt financing and, over time, our ability to generate positive cash flows from operations.

### Summary of Cash Flows

The following table provides a summary of our cash flow data for the periods indicated:

(in thousands)	Years Ended December 31,	
	2022	2021
Cash (used in) provided by:		
Operating activities	\$ (46,500)	\$ (29,991)
Investing activities	(296,009)	3,314
Financing activities	289,927	184,760
Effect of exchange rate changes on cash	(526)	233
<b>Net (decrease) increase in cash, cash equivalents and restricted cash</b>	<b>\$ (53,108)</b>	<b>\$ 158,316</b>

#### Operating Activities

Our cash flows used in operating activities to date have been primarily comprised of payroll, consumables and supplies related to research and development, expenditures and reimbursements related to our JDAs, and facilities expense and professional services for general and administrative activities. As we continue to ramp up hiring for research and development headcount to accelerate our engineering efforts, we expect our cash used in operating activities to increase significantly before we start to generate any material cash inflows from our operations.

Net cash used in operating activities of \$46.5 million for the year ended December 31, 2022 was primarily attributable to net loss of \$51.0 million, as adjusted for a gain on change in fair value of Sponsor Earn-Out liability of \$25.4 million, stock-based compensation expense of \$22.8 million, depreciation and amortization expense of \$2.6 million and accretion income from available-for-sale short-term investments of \$2.4 million, partially offset by a \$6.4 million working capital inflow. The working capital inflow was driven by a \$6.8 million increase in accrued expenses and other liabilities and a \$5.5 million decrease in receivable from related party, partially offset by a \$4.0 million decrease in accounts payable and a \$1.6 million increase in prepaids and other assets. The increase in accrued expenses and other liabilities was primarily due to advanced payments received under the JDAs, accrued income taxes payable, payroll related accruals and the accounting of certain postemployment benefits. The decrease in receivable from related party was driven by activity from a JDA. The decrease in accounts payable was primarily due to the payment of transaction costs related to the Business Combination and PIPE Financing partially offset by an increase in accounts payable related to the purchase of property and equipment for the South Korea facility. The increase in prepaids and other assets was primarily due to insurance costs to cover potential liabilities under our indemnification obligations to our directors and certain officers.

Net cash used in operating activities of \$30.0 million for the year ended December 31, 2021 was primarily attributable to net loss of \$31.3 million, as adjusted for stock-based compensation expense of \$4.6 million, depreciation and amortization of \$1.7 million and gain on the forgiveness of the PPP note payable of \$0.8 million, partially offset by a \$4.2 million working capital outflow. The working capital outflow was primarily driven by a \$7.9 million increase in receivable from related party and a \$1.7 million increase in prepaids and other assets, partially offset by a \$4.1 million increase in accrued expenses and other liabilities and a \$1.3 million increase in accounts payable. The increase in receivable from related party was driven by activity from a JDA. The increase in prepaids and other assets was primarily attributable to prepaid rent and deposits related to the Shanghai facility. The increase in accrued expenses and other liabilities was primarily attributable to increased marketing and public relations activity and a prepayment attributable to a JDA. The increase in accounts payable was primarily attributable to professional fees associated with external legal, consulting and accounting services.

#### Investing Activities

Net cash used in investing activities was \$296.0 million for the year ended December 31, 2022, compared with net cash provided by investing activities of \$3.3 million for the year ended December 31, 2021.

*Purchases and Maturities of Investments* – Net purchases of short-term investments were \$281.4 million for the year ended December 31, 2022, compared with net proceeds from maturities of short-term investments of \$12.3 million for the year ended December 31, 2021. The \$293.6 million decrease in net proceeds was driven by a shift of our investment portfolio to cash equivalents in the current year.

*Capital Spending* – Capital expenditures were \$14.7 million and \$9.0 million for the years ended December 31, 2022 and 2021, respectively, and primarily related to purchases of lab machinery and equipment, lab tools and instruments and leasehold improvements to our facilities

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in the United States, Shanghai and South Korea. We expect capital expenditures to significantly increase in 2023 compared with 2022 as we continue to invest in the build out of our manufacturing pre-production facilities and expand into new facilities.

**Financing Activities**

Net cash provided by financing activities of \$289.9 million for the year ended December 31, 2022 was primarily attributable to proceeds received from the Business Combination and PIPE Financing, net of transaction costs and from a government grant.

Net cash provided by financing activities of \$184.8 million for the year ended December 31, 2021 related to proceeds received from the issuance of Series D and D plus redeemable convertible preferred stock, net of issuance costs.

**Debt**

In April 2020, we applied for and received \$0.8 million in the PPP note. We received full forgiveness of all our debt under the terms of the program in February 2021 and recorded a gain of \$0.8 million in other income in our consolidated statement of operations and comprehensive loss for the year ended December 31, 2021. As of the date of this filing, we have no debt obligations outstanding.

**Contractual Obligations and Commitments**

The following table summarizes our material contractual obligations for cash expenditures as of December 31, 2022, and the periods in which these obligations are due:

	Short Term	Long Term	Total
Purchase obligations <sup>(1)</sup>	\$ 37,204	\$ 26,215	\$ 63,419
Operating lease obligations <sup>(2)</sup>	2,892	14,415	17,307
<b>Total contractual obligations</b>	<b>\$ 40,096</b>	<b>\$ 40,630</b>	<b>\$ 80,726</b>

<sup>(1)</sup> Purchase obligations include commitments for the purchase of lab supplies and equipment as well as committed spend related to a JDA. These commitments are derived from purchase orders, supplier contracts and open orders based on projected demand information.

<sup>(2)</sup> Operating lease obligations represent the fixed lease payments for the noncancelable lease term, fixed lease payments for optional renewal periods where the Company is reasonably certain the renewal option will be exercised, and variable lease payments that depend on an underlying index or rate in effect at lease commencement.

**Off-Balance Sheet Arrangements**

As of December 31, 2022, we had a letter of credit issued by a financial institution totaling \$0.6 million. The letter of credit relates to deposits the Company is required to maintain under one of its operating leases agreements. We have restricted cash that serves as collateral for this outstanding letter of credit that is included in other assets on our consolidated balance sheet. No amounts have been drawn under the letter of credit.

**Recent Accounting Pronouncements**

See “Note 2 – Summary of Significant Accounting Policies” of our accompanying consolidated financial statements included in this Annual Report on Form 10-K for more information about recent accounting pronouncements, the timing of their adoption, and their potential impact on our financial condition, results of operations and cash flows.

**Critical Accounting Estimates and Judgments**

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

We consider an accounting 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 financial statements. Our significant accounting policies are described in “Note 2 – Summary of Significant Accounting Policies” of our accompanying consolidated financial statements included in this Annual Report on Form 10-K. We consider the following to be our critical accounting estimates.

Description	Judgments and Uncertainties	Effect if Results Differ From Assumptions
<b>Stock-Based Compensation</b>		
<p>We record stock-based compensation expense according to the provisions of ASC Topic 718 – Stock Compensation. ASC Topic 718 requires all share-based awards to employees, including grants of Restricted Stock Units (RSUs), Performance Stock Units (PSUs), Restricted Stock Awards (RSAs), and employee stock options, to be recognized in the financial statements based on their fair values.</p> <p>Prior to the Business Combination, the RSAs and stock option grant date fair value of Old SES common stock was historically determined by its board of directors with the assistance of management and an independent valuation.</p> <p>Post Business Combination, as our common stock is publicly traded, the fair value of RSU grants is based on the closing market price on the date grants are made. The fair value of PSU grants is determined through an independent valuation of the likelihood of the performance metrics being met within the terms of the award.</p>	<p>Under the provisions of ASC Topic 718, we determine the appropriate fair value model to be used for valuing share-based issuances and the amortization method for recording compensation cost, which can be impacted by the following assumptions:</p> <ul style="list-style-type: none"> <li>● expected term</li> <li>● expected volatility</li> <li>● expected dividend yield</li> <li>● risk-free interest rate</li> </ul>	<p>If we were to change any of these judgments or estimates, it could cause a material increase or decrease in the amount of stock-based compensation expense reported.</p>
<b>Earn-Out Restricted Shares</b>		
<p>The Earn-Out Restricted Shares are accounted for as a single tranche equity award issued to employees subject to time and share price vesting hurdle. These Earn-Out Restricted Shares have a share price vesting hurdle and are also subject to forfeiture if a recipient’s service terminates prior to the vesting. Pursuant to ASC 718 – Stock Compensation, we recognize stock-based compensation based on the fair value determined as of Closing with the assistance of management and an independent valuation.</p>	<p>Under the provisions of ASC Topic 718, we determine the appropriate fair value model to be used for valuing share-based issuances and the amortization method for recording compensation cost, which can be impacted by the following assumptions:</p> <ul style="list-style-type: none"> <li>● expected term</li> <li>● expected volatility</li> <li>● expected dividend yield</li> <li>● risk-free interest rate</li> <li>● probability of change of control</li> </ul>	<p>If we were to change any of these judgments or estimates, it could cause a material increase or decrease in the amount of stock-based compensation expense reported.</p>
<b>Sponsor Earn-out Liability</b>		
<p>Certain Sponsor Earn-Out Shares are accounted for as a derivative liability measured at fair value, with changes in fair value recorded in the consolidated statement of operations and comprehensive loss at each reporting period, because the earn-out events that determine the number of Sponsor Earn-Out Shares to be earned back by the Sponsor include events that are not solely indexed to the common stock of the Company.</p> <p>The fair value of our common stock, which is publicly traded, is used in determining the fair value of the derivative liability at each valuation date with the assistance of management and an independent valuation.</p>	<p>We determine the appropriate fair value model to be used for valuing the derivative liability to record the change in fair value in our consolidated statement of operations and comprehensive loss, which may be impacted by the following assumptions:</p> <ul style="list-style-type: none"> <li>● expected volatility</li> <li>● risk free rate</li> <li>● expected term</li> <li>● probability of change of control</li> </ul>	<p>If we were to change any of these judgments or estimates, it could cause a material increase or decrease in the amount of earn out liability reported.</p>

Description	Judgments and Uncertainties	Effect if Results Differ From Assumptions
<b>Leases</b>		
<p>We adopted ASC 842, Leases, with an initial application date of January 1, 2022, using the modified retrospective method with certain optional transition relief.</p> <p>At the lease commencement date, we recognized a right-of-use (“ROU”) asset and a lease liability for all leases, except short-term leases with an original term of 12 months or less. The ROU asset represents the right to use the leased asset for the lease term. The lease liability represents the present value of the lease payments under the lease.</p> <p>The operating lease liability is equal to the present value of (1) fixed lease payments for the noncancelable lease term, (2) fixed lease payments for optional renewal periods where it is reasonably certain the renewal option will be exercised, and (3) variable lease payments that depend on an underlying index or rate in effect at lease commencement. Variable lease payments that do not depend on an underlying index or rate in effect at lease commencement, such as common area maintenance, insurance, and property tax, are recognized in operating expenses when incurred.</p>	<p>The measurement of the lease liability depends on the expected lease term with renewal options wherein it is reasonably certain that the renewal option will be exercised. Because the Company’s operating lease does not provide an implicit rate, the Company estimates its incremental borrowing rate at lease commencement date for borrowings on a collateralized basis over a similar term in a similar economic environment.</p>	<p>If we were to change any of these judgments or estimates, it could cause a material increase or decrease in the amount of ROU asset and lease liability reported.</p>

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

The Company is 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, 2022, we had cash and cash equivalents of \$106.6 million, primarily consisting of interest-bearing money market funds, and short-term investments of \$283.5 million, consisting U.S treasury securities, respectively. A 100 basis point increase in the general level of U.S. interest rates relative to interest rates as of December 31, 2022 would decrease the fair value of our short-term investments by approximately \$1.6 million. This estimate is based on a sensitivity model that measures market value changes when changes in interest rates occur. Such decrease in fair value would only be realized if we sold the investments prior to maturity.

**Foreign Currency Risk**

The functional currency of all our entities and all its subsidiaries is the U.S. dollar, except for our subsidiaries in China and South Korea, which has Chinese renminbi (RMB) and South Korean won (KRW), respectively, as its functional currency, reflecting its principal operating economic environment. We expect to be exposed to both currency transaction remeasurement and translation risk. Net realized and unrealized gains (losses) from foreign currency transactions are included in other expense, net in the consolidated statement of operations and comprehensive loss and amounted to a gain of \$0.1 million for the year ended December 31, 2022. This foreign transaction gain was primarily due to the strengthening of the U.S. dollar to the Chinese renminbi (RMB) and South Korean won (KRW). We 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 Stockholders and Board of Directors  
SES AI Corporation:

### *Opinion on the Consolidated Financial Statements*

We have audited the accompanying consolidated balance sheets of SES AI Corporation and subsidiaries (the Company) as of December 31, 2022 and 2021, the related consolidated statements of operations and comprehensive loss, redeemable convertible preferred stock and stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2022, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2022, 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, 2022, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated March 16, 2023 expressed an adverse opinion on the effectiveness of the Company's internal control over financial reporting.

### *Change in Accounting Principle*

As discussed in Note 2 to the consolidated financial statements, the Company changed its method of accounting for leases as of January 1, 2022 due to the adoption of Accounting Standards Update 2016-02, Leases (Topic 842), as amended.

### *Basis for Opinion*

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated 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 consolidated 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 consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

### *Critical Audit Matters*

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

### *Valuation of sponsor earn-out liability*

As discussed in Notes 2, 3 and 11 to the consolidated financial statements, on February 3, 2022, the Company completed a business combination that was accounted for as a reverse recapitalization, and the Company was determined to be the accounting acquirer. In connection with the business combination, 6,900,000 shares of Class B ordinary shares held by Ivanhoe Capital Sponsor LLC (the "Sponsor") were converted into an equal number of Class B common stock of the Company that were converted on closing of the business

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combination into an equal number of Class A common stock of the Company (the “Sponsor Earn-Out Shares”). Certain Sponsor Earn-Out Shares are accounted for as a derivative liability (the “Sponsor Earn-Out Liability”) measured at fair value, with changes in fair value recorded in the consolidated statement of operations and comprehensive loss at each reporting period. The fair value of the Sponsor Earn-Out Liability is estimated using a Monte Carlo simulation model. The fair value of the Sponsor Earn-Out Liability was determined to be \$36,393,000 at February 3, 2022, and \$10,961,000 at December 31, 2022. The gain on change of fair value of Sponsor Earn-Out Liability was \$25,432,000 for the year ended December 31, 2022.

We identified the assessment of the fair value of the Sponsor Earn-Out Liability as a critical audit matter. Specifically, a high degree of subjective auditor judgment was required due to the complex valuation model and volatility assumptions used in the determination of fair value. It also required specialized skills and knowledge to evaluate the Company’s determination of the fair value of the Sponsor Earn-Out Liability.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the peer group public companies used in the determination of volatility assumptions by reviewing the business descriptions of the peer group public companies to determine if the peer group public companies are reasonably comparable in terms of the Company’s industry. We involved valuation professionals with specialized skills and knowledge who assisted in (1) evaluating the appropriateness of the Monte Carlo simulation model (2) performing independent calculations of volatility using peer group public companies’ data and comparing to volatility assumptions utilized in management’s estimate and (3) performing an independent calculation of the fair value using management’s assumptions and comparing to the fair value of the Sponsor Earn-Out Liability determined by the Company.

*Valuation of certain stock-based compensation awards*

As discussed in Note 17 to the consolidated financial statements, during the year ended December 31, 2022, the Company issued various share-based awards, including restricted stock units, restricted stock awards, performance stock units, as well as earn-out restricted shares granted in connection with the business combination completed on February 3, 2022. The performance stock units and earn-out restricted shares have both service and market vesting conditions. The fair value of the performance stock units and earn-out restricted shares was estimated using a Monte Carlo simulation model. The Company reported stock-based compensation expense of \$22,775,000 for the year ended December 31, 2022.

We identified the assessment of fair value of the performance stock units and earn-out restricted shares granted in connection with the business combination as a critical audit matter. Specifically, a high degree of subjective auditor judgment was required due to the complex valuation model and volatility assumptions used in the determination of fair value. It also required specialized skills and knowledge to evaluate the Company’s determination of the fair value of the performance stock units and earn-out restricted shares.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the peer group public companies used in the determination of volatility assumptions by reviewing the business descriptions of the peer group public companies to determine if the peer group public companies are reasonably comparable in terms of the Company’s industry. We involved valuation professionals with specialized skills and knowledge who assisted in (1) evaluating the appropriateness of the Monte Carlo simulation model (2) performing independent calculations of volatility using peer group public companies’ data and comparing to volatility assumptions utilized in management’s estimate and (3) performing an independent calculation of the fair value using management’s assumptions and comparing to the fair value of the performance stock units and earn-out restricted shares determined by the Company.

/s/ KPMG LLP

We have served as the Company’s auditor since 2021.

Boston, Massachusetts

March 16, 2023

## Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors  
SES AI Corporation:

### *Opinion on Internal Control Over Financial Reporting*

We have audited SES AI Corporation and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, because of the effect of the material weaknesses, described below, on the achievement of the objectives of the control criteria, the Company has not maintained effective internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2022 and 2021, the related consolidated statements of operations and comprehensive loss, redeemable convertible preferred stock and stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2022, (collectively, the consolidated financial statements), and our report dated March 16, 2023 expressed an unqualified opinion on those consolidated financial statements.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the company's annual or interim financial statements will not be prevented or detected on a timely basis. The material weaknesses have been identified and included in management's assessment related to certain components of the Company's control environment that were ineffective as the Company did not have a sufficient complement of resources with assigned responsibility and accountability for the design, operation and documentation of internal control over financial reporting. This created deficiencies in the Company's risk assessment process that led to ineffective information and communication activities as the controls necessary to ensure the reliability of information used in financial reporting and communicate relevant information about roles and responsibilities for internal control over financial reporting were ineffective. As a result, process-level control activities were not designed, implemented or operated effectively in the substantial majority of processes. The material weaknesses were considered in determining the nature, timing, and extent of audit tests applied in our audit of the December 31, 2022 consolidated financial statements, and this report does not affect our report on those consolidated financial statements.

### *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 Control 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 of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included 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

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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/ KPMG LLP

Boston, Massachusetts

March 16, 2023

**SES AI Corporation**  
**Consolidated Balance Sheets**

(in thousands, except share and per share amounts)	As of December 31,	
	2022	2021
<b>Assets</b>		
Current Assets		
Cash and cash equivalents	\$ 106,623	\$ 160,497
Short-term investments	283,460	—
Receivable from related party	2,383	7,910
Inventories	383	—
Prepaid expenses and other current assets	3,792	1,563
Total current assets	396,641	169,970
Property and equipment, net	27,756	12,494
Intangible assets, net	1,473	1,626
Right-of-use assets, net	11,363	—
Other assets	3,206	9,263
Total assets	\$ 440,439	\$ 193,353
<b>Liabilities, Redeemable Convertible Preferred Stock and Stockholders' Equity</b>		
Current Liabilities		
Accounts payable	\$ 6,187	\$ 4,712
Operating lease liabilities, current	1,899	—
Accrued expenses and other current liabilities	11,271	6,273
Total current liabilities	19,357	10,985
Sponsor Earn-Out liability	10,961	—
Operating lease liabilities, non-current	10,165	—
Unearned government grant	6,657	—
Other liabilities	1,760	749
Total liabilities	48,900	11,734
Commitments and contingencies (Note 14)		
Redeemable convertible preferred stock, \$0.000001 par value; none authorized, issued and outstanding as of December 31, 2022; 213,960,286 shares authorized, issued and outstanding as of December 31, 2021 (aggregate liquidation preference of \$271,148 as of December 31, 2021)	—	269,941
<b>Stockholders' Equity</b>		
Preferred stock, \$0.0001 par value; 20,000,000 shares authorized, none issued and outstanding as of December 31, 2022 and 2021, respectively	—	—
Common stock: Class A shares, \$0.0001 par value; 2,100,000,000 shares authorized; 305,833,589 and 22,261,480 shares issued and outstanding as of December 31, 2022 and 2021, respectively; Class B shares, \$0.0001 par value; 200,000,000 shares authorized; 43,881,251 and 39,881,455 shares issued and outstanding as of December 31, 2022 and 2021, respectively	35	6
Additional paid-in capital	538,041	5,598
Accumulated deficit	(145,286)	(94,293)
Accumulated other comprehensive (loss) income	(1,251)	367
Total stockholders' equity	391,539	(88,322)
Total liabilities, redeemable convertible preferred stock, and stockholders' equity	\$ 440,439	\$ 193,353

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

**SES AI Corporation**  
**Consolidated Statements of Operations and Comprehensive Loss**

(in thousands, except share and per share amounts)	Years Ended December 31,		
	2022	2021	2020
<b>Operating expenses:</b>			
Research and development	\$ 27,967	\$ 15,514	\$ 9,443
General and administrative	51,606	16,492	4,460
Total operating expenses	79,573	32,006	13,903
Loss from operations	(79,573)	(32,006)	(13,903)
<b>Other income (expense):</b>			
Gain on change of fair value of Sponsor Earn-Out liability, net	25,432	—	—
Interest income, net	6,196	248	76
Other expense, net	(1,793)	(312)	(55)
Gain on forgiveness of PPP note	—	840	—
Total other income, net	29,835	776	21
Loss before income taxes	(49,738)	(31,230)	(13,882)
Provision for income taxes	(1,255)	(25)	(7)
<b>Net loss</b>	(50,993)	(31,255)	(13,889)
Other comprehensive (loss) income:			
Foreign currency translation adjustment	(1,373)	234	188
Unrealized loss on short-term investments	(245)	—	—
<b>Total comprehensive loss</b>	(52,611)	(31,021)	(13,701)
<b>Net loss per share attributable to common stockholders:</b>			
Basic and diluted	\$ (0.18)	\$ (0.51)	\$ (0.23)
<b>Weighted-average shares outstanding:</b>			
Basic and diluted	288,304,750	61,089,065	60,781,758

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

**SES AI Corporation**  
**Consolidated Statements of Redeemable Convertible Preferred Stock and Stockholders' Equity**

(in thousands, except share and per share amounts)	Redeemable Convertible Preferred Stock		Class A and Class B Common Stock		Additional Paid-in-Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity
	Shares	Amount	Shares	Amount				
Balance – December 31, 2019	29,496,153	\$ 82,044	10,245,074	\$ —	\$ 682	\$ (49,149)	\$ (55)	\$ (48,522)
Retroactive application of reverse recapitalization upon Business Combination <sup>(1)</sup>	145,497,987	—	50,536,901	6	(6)	—	—	—
Balance — December 31, 2019, as converted	174,994,140	82,044	60,781,975	6	676	(49,149)	(55)	(48,522)
Stock-based compensation	—	—	—	—	154	—	—	154
Net loss	—	—	—	—	—	(13,889)	—	(13,889)
Foreign currency translation adjustments	—	—	—	—	—	—	188	188
Balance – December 31, 2020	174,994,140	82,044	60,781,975	6	830	(63,038)	133	(62,069)
Issuance of Series D and Series D plus redeemable convertible preferred stock, net of issuance costs of \$608	38,966,146	187,897	—	—	—	—	—	—
Stock-based compensation	—	—	—	—	4,571	—	—	4,571
Issuance of common stock upon exercise of stock options	—	—	1,360,960	—	197	—	—	197
Net loss	—	—	—	—	—	(31,255)	—	(31,255)
Foreign currency translation adjustments	—	—	—	—	—	—	234	234
Balance – December 31, 2021	213,960,286	269,941	62,142,935	6	5,598	(94,293)	367	(88,322)
Conversion of redeemable convertible preferred stock to common stock in connection with reverse recapitalization upon Business Combination	(213,960,286)	(269,941)	213,960,286	21	269,920	—	—	269,941
Business Combination and PIPE Financing, net of redemptions and transaction costs <sup>(2)</sup>	—	—	71,767,824	7	234,514	—	—	234,521
Post close adjustment of transaction costs related to Business Combination and PIPE Financing	—	—	—	—	4,905	—	—	4,905
Issuance of common stock upon exercise of stock options	—	—	2,089,351	1	329	—	—	330
Restricted stock units vested	—	—	185,944	—	—	—	—	—
Forfeitures of Earn-Out restricted shares	—	—	(387,005)	—	—	—	—	—
Forfeitures of restricted stock awards	—	—	(44,495)	—	—	—	—	—
Stock-based compensation	—	—	—	—	22,775	—	—	22,775
Net loss	—	—	—	—	—	(50,993)	—	(50,993)
Foreign currency translation adjustments	—	—	—	—	—	—	(1,373)	(1,373)
Unrealized loss on short-term investments	—	—	—	—	—	—	(245)	(245)
Balance — December 31, 2022	—	\$ —	349,714,840	\$ 35	\$ 538,041	\$ (145,286)	\$ (1,251)	\$ 391,539

(1) Included in the share number is 39,881,455 shares of Class B common stock as of December 31, 2020 and 2021 issued upon recapitalization to the SES Founder Group (defined in Note 2 - Summary of Significant Accounting Policies) based on the number of shares held by such executive prior to the recapitalization multiplied by 5.9328 (the “Exchange Ratio”).

(2) Includes issuance of 33,793,878 restricted shares of Class A common stock and 3,999,796 restricted shares of Class B common stock, subject to vesting.

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

**SES AI Corporation**  
**Consolidated Statements of Cash Flows**

(in thousands)	Years Ended December 31,		
	2022	2021	2020
<b>Cash Flows From Operating Activities</b>			
Net loss	\$ (50,993)	\$ (31,255)	\$ (13,889)
Adjustments to reconcile net loss to net cash used in operating activities:			
Gain on change of fair value of Sponsor Earn-Out liability	(25,432)	—	—
Stock-based compensation	22,775	4,571	154
Depreciation and amortization	2,596	1,662	1,706
Accretion income from available-for-sale short-term investments	(2,350)	—	—
Other	490	95	—
Gain on forgiveness of PPP note	—	(840)	—
Changes in operating assets and liabilities:			
Receivable from related party	5,525	(7,910)	—
Inventories	(383)	—	—
Prepaid expenses and other assets	(1,586)	(1,666)	(333)
Accounts payable	(3,975)	1,287	608
Accrued expenses and other liabilities	6,833	4,065	745
Net cash used in operating activities	(46,500)	(29,991)	(11,009)
<b>Cash Flows From Investing Activities</b>			
Purchases of property and equipment	(14,654)	(8,951)	(982)
Purchase of short-term investments	(411,355)	(150,810)	(17,487)
Proceeds from the maturities of short-term investments	130,000	163,101	5,196
Purchases of intangible assets	—	(26)	—
Net cash (used in) provide by investing activities	(296,009)	3,314	(13,273)
<b>Cash Flows From Financing Activities</b>			
Proceeds from Business Combination and PIPE Financing, net of issuance costs	282,940	—	—
Proceeds from government grant	6,657	—	—
Proceeds from stock option exercises	330	197	—
Proceeds from issuance of Series D and D plus redeemable convertible preferred stock, net of issuance costs	—	187,897	—
Payment of deferred offering costs	—	(3,334)	—
Proceeds from PPP note	—	—	840
Net cash provided by financing activities	289,927	184,760	840
Effect of exchange rates on cash	(526)	233	188
Net (decrease) increase in cash, cash equivalents and restricted cash	(53,108)	158,316	(23,254)
<b>Cash, cash equivalents and restricted cash at beginning of period (Note 5)</b>	<b>161,044</b>	<b>2,728</b>	<b>25,982</b>
<b>Cash, cash equivalents and restricted cash at end of period (Note 5)</b>	<b>\$ 107,936</b>	<b>\$ 161,044</b>	<b>\$ 2,728</b>
<b>Supplemental Non-Cash Information:</b>			
Conversion of Redeemable Convertible Preferred Stock to shares of Class A common stock	\$ (269,941)	\$ —	\$ —
Release of accrued transaction costs related to Business Combination and PIPE Financing	\$ 6,061	\$ —	\$ —
Accounts payable and accrued expenses related to purchases of property and equipment	\$ 4,349	\$ 378	\$ 145
Lease liabilities arising from obtaining right-of-use assets	\$ 1,547	\$ —	\$ —
Liabilities of Ivanhoe acquired in the Business Combination	\$ (387)	\$ —	\$ —
Deferred offering costs included in accounts payable and accrued expenses and other liabilities	\$ —	\$ 2,377	\$ —

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



**SES AI Corporation**  
**Notes to Consolidated Financial Statements**

**Note 1. Nature of Business**

SES AI Corporation, and consolidated subsidiaries (together the “Company”) consists of SES AI Corporation (“SES”) and its wholly-owned subsidiary SES Holdings Pte. Ltd. (“SES Holdings” or “Old SES”), along with its wholly owned subsidiaries SolidEnergy Systems, LLC (“SES LLC”), SolidEnergy (Shanghai) Co., Ltd. (“SES Shanghai”), SolidEnergy Systems Securities Corporation (“SES Securities”), Viking Power Systems Pte. Ltd. (“SES Viking”), SES AI Korea Co., Ltd. (“SES Korea”) and SES Energy Pte. Ltd. (“SES Energy”).

SES Holdings is a Singapore private company limited by shares formed in November 2018. SES LLC is a Delaware limited liability company formed in November 2018 as a result of the conversion from a corporation to a limited liability company by SolidEnergy Systems Corp, a Delaware corporation formed in April 2012. SES Shanghai was registered in Shanghai, China in August 2018. SES Securities was incorporated in December 2017 as a Massachusetts Security Corporation. SES Viking is a Singapore private company limited by shares and was formed in May 2019. SES Korea, formerly known as Massachusetts Solid Energy Co., Ltd., was registered in South Korea in November 2021. SES Energy is a Singapore private company and was incorporated in September 2022.

SES is engaged in the development of high-performance, Lithium-Metal (“Li-Metal”) rechargeable battery technologies for electric vehicles (“EVs”), electric vehicle take-off and landing (“eVTOL”) and other applications. We were founded in 2012, and our mission is to facilitate the widespread adoption of sustainable electric transportation, both on land and in air, by creating best-in-class, high energy density Li-Metal batteries centered around long-range performance and safety. Our third-party tested, differentiated battery technology has been designed to combine the high energy density of Li-Metal with the cost-effective, large-scale manufacturability of conventional Lithium-ion (“Li-ion”) batteries and will help to promote the transition from the global dependence on fossil fuel-based automotive vehicles to clean and efficient EVs. The Company’s headquarters are located in Woburn, Massachusetts with research and development facilities located there, in Shanghai, China, and in Chungju, South Korea. Principal operations have not yet commenced as of December 31, 2022, and the Company has not derived revenue from its principal business activities.

Prior to the closing of the Business Combination (the “Closing”), Ivanhoe Capital Acquisition Corp. (“Ivanhoe”), a Cayman Islands exempted company, migrated out of the Cayman Islands and domesticated as a Delaware corporation (the “Domestication”) and changed its name to “SES AI Corporation.” On February 3, 2022 (the “Closing Date”), SES AI Corporation, formerly known as Ivanhoe, and Wormhole Amalgamation Sub Pte. Ltd., a Singapore private company limited by shares and a direct, wholly-owned subsidiary of Ivanhoe (“Amalgamation Sub”), consummated the previously announced Business Combination (the “Business Combination”) pursuant to which, among other things, Amalgamation Sub merged with and into Old SES, with Old SES surviving the Business Combination as a wholly-owned subsidiary of SES. See “Note 3 – Business Combination” for additional information.

**Note 2. Summary of Significant Accounting Policies**

***Basis of Presentation***

The accompanying consolidated financial statements include the accounts of the Company and have been prepared on a going concern basis and in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”) as determined by the Financial Accounting Standards Board (“FASB”) Accounting Standards Codification (“ASC”) and pursuant to the regulations of the U.S. Securities and Exchange Commission (“SEC”). The Company’s fiscal year ends on December 31.

As a result of the Business Combination completed on February 3, 2022, prior period share and per share amounts presented in the accompanying consolidated financial statements and these related notes have been retroactively converted.

***Principles of Consolidation***

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All intercompany balances and transactions have been eliminated upon consolidation.

***Use of Estimates***

The preparation of the consolidated financial statements in conformity with U.S. GAAP requires management to make use of estimates and assumptions that affect the reported amount of assets and liabilities, the disclosure of commitments and contingencies, and the reported

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amounts of revenues, if any, and expenses. The Company bases its estimates on available historical experience and on various other factors that the Company believes are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not apparent from other sources. Changes in estimates are reflected in reported results for the period in which they become known. Actual results may differ from those estimates.

Significant estimates and assumptions include those related to the valuation of (i) certain equity awards, including common stock awards prior to the Business Combination, the Sponsor Earn-Out Shares, the Earn-Out Restricted Shares, and performance stock units, (ii) deferred tax assets and uncertain income tax positions, and (iii) and the measurement of operating lease liabilities. On an ongoing basis, the Company evaluates these judgments and estimates for reasonableness.

### ***Foreign Currency Translation***

For the foreign subsidiaries of the Company, assets and liabilities are translated into U.S. dollars using exchange rates as of the balance sheet date, and income and expenses are translated using the average exchange rates in effect for the related month. The net effect of these translation adjustments is reported in accumulated other comprehensive (loss) income within total stockholders' equity on the consolidated balance sheets. Net realized and unrealized gains (losses) from foreign currency transactions are included in other expense, net in the consolidated statement of operations and comprehensive loss and were \$0.1 million, \$(0.2) million, and \$(0.1) million for the years ended years ended December 31, 2022, 2021 and 2020, respectively.

### ***Reclassification of Prior Period Amounts***

Certain reclassifications have been made to prior period amounts to conform to the current period financial statement presentation. Restricted cash and deferred offering costs have been combined with other assets and accrued compensation has been combined with accrued expenses and other current liabilities on the prior year consolidated balance sheet. The impact of these changes was an increase of \$6.2 million to other assets and an increase of \$2.1 million to accrued expenses and other current liabilities as of December 31, 2021. In addition, the Company reclassified the change in other assets to the change in prepaid expenses and other assets and the change in accrued compensation to the change in accrued expenses and other liabilities in the prior years statements of cash flows in the amount of \$0.5 million and \$0.9 million for the year ended December 31, 2021, respectively, and \$0.1 million and \$0.6 million for the year ended December 31, 2020, respectively. There was no change to previously reported total assets, total liabilities, or net cash used in operating activities.

### ***Cash and Cash Equivalents***

Cash and cash equivalents consist of cash on hand and highly liquid investments that have original maturity periods of 90 days or less at the time of purchase that are readily convertible to known amounts of cash.

### ***Restricted Cash***

Restricted cash includes cash held in checking and money market funds as collateral to secure certain insurance policies and a letter of credit for corporate lease activity. The letter of credit is required to be maintained throughout the term of the lease. If the date of availability or disbursement is less than one year, restricted cash is reported within prepaid expenses and other current assets on the consolidated balance sheets. If the date of availability or disbursement is longer than one year and the balances are maintained under an agreement that legally restricts the use of such funds, restricted cash is reported within other assets on the consolidated balance sheets. As of December 31, 2022, no amount has been drawn under the letter of credit.

### ***Investments in Short-term Investments***

Investments in short-term investments consist of U.S. treasury securities. Investments with a stated maturity date of less than one year are classified as short-term investments, while investments with a stated maturity date of more than one year, and that are not expected to be used in current operations, are classified as long-term investments on the consolidated balance sheet, respectively. These available-for-sale marketable securities are recorded at fair value, with any unrealized gains and losses included as a component of accumulated other comprehensive (loss) income in total stockholders' equity on the consolidated balance sheets until realized or until a determination is made that an other-than-temporary decline in market value has occurred. The amortized cost of U.S. treasury securities is adjusted for amortization of premiums and accretion of discounts to maturity. Such amortization and accretion are reported within interest income, net in the consolidated statement of operations and comprehensive loss.

**Inventories**

Inventories consist of raw materials and are stated at the lower of average cost or net realizable value.

**Concentrations of Credit Risk**

Financial instruments that subject the Company to concentrations of credit risk consist of cash, cash equivalents, restricted cash and short-term investments. The Company seeks to mitigate its credit risk with respect to such concentrations by holding its deposits with large, reputable financial institutions and investing in high credit rated shorter-term instruments.

**Fair Value Measurements**

Fair value is defined as an exchange price 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. When determining the fair value measurements for assets and liabilities required or permitted to be either recorded or disclosed at fair value, the Company considers the principal or most advantageous market in which it would transact, and it also considers assumptions that market participants would use when pricing the asset or liability.

The Company maximizes the use of observable inputs and minimizes the use of unobservable inputs when measuring fair value. GAAP establishes a fair value hierarchy based on the level of independent, objective evidence surrounding the inputs used to measure fair value. A financial instrument's categorization within the fair value hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The fair value hierarchy is as follows:

- Level 1 Observable inputs such as quoted prices in active markets for identical assets or liabilities that the Company has the ability to access at the measurement date.
- Level 2 Inputs other than the quoted prices in active markets that are observable either directly or indirectly.
- Level 3 Unobservable inputs in which there are little or no market data and which require the Company to develop its own assumptions.

Certain of the Company's financial instruments, including cash and cash equivalents, accounts payable, accrued expenses and other current liabilities are carried at cost, which approximates their fair value because of their short-term nature. The following table presents information about the Company's financial assets and liabilities that are measured at fair value on a recurring basis:

(in thousands)	Level 1	Level 2	Level 3	Total
<b>December 31, 2022</b>				
<b>Assets</b>				
Cash equivalents in money market funds	\$ 46,308	\$ —	\$ —	\$ 46,308
Restricted cash in money market funds	614	—	—	614
U.S. treasury securities <sup>(1)</sup>	283,460	—	—	283,460
<b>Total assets at fair value</b>	<b>\$ 330,382</b>	<b>\$ —</b>	<b>\$ —</b>	<b>\$ 330,382</b>
<b>Liabilities</b>				
Sponsor Earn-Out liability <sup>(2)</sup>	—	—	10,961	10,961
<b>Total liabilities at fair value</b>	<b>\$ —</b>	<b>\$ —</b>	<b>\$ 10,961</b>	<b>\$ 10,961</b>
<b>December 31, 2021</b>				
<b>Assets</b>				
Cash equivalents in money market funds	\$ 3,014	\$ —	\$ —	\$ 3,014
Restricted cash in certificates of deposit	—	547	—	547
<b>Total assets at fair value</b>	<b>\$ 3,014</b>	<b>\$ 547</b>	<b>\$ —</b>	<b>\$ 3,561</b>

<sup>(1)</sup> Fair value was determined using market prices obtained from third-party sources. See "Note 6 – Investments" for more details on investments.

<sup>(2)</sup> See "Note 11 – Sponsor Earn-Out Liability" for details about inputs used in the fair value measurements of the Sponsor Earn-Out liability.

There were no transfers in or out of Level 3 measurements during the year ended December 31, 2022.

### ***Property and Equipment***

Property and equipment are stated at cost less accumulated depreciation. Depreciation for property and equipment, other than construction in progress, is based upon the following useful lives using the straight-line method:

Laboratory machinery and equipment	5 – 10 years
Office and computer equipment	3 – 5 years
Furniture and fixtures	5 years
Leasehold improvements	Shorter of useful life of asset or lease term

The Company periodically assesses the useful lives of the assets to determine whether events or circumstances may indicate that a revision to the useful life is warranted. Maintenance and repairs that do not extend the life or improve the asset are expensed as incurred. Construction in progress is stated at cost, which includes the cost of construction and other direct costs attributable to placing the asset in service. Additionally, reimbursements received by the Company under its A-Sample joint development agreement (“JDA”) related to property and equipment constructed and owned by the Company are recognized as a reduction of the cost of the related asset in the consolidated balance sheets as discussed in “Note 4 – Partnerships” below.

### ***Intangible Assets***

Intangible assets purchased are recorded at cost and stated at cost less accumulated amortization. Intangibles assets with finite useful lives are amortized based on the pattern in which the economic benefits of the assets are estimated to be consumed over the following estimated useful lives:

Intellectual property	15 years
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Amortization expense is included in general and administrative expenses in the consolidated statement of operations and comprehensive loss.

### ***Impairment of Long-Lived Assets***

The Company evaluates long-lived assets for impairment annually or whenever events indicate that a potential impairment may have occurred. If such events arise, the Company will compare the carrying amount of the asset group comprising the long-lived assets to the estimated future undiscounted cash flows expected to be generated by the asset group. If the estimated aggregate undiscounted cash flows are less than the carrying amount of the asset group, an impairment charge is recorded as the amount by which the carrying amount of the asset group exceeds the fair value of the assets, as based on the expected discounted future cash flows attributable to those assets. Long-lived assets to be disposed of are reported at the lower of carrying amount or fair value less costs to sell. There were no impairments of long-lived assets during the years ended December 31, 2022, 2021 and 2020.

### ***Deferred Offering Costs***

Deferred offering costs consist of legal, accounting, and other costs incurred through the balance sheet date that are directly related to the Company becoming a publicly traded company are capitalized. Deferred offering costs are charged to stockholders’ equity upon the completion of the proposed transaction. On the Closing Date, \$5.7 million in deferred offering costs, included in other assets as of December 31, 2021, were charged to stockholders’ equity upon consummation of the Business Combination.

### ***Leases***

The Company determines if an arrangement includes a lease at inception. Lease arrangements generally have lease and non-lease components, which the Company has elected to account for as a single lease component. At the lease commencement date, the Company recognizes an operating lease liability and an operating lease asset, which represents the right to use the underlying asset for the lease term (the “ROU asset”). The operating lease liability is equal to the present value of (1) fixed lease payments for the noncancelable lease term, (2) fixed lease payments for optional renewal periods where it is reasonably certain the renewal option will be exercised, and (3) variable lease payments that depend on an underlying index or rate in effect at lease commencement. Variable lease payments that do not depend on an underlying index or rate in effect at lease commencement, such as common area maintenance, insurance, and property tax, are recognized in operating expenses when incurred. The operating ROU asset is initially measured at cost, which primarily comprises the initial amount of the lease liability and lease payments made prior to lease commencement, less any lease incentives received.

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As the Company's leases do not provide an implicit rate, the Company uses an incremental borrowing rate based on the information available at lease commencement in determining the present value of lease payments. The Company's incremental borrowing rate estimates a secured rate that reflects the term of the lease, the nature of the underlying asset and the economic environment. The Company recognizes rent expense on a straight-line basis over the lease term, with any lease incentives amortized as a reduction of rent expense over the lease term. All ROU assets are periodically reviewed for impairment in accordance with standards that apply to long-lived assets. The Company excludes leases with an expected term of one year or less from recognition on the consolidated balance sheets. See "Note 12 – Leases" for additional information about the Company's leases.

### **Government Grants**

The Company occasionally receives government grants that provide financial assistance for certain eligible expenditures. Government grants are not recognized until there is reasonable assurance that the Company will comply with the conditions attached to it, and that the grant will be received. The Company records such grants either as a reduction of the related expense or as other income, depending on the nature of the grant, in the consolidated statement of operations and comprehensive loss or as a reduction of the cost of the related asset in the consolidated balance sheet. If a grant amount is received but not earned, then such amount is deferred and shown as a liability in the consolidated balance sheet. See "Note 10 – Government Grant" for additional information about government grants awarded to the Company.

### **Sponsor Earn-Out Liability**

On February 2, 2022, in connection with the Domestication, 6,900,000 of Ivanhoe's Class B ordinary shares held by Ivanhoe Capital Sponsor LLC (the "Sponsor") converted into an equal number of shares of duly authorized, validly issued, fully paid and nonassessable Class B common stock, par value \$0.0001 per share (the "Class B common stock"), of the Company. At Closing, these 6,900,000 shares of Class B common stock converted into an equal number of shares of duly authorized, validly issued, fully paid and nonassessable Class A common stock, par value \$0.0001 per share (the "Class A common stock," and together with the Class B common stock, "common stock"), of the Company (the "Sponsor Earn-Out Shares"). These Sponsor Earn-Out Shares are subject to certain transfer restrictions and forfeiture terms following the Closing, which will be released as follows:

- 20% are subject to transfer restrictions until the date that is 180 days after the Closing ("Tranche 1");
- 20% are subject to transfer restrictions until SES's closing stock price equals or exceeds \$12.00 for 20 out of 30 consecutive trading days following the date that is 150 days after the Closing ("Tranche 2");
- 20% are subject to transfer restrictions until SES's closing stock price equals or exceeds \$14.00 for 20 out of 30 consecutive trading days following the date that is 150 days after the Closing ("Tranche 3");
- 20% are subject to transfer restrictions until SES's closing stock price equals or exceeds \$16.00 for 20 out of 30 consecutive trading days following the date that is 150 days after the Closing ("Tranche 4"); and
- 20% are subject to transfer restrictions until SES's closing stock price equals or exceeds \$18.00 for 20 out of 30 consecutive trading days following the date that is 150 days after the Closing ("Tranche 5").

If there is a change in control of SES at a per share value of greater than \$18.00, then 100% of the Sponsor Earn-Out Shares will be released from these transfer restrictions; however if the per share value is less than \$18.00 upon a change in control, then the Sponsor Earn-Out Shares will be released pro rata based on the per share value of the change in control and the stock price thresholds for release specified above. Any Sponsor Earn-Out Shares not released will be forfeited and cancelled.

The Sponsor Earn-Out Shares in Tranche 1 are accounted for as equity instruments because they are legally owned by the Sponsor, cannot be forfeited and were subject only to transfer restrictions that lapsed 180 days after the Closing Date, which occurred on August 2, 2022, and as such meet the equity classification criteria in accordance with ASC 505, *Equity*. The Sponsor Earn-Out Shares under Tranche 2 through Tranche 5 are accounted for as a derivative liability measured at fair value, with changes in fair value reported within other expense, net on the consolidated statement of operations and comprehensive loss at each reporting period, because the earn-out triggering events that determine the number of Sponsor Earn-Out Shares to be earned back by the Sponsor include events that are not solely indexed to the shares of Class A common stock. As of December 31, 2022, the earn-out triggering events were not achieved for any of Tranche 2 through Tranche 5. See "Note 11 – Sponsor Earn-Out Liability" for further information on fair value.

### ***Earn-Out Shares***

In connection with the Business Combination, holders of Old SES common stock, redeemable convertible preferred stock, options and restricted shares received 29,999,947 earn-out shares of common stock, including (i) 23,691,182 shares of Class A common stock (the “Earn-Out Shares”) issued for the benefit of the former holders of Old SES common and redeemable convertible preferred stock; (ii) 2,308,969 shares of restricted Class A common stock (the “Earn-Out Restricted Shares”) issued to Old SES option holders and pre-Closing recipients of Old SES restricted shares; and (iii) 3,999,796 shares of Class B common stock (“Founder Earn-Out Shares”) issued to the CEO and certain entities affiliated with the CEO (the “SES Founder Group”).

The Earn-Out Shares and the Founder Earn-Out Shares (collectively, the “Escrowed Earn-Out Shares”) were placed into escrow at the Closing and shall vest on the date that the closing price of shares of Class A common stock is equal to or greater than \$18.00 (“Triggering Event”) during the period beginning on the date that is one year following the Closing and ending on the date that is five years following the Closing (the “Earn-Out Period”). If a Triggering Event has not occurred by the expiration of the Earn-Out Period, then the Escrowed Earn-Out Shares shall be cancelled and holders of such shares shall have no right to receive such Escrowed Earn-Out Shares. The Earn-Out Restricted Shares are subject to vesting based on the same terms as the Escrowed Earn-Out Shares and are also subject to forfeiture if such recipient’s service with the Company terminates prior to vesting. Any such forfeited Earn-Out Restricted Shares shall be available for grant pursuant to the Company’s incentive plan. If, during the earn-out period of five years, there is a change in control transaction at a per share price of greater than or equal to \$18.00 per share, then all 29,999,947 earn-out shares will vest immediately prior to the consummation of such change in control.

The Escrowed Earn-Out Shares to be released upon achievement of the vesting condition are classified as equity instruments and recorded at fair value in stockholders’ equity as vesting is indexed to the common stock of the Company. The Earn-Out Restricted Shares are accounted for as a single tranche equity award. See “Note 17 – Stock-Based Compensation” for further information on fair value of the Earn-Out Restricted Shares.

### ***Common Stock Warrants***

Prior to the Business Combination, Ivanhoe had issued 9,200,000 public warrants (“Public Warrants”) and 5,013,333 private placement warrants (“Private Warrants”) and collectively with the Public Warrants, the “Warrants”) which were assumed by the Company at Closing. On February 1, 2022, prior to Closing, the Ivanhoe warrant holders approved certain amendments to the terms of the Warrants such that the Warrants met the derivative scope exception for contracts in the Company’s own stock and were recorded in stockholders’ equity. Prior to the amendment, the Warrants were accounted for as derivative liabilities measured at fair value, with changes in fair value recorded in the consolidated statement of operations and comprehensive loss at each reporting period. Each whole Warrant entitles the registered holder to purchase one share of Class A common stock at a price of \$11.50 per share. Pursuant to the Warrant agreement, a Warrant holder may exercise its Warrants only for a whole number of shares of Class A common stock. This means only a whole Warrant may be exercised at a given time by a warrant holder.

The amendments, among other things, include the following:

- amendments to the rights specific to the Private Warrants such that (a) the rights specific to Private Warrants are retained by the holder thereof regardless of such holder’s identity, (b) the Private Warrants are no longer subject to redemption by the Company when such warrants are trading at a price equal to or in excess of \$10.00 per share but less than \$18.00 per share and (c) the Private Warrants are no longer generally exercisable on a “cashless basis”;
- eliminates the Company’s ability to redeem any Public Warrants unless the Class A common stock is trading at a price equal to or in excess of \$18.00 per share; and
- removes certain language related to the treatment of Warrants in the event of a tender offer for the shares underlying such Warrants.

Subsequent to the Closing, the Company registered 14,213,280 shares of Class A common stock issuable upon the exercise of the Warrants.

### ***Redeemable Convertible Preferred Stock***

The Company records all shares of redeemable convertible preferred stock at their respective fair values less issuance costs on the dates of issuance. The redeemable convertible preferred stock is recorded outside of stockholders’ equity because, in the event of certain liquidation events considered not solely within the Company’s control, such as a change in control event and sale of all or substantially all of the

Company's assets, the redeemable convertible preferred stock will become redeemable at the option of the holders. If it becomes probable that the shares will become redeemable, the Company will re-measure the carrying value of the shares to the redemption value through the redemption date. Upon closing of the Business Combination, the redeemable convertible preferred shares were cancelled and converted into shares of Class A common stock, as discussed in "Note 3 – Business Combination."

### ***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 ("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 and reportable segment, as the CODM reviews financial information presented on a consolidated basis for purposes of making operating decisions, allocating resources, and evaluating financial performance. See "Note 20 – Segment and Geographic Information" for additional information.

### ***Research and Development Costs***

Research and development costs with no alternative future use are expensed as incurred. Research and development costs are comprised of expenses incurred in performing research and development activities, including compensation and benefits for employees, materials and supplies, payments to consultants, patent related legal costs, facility costs, depreciation, and travel expenses. Additionally, payments received by the Company under its A-Sample JDAs are recognized as a reduction to research and development expense in the consolidated statement of operations and comprehensive loss.

### ***Stock-Based Compensation***

The Company measures compensation expense for all stock-based awards made to employees, directors, and non-employees, based on estimated fair values as of the grant date and recognizes the compensation expense using the straight-line method over the requisite service period, which is generally the vesting period. The Company accounts for forfeitures when they occur. Changes in the assumptions can materially affect the fair value and ultimately how much stock-based compensation expense is recognized. The inputs used in valuation models to estimate the fair value of certain stock-based awards are subjective and generally require significant analysis and judgment to develop. See "Note 17 – Stock-Based Compensation" for additional information about stock-based awards.

### ***Income Taxes***

Income tax expense has been provided using the asset and liability method. Deferred tax assets and liabilities are determined based on the estimated future tax consequences attributable to differences between the financial statement carrying amounts and tax bases of existing assets and liabilities. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. Deferred tax expense or benefit is the result of changes in the deferred tax asset and liability. The Company provides a valuation allowance against net deferred tax assets if, based upon the available evidence, it is more likely than not that the deferred tax assets will not be realized. In evaluating the Company's ability to recover deferred tax assets, the Company considers all available positive and negative evidence, including historical operating results, ongoing tax planning, and forecasts of future taxable income on a jurisdiction-by-jurisdiction basis.

The Company recognizes a tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the Company's consolidated financial statements from such positions are measured based on the largest benefit that has a greater than 50% likelihood of being realized. The Company recognizes interest and penalties associated with tax matters as part of the income tax provision and includes accrued interest and penalties with the related income tax liability within accrued expenses and other current liabilities on the consolidated balance sheets.

### ***Other Comprehensive Income (Loss)***

Other Comprehensive income (loss) includes changes in the balances of items that are reported directly as a separate component of stockholders' equity on the consolidated balance sheets. The components of comprehensive loss are net loss, foreign currency translation adjustments and unrealized gains and losses from available-for-sale marketable securities. The Company does not provide for income taxes on foreign currency translation adjustments since it does not provide for taxes on the unremitted earnings of its foreign subsidiaries. The

changes in accumulated other comprehensive income (loss) are included in the Company's consolidated statement of operations and comprehensive loss.

### ***Net Income (Loss) Per Share***

Upon recapitalization, net loss per share calculations for all periods prior to the Business Combination have been retrospectively restated to the equivalent number of shares reflecting the Exchange Ratio established in the Business Combination, including the issuance of Class A common stock and Class B common stock to Old SES common stockholders. Under the two-class method, the net loss attributable to common stockholders was not allocated to the redeemable convertible preferred stock as the holders of its redeemable convertible preferred stock do not have a contractual obligation to share in the Company's losses. As the liquidation and dividend rights of Class A common stock and Class B common stock are identical, the net loss attributable to common stockholders is allocated on a proportionate basis, and the resulting net loss per share is identical for Class A common stock and Class B common stock under the two-class method.

Basic net income or loss per share attributable to Class A common stock and Class B common stock stockholders is computed by dividing the net income or loss attributable to common stockholders by the weighted-average number of shares of common stock outstanding during the period. The diluted net income or loss per share attributable to common stockholders is calculated by giving effect to all potentially dilutive common stock equivalents outstanding during the period.

### ***Recently Adopted Accounting Pronouncements***

In February 2016, the Financial Accounting Standard Board (the "FASB") issued ASU No. 2016-02, *Leases (Topic 842)*, and has since issued several updates, amendments, and technical improvements to ASU 2016-02. Topic 842 generally requires that lessees recognize operating and financing liabilities for the obligation to make lease payments and a right-to-use asset for the right to use the underlying asset for the lease term.

Topic 842 also requires additional disclosures about leasing arrangements related to discount rates, lease terms, and the amount, timing, and uncertainty of cash flows arising from leases. Topic 842 is effective for financial statements issued for fiscal years beginning after December 15, 2021. The Company adopted this guidance on January 1, 2022 utilizing the modified retrospective transition method through a cumulative-effect adjustment at the beginning of 2022. The Company has elected the package of practical expedients, that allows the Company not to reassess prior conclusions of (i) whether any expired or existing contracts as of the adoption date are or contain a lease, (ii) lease classification for any expired or existing leases as of the adoption date and (iii) initial direct costs for any existing leases as of the adoption date. The Company has also elected to account for lease and non-lease components as a single lease component and not to recognize ROU assets and liabilities for short-term leases with terms of twelve months or less.

The adoption of Topic 842 on January 1, 2022 resulted in the recognition of ROU assets of approximately \$11.9 million and lease liabilities for operating leases of approximately \$12.6 million on the Company's consolidated balance sheets. Approximately \$0.7 million of deferred rent balances and lease incentives were reclassified against the costs of the ROU assets. There was no material impact to the consolidated statement of operations and comprehensive loss and statement of cash flows.

In November 2021, the FASB issued ASU 2021-10, *Government Assistance (Topic 832), Disclosures by Business Entities About Government Assistance*, which requires entities to provide disclosures on material government transactions for annual reporting periods. The disclosures include information around the nature of the assistance, the related accounting policies used to account for government assistance, the effect of government assistance on the entity's financial statements, and any significant terms and conditions of the agreements, including commitments and contingencies. The Company's adoption of this guidance on January 1, 2022 impacted the disclosures related to government grant that the Company received during the year ended December 31, 2022, as further described in "Note 10 – Government Grant."

The Company has reviewed all other accounting pronouncements issued during the year ended December 31, 2022 and concluded they were either not applicable or not expected to have a material impact on the Company's consolidated financial statements.

### **Note 3. Business Combination**

On February 3, 2022, SES consummated the previously discussed business combination. The Business Combination was accounted for as a reverse recapitalization. Under this method of accounting, SES, formerly known as Ivanhoe, was treated as the "acquired" company for financial reporting purposes. Accordingly, the financial statements of the Company represent a continuation of the financial statements of



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Old SES with the Business Combination treated as the equivalent of Old SES issuing stock for the net assets of Ivanhoe, accompanied by a recapitalization. The net assets of Ivanhoe are stated at historical cost, with no goodwill or other intangible assets recorded. Operations prior to the Business Combination are those of Old SES. As a result, the consolidated financial statements included in this report reflect (i) the historical operating results of Old SES prior to the Business Combination; (ii) the combined results of SES and Old SES following the Closing; (iii) the assets and liabilities of Old SES at their historical cost; and (iv) SES's equity structure for all periods presented as discussed below.

At Closing, the following occurred:

- Each share of Old SES common stock, excluding shares held by the SES Founder Group, and each redeemable convertible preferred share that was outstanding immediately prior to the Closing was cancelled and converted into a number of fully paid and nonassessable shares of Class A common stock equal to the Exchange Ratio, rounded down to the nearest whole number;
- Each share of Old SES common stock held by the SES Founder Group that was outstanding immediately prior to the Closing was cancelled and converted into a number of fully paid and nonassessable shares of Class B common stock equal to the Exchange Ratio, rounded down to the nearest whole number;
- Each Old SES restricted share that was granted and subject to restrictions (including vesting) immediately prior to the Closing was assumed by the Company and converted into a number of shares of restricted Class A common stock equal to the Exchange Ratio, rounded down to the nearest whole number, which remain subject to the same terms and conditions as were applicable prior to the Closing; and
- Each Old SES option that was outstanding immediately prior to the Closing, whether vested or unvested, was assumed by the Company and converted into an option to acquire Class A common stock with the same terms as were applicable prior to the Closing, except for the number of shares exercisable and the exercise price, each of which was adjusted using the Exchange Ratio, rounded down to the nearest whole number;
- Holders of Old SES common stock, redeemable convertible preferred stock, options and restricted shares received 29,999,947 earn-out shares of the Company's common stock.

Additionally, in connection with the Domestication on February 2, 2022, 6,900,000 shares of Ivanhoe's Class B ordinary shares held by the Sponsor converted, on a one-for-one basis, into shares of Class B common stock and at Closing converted into an equal number of Class A common stock.

In connection with the Business Combination, the Company received \$326.1 million in gross proceeds, including a contribution of \$51.6 million of cash held in Ivanhoe's trust account net of redemption of Ivanhoe Class A common stock held by Ivanhoe's public stockholders and a \$274.5 million private investment in public equity (the "PIPE Financing") at \$10.00 per share of Class A common stock, prior to the payment of transaction costs and other amounts. The Company incurred \$46.3 million of transaction costs, consisting of underwriting, legal, and other professional fees, of which \$41.6 million was recorded to additional paid-in capital as a reduction of proceeds and the remaining \$4.7 million was expensed immediately. Of the total amount of transaction costs incurred, \$13.0 million was unpaid, which was included in accrued expenses as of the Closing Date. Subsequent to the Closing, \$4.9 million of net transaction costs recorded to additional paid-in capital was released and adjusted.

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The following table reconciles the elements of the Business Combination to the consolidated statement of cash flows and the consolidated statements of redeemable convertible preferred stock and stockholders' equity as of the date of closing:

	(in thousands)
Cash - Ivanhoe's trust and cash, net of redemptions	\$ 51,590
Cash - PIPE Financing	274,500
Less: Non-Transaction costs relating to Ivanhoe in conjunction with Closing	(13,149)
Less: Transaction costs and advisory fees paid	(26,972)
<b>Net proceeds from Business Combination and PIPE Financing at Closing</b>	<b>285,969</b>
Less: Transaction costs paid post Closing	(3,029)
<b>Financing cash inflow from Business Combination and PIPE Financing</b>	<b>282,940</b>
Add: Transaction costs expensed relating to liabilities assumed upon the Business Combination	4,649
Less: Transactions costs paid on or before December 31, 2021	(3,334)
Less: Sponsor Earn-Out liability	(36,393)
Less: Liabilities assumed from Ivanhoe	(387)
Less: Accrued transaction costs	(12,954)
<b>Net contributions from Business Combination and PIPE Financing</b>	<b>\$ 234,521</b>

The number of shares of common stock issued immediately following the consummation of the Business Combination:

	Number of Shares
Ivanhoe Class A common stock, outstanding prior to Business Combination	27,600,000
Less: Redemption of Ivanhoe Class A common stock	(22,455,850)
Ivanhoe Class A common stock, net of redemptions	5,144,150
Ivanhoe Class B ordinary shares, converted to Class A common stock upon Closing	6,900,000
<b>Total Ivanhoe Class A Common Stock</b>	<b>12,044,150</b>
PIPE Investors — Class A common stock	27,450,000
Old SES common and redeemable convertible preferred shares (other than SES Founder Group) converted to Class A common stock	236,221,766
SES Founder Group shares of common stock converted to shares of Class B common stock	39,881,455
Old SES Restricted Shares converted to restricted shares of Class A common stock	2,273,727
Founder Earn-Out Shares (Class B common stock)	3,999,796
Earn-Out Shares (Class A common stock)	23,691,182
Earn-Out Restricted Shares (Class A common stock)	2,308,969
<b>Total</b>	<b>347,871,045</b>
Less: Shares of Old SES outstanding prior to Business Combination and PIPE Financing	(276,103,221)
<b>Business Combination and PIPE Financing Shares</b>	<b>71,767,824</b>

**Note 4. Partnerships**

In December 2020, the Company established a partnership with Hyundai Motor Company (“Hyundai”) when it entered into a joint development agreement (“JDA”) to jointly research and develop (“R&D”) Li-Metal battery technology. Further, in May 2021, the Company executed another JDA with Hyundai to jointly develop an A-Sample Li-Metal battery effective August 31, 2021. The JDAs have an initial term of three years.

In February 2021, the Company established a partnership with GM Global Technology Operations LLC (“GM Technology”), an affiliate of GM Ventures LLC (“GM Ventures”), and General Motors Holdings LLC (“GM Holdings”) (collectively, “General Motors” or “GM”) when it entered into a JDA to jointly R&D an A-Sample Li-Metal battery cell and build-out a prototype manufacturing line for GM Technology. The JDA has an initial term of three years.

In December 2021, the Company established a partnership with Honda Motor Company, Ltd. (“Honda”) when it entered into a JDA to jointly R&D an A-Sample Li-Metal battery cell. The JDA has an initial term of two years.

Under the terms of the respective JDAs, the Company will fund research and development activities and capital expenditures related the buildout of pilot manufacturing lines and the JDA partner will be required to refund such expenses to the Company, regardless of the results

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of the R&D activities. The following table summarizes the expenses incurred by the Company that were recorded as a credit to research and development expense in the consolidated statement of operations and comprehensive loss:

(in thousands)	Years Ended December 31,	
	2022	2021
Research and development (related party)	\$ 8,758	\$ 13,972
Research and development	5,431	2,004
<b>Total credits to research and development</b>	<b>\$ 14,189</b>	<b>\$ 15,976</b>

Additionally, the Company recorded \$9.9 million as a credit to property and equipment in the consolidated balance sheets, which represents reimbursements received from related party for property and equipment constructed and owned by the Company.

Of the amounts invoiced to non-related party JDAs, \$4.2 million was recorded as deferred income as of December 31, 2022, and \$0.4 million and \$0.8 million were recorded as a receivable and as deferred income as of December 31, 2021, respectively. Receivables are recorded within prepaid expenses and other current assets and the deferred income is recorded within accrued expenses and other current liabilities in the consolidated balance sheets.

**Note 5. Cash and Cash Equivalents**

The following table presents information about the Company's cash, cash equivalents, and restricted cash:

(in thousands)	As of December 31,	
	2022	2021
Cash	\$ 60,315	\$ 157,483
Money market funds	46,308	3,014
<b>Total cash and cash equivalents</b>	<b>106,623</b>	<b>160,497</b>
Restricted cash included in prepaid expenses and other current assets and other assets	1,313	547
<b>Total cash, cash equivalents, and restricted cash shown in the consolidated statement of cash flows</b>	<b>\$ 107,936</b>	<b>\$ 161,044</b>

**Note 6. Investments**

The following table provides amortized costs, gross unrealized gains and losses, and fair values for the Company's investments as of December 31, 2022, which had maturity dates that range from 1 month to 11 months. The Company had no investments as of December 31, 2021. Realized gains or losses were insignificant for the years ended December 31, 2022, 2021 and 2020.

(in thousands)	Amortized Cost	Gross		Fair Value
		Unrealized Gains	Unrealized Losses	
U.S. treasury securities	\$ 283,705	\$ 2	\$ 247	\$ 283,460
<b>Total short-term investments</b>	<b>\$ 283,705</b>	<b>\$ 2</b>	<b>\$ 247</b>	<b>\$ 283,460</b>

**Note 7. Property and Equipment, Net**

Property and equipment, net consisted of the following:

(in thousands)	As of December 31,	
	2022	2021
Laboratory machinery and equipment	\$ 18,133	\$ 7,285
Office and computer equipment	358	311
Leasehold improvements	11,443	4,105
Construction in progress	5,422	6,039
<b>Total property and equipment</b>	<b>35,356</b>	<b>17,740</b>
Less: accumulated depreciation	(7,600)	(5,246)
<b>Property and equipment, net</b>	<b>\$ 27,756</b>	<b>\$ 12,494</b>

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Depreciation expense was \$2.5 million, \$1.5 million, and \$1.6 million for the years ended December 31, 2022, 2021 and 2020, respectively. Construction in progress primarily consists of leasehold improvement projects associated with the Company's Shanghai pilot facility.

**Note 8. Intangible Assets, Net**

Intangible assets, net consisted of the following:

(in thousands)	As of December 31,	
	2022	2021
Intellectual property	\$ 1,918	\$ 1,918
Internal-use software	—	26
Total intangible assets	1,918	1,944
Less: accumulated amortization	(445)	(318)
<b>Intangible assets, net</b>	<b>\$ 1,473</b>	<b>\$ 1,626</b>

Amortization expense was \$0.1 million for each of the years ended December 31, 2022, 2021 and 2020, respectively. Amortization expense associated with the intangible assets included on the Company's consolidated balance sheet as of December 31, 2022 is expected to be as follows:

Years Ending December 31,	(in thousands)
2023	\$ 128
2024	128
2025	128
2026	128
2027	128
Thereafter	833
<b>Total</b>	<b>\$ 1,473</b>

**Note 9. Accrued Expenses and Other Current Liabilities**

The components of accrued expenses and other current liabilities consisted of the following:

(in thousands)	As of December 31,	
	2022	2021
Advance payments received under joint development agreements	\$ 4,189	\$ 1,978
Employee compensation and related costs	3,115	2,117
Income taxes payable	1,422	226
Professional and consulting services	1,566	1,099
Other	979	853
<b>Accrued expenses and other current liabilities</b>	<b>\$ 11,271</b>	<b>\$ 6,273</b>

**Note 10. Government Grant**

In December 2022, the Company was awarded a grant (the "Grant") from certain government agencies. The incentives received under the Grant, which is in the form of cash, can be used for facilities related expenses and the purchase of property and equipment. The Company is required to adhere to the following conditions attached to the incentives, which include required minimum investments into specified spending categories and the creation of a minimum amount of permanent full-time jobs in a certain geographical location over the next five years. As of December 31, 2022, the Company had received but not yet earned \$6.7 million, which is shown as a noncurrent liability in the consolidated balance sheet.

**Note 11. Sponsor Earn-Out Liability**

The Sponsor Earn-Out shares in Tranche 2 through Tranche 5 have been measured at their estimated fair value using a Monte Carlo simulation valuation model. Inherent in the valuation model are assumptions related to expected stock price volatility, risk-free interest rate, expected life, and dividend yield. The key inputs used in the Monte Carlo simulation model for the Sponsor Earn-Out liability at their measurement dates were as follows:

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	December 31, 2022	February 3, 2022 (Closing Date)
Contractual term (in years)	4.1	5.0
Risk free rate	4.09%	1.63%
Expected volatility	85.0%	81.0%
Expected dividends	0%	0%
Stock price	\$ 3.15	\$ 7.68

The stock price is based on the closing price of the Company's Class A common stock as of the valuation date and simulated through the end of the earn-out period following Geometric Brownian Motion. The Company estimates the volatility of its common stock by using an average of historical volatilities of select peer companies' common stock that matches the expected remaining term of the awards. The risk-free interest rate is based on the yield curve for zero-coupon U.S. Treasury notes with maturities corresponding to the expected remaining life of the awards, which is assumed to be equivalent to their remaining contractual term. The dividend rate is based on the historical rate, which the Company anticipates remaining at zero.

The following table provides a reconciliation of the beginning and ending balances for the Sponsor Earn-Out liability:

	(in thousands)
Balance as of December 31, 2021	\$ —
Additions during the period	36,393
Change in fair value	(25,432)
Balance as of December 31, 2022	\$ 10,961

**Note 12. Leases**

The Company's operating leases consist primarily of leases for office and plant spaces. Certain of the Company's operating leases include escalating rental payments, some of which include the option to extend the lease term for up to 5 years, and some include options to terminate the lease at certain times within the lease term. The Company's lease agreements do not contain any material residual value guarantees or material restrictive covenants.

The Company's total operating lease cost was \$2.5 million for the year ended December 31, 2022. For the years ended December 31, 2021 and 2020 total rental expense was \$1.8 million and \$1.3 million, respectively. Cash paid for amounts included in the measurement of lease liabilities was \$2.4 million for the year ended December 31, 2022.

The following table summarizes the future minimum undiscounted lease payments under operating leases as of December 31, 2022:

Years Ending December 31,	(in thousands)
2023	\$ 2,675
2024	2,721
2025	2,779
2026	2,092
2027	1,177
Thereafter	3,375
<b>Total future minimum lease payments</b>	<b>14,819</b>
Less: imputed interest	(2,755)
<b>Total future minimum lease payments</b>	<b>\$ 12,064</b>

As of December 31, 2022, the weighted average remaining lease term for operating leases was 6.3 years and the weighted average discount rate used to determine the operating lease liability was 6.2%.

*Woburn Lease*

In August 2016, the Company entered into an operating lease agreement to lease an office space in Woburn, Massachusetts with the original lease term expiring in August 2021. The lease agreement has one five-year renewal option and provides for annual cost of living increases of up to 6%. In May 2020, the Company extended the term of the lease by 5 years through August 2026. In February

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and March 2021, the Company amended the lease agreement increasing the leased space. In December 2021, the Company further amended the lease agreement reducing the leased space. The amendment includes an obligation to pay monthly relinquishment charges (equal to the total rental obligation for the duration of the lease term), only if the new tenant does not pay monthly rental amount and lessor has provided a notice to collect the relinquishment charges from the Company. As of December 31, 2022, the Company assessed the probability of any liability to be incurred for relinquishment charges as remote. Total future minimum lease payments under this lease is \$7.6 million.

In October 2022, the Company entered into an amendment to the operating lease agreement for its Woburn facility to add additional space. Pursuant to the amendment, the landlord has agreed to construct an addition to the existing facility for such additional space, which the Company anticipates will be completed in the third quarter of 2023, triggering the commencement of the amended lease. The additional space will consist of approximately 5,000 square feet and the total undiscounted future minimum lease payments for the addition through the expected 8 year term will be approximately \$1.5 million.

*Shanghai Lease*

In September 2018, the Company entered into an operating lease agreement to lease a manufacturing space in Shanghai, China with the original lease term expiring in August 2023. The lease agreement has renewal terms that can extend the lease term by providing application for renewal at least 90 days before the expiry and provides for annual cost of living increases of up to 3%. In September 2021, the Company amended the lease agreement. The amendment increased the amount of leased space and extended the term of the lease by three years through August 2026. Total future minimum lease payments under this lease is \$5.3 million.

**Note 13. Note Payable**

In April 2020, the Company applied for and received a loan in the amount of \$0.8 million under the Paycheck Protection Program (the "PPP"), established and pursuant to the Coronavirus Aid, Relief, and Economic Security Act and administered by the Small Business Administration (the "PPP Note"). Under the terms of the PPP Note, interest accrues on the outstanding principal at the rate of 1% per annum. In February 2021, the principal and interest were forgiven for the PPP Note, for which the Company recorded a gain on forgiveness of PPP Note of \$0.8 million in its consolidated statement of operations and comprehensive loss.

**Note 14. Commitments and Contingencies**

*Commitments*

The Company has entered into multiple JDAs with strategic automotive OEM Partners to develop A-Sample battery cells over the next two to three years. Under the terms of one of the JDAs, the Company is committed to undertake certain research and development activities to the benefit of both itself and its OEM Partners which involves expenditures related to engineering efforts and purchases of related equipment. This JDA has an agreed-upon value of up to \$50 million, of which the Company has spent \$1.7 million as of December 31, 2022.

*Legal Contingencies*

From time-to-time, the Company may be subject to claims arising in the ordinary course of business or become involved in litigation or other legal proceedings. While the outcome of such claims or other proceedings cannot be predicted with certainty, the Company's management expects that any such liabilities, to the extent not provided for by insurance or otherwise, would not have a material effect on the Company's financial condition, results of operations or cash flows.

*Indemnifications*

The Company enters into indemnification provisions under agreements with other companies in the ordinary course of business, including, but not limited to, partnerships, landlords, vendors, and contractors. Pursuant to these arrangements, the Company agrees to indemnify, defend, and hold harmless the indemnified party for certain losses suffered or incurred by the indemnified party as a result of the Company's activities. The maximum potential amount of future payments the Company could be required to make under these agreements is not determinable. The Company has never incurred costs to defend lawsuits or settle claims related to these indemnification provisions. In addition, the Company indemnifies its officers, directors, and certain key employees against claims made with respect to matters that arise while they are serving in their respective capacities as such, subject to certain limitations set forth under applicable law, and applicable indemnification agreements. The Company maintains insurance, including commercial general liability insurance, product liability

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insurance, and directors and officers insurance to offset certain potential liabilities under these indemnification provisions. To date, there have been no claims under these indemnification provisions.

**Note 15. Redeemable Convertible Preferred Stock**

The Company had the following redeemable convertible preferred stock issued and outstanding as of December 31, 2021. Upon closing of the Business Combination, all outstanding redeemable convertible preferred stock were converted into shares of the Company's common stock in an amount determined by application of the Exchange Ratio, as discussed further in "Note 3 – Business Combination," and as a result, the following share and per share amounts have been retroactively converted.

(in thousands, except share and per share amounts) Series	Issue Price per share	Shares Authorized	Shares Issued and Outstanding	Liquidation Amount	Carrying Amount
Series A	\$ 0.1406	32,011,403	32,011,403	\$ 4,500	\$ 4,413
Series B	\$ 0.3795	30,305,065	30,305,065	11,500	11,362
Series C	\$ 0.4829	75,874,600	75,874,600	36,643	36,324
Series C plus	\$ 0.8151	36,803,072	36,803,072	30,000	29,945
Series D	\$ 4.7939	28,891,766	28,891,766	138,505	138,257
Series D plus	\$ 4.9631	10,074,380	10,074,380	50,000	49,640
<b>Total</b>		<b>213,960,286</b>	<b>213,960,286</b>	<b>\$ 271,148</b>	<b>\$ 269,941</b>

In April 2021, the Company entered into a stock purchase agreement whereby certain investors agreed to purchase \$138.5 million in Series D redeemable convertible preferred stock, \$0.000001 par value per share. Upon closing of the financing transaction in April 2021, the investors purchased 28,891,766 shares of Series D redeemable convertible preferred stock. In May 2021, the Company entered into a stock purchase agreement whereby an investor agreed to purchase \$50.0 million in Series D plus redeemable convertible preferred stock, \$0.000001 par value per share. Upon closing of the financing transaction in May 2021, the investor purchased 10,074,380 shares of Series D plus redeemable convertible preferred stock.

*Voting*

The holders of Series A, Series B, Series C, Series C plus, Series D and Series D plus redeemable convertible preferred stock are entitled to vote on all matters on which the common stockholders are entitled to vote. On such matters, holders of Series A, Series B, Series C, Series C plus, Series D and Series D plus redeemable convertible preferred and common stock vote together with the holders of common stock as a single class. Each holder of the Series A, Series B, Series C, Series C plus, Series D and Series D plus redeemable convertible preferred stock is entitled to the number of votes equal to the number of shares of common stock into which the shares of redeemable convertible preferred stock held by such holder could then be converted.

*Conversion*

Shares of redeemable convertible preferred stock are convertible into common stock at the holders' option at any time after the date of issuance of such share or automatically (i) immediately prior to the closing of a firm commitment underwritten public offering of the Company's common stock at a price per share at least 2 times the Series D and Series D plus issuance price and with gross proceeds to the Company of at least \$100 million, net of underwriting commission and discounts or (ii) upon the vote or receipt by the Company of a written request for such conversion from the holders of the 66% of the redeemable convertible preferred stock then outstanding, voting as a single class and on an as-converted basis. Each share of the Series A, Series B, Series C, Series C plus, Series D and Series D plus redeemable convertible preferred stock is convertible into the number of shares of common stock at the then effective conversion ratio. The initial conversion price per share for the Series A, Series B, Series C, Series C plus, Series D and Series D plus redeemable convertible preferred stock is subject to anti-dilution adjustments, if any.

*Liquidation*

In the event of any liquidation of the Company, sale, lease, transfer, exclusive license or other disposition of all or substantially all of the assets of the Company, dissolution, or winding up of the Company, the holders of Series A, Series B, Series C, Series C plus, Series D and Series D plus redeemable convertible preferred stock will be entitled to receive, in preference to any distribution to the holders of common stock, an amount per share equal to the applicable issuance price together with any other dividends declared but unpaid thereon on each share of redeemable convertible preferred stock.

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If the assets of the Company legally available for distribution to the holders of given Series of redeemable convertible preferred stock are insufficient to permit the payment to such holders of the full amounts of a given Series, then the assets of the Company will be distributed on a pro rata basis among the holders of such Series of redeemable convertible preferred stock in proportion to the full amounts they would otherwise be entitled to receive pursuant to their liquidation preference.

After the payment to the holders of redeemable convertible preferred stock of the full amounts above, the remaining assets of the Company will be distributed with equal priority and pro rata among the holders of the redeemable convertible preferred stock on an as-converted basis and common stock.

### *Dividends*

The holders of the Series A, Series B, Series C, Series C plus, Series D and Series D plus redeemable convertible preferred stock are entitled to receive dividends, when and if declared by the Board of Directors subject to adjustment for stock splits, stock dividends, combination of shares, reorganization, recapitalization, reclassification, or other similar event. The dividends are payable in preference and priority to any payment of any dividend on the common stock of the Company and are noncumulative. No dividends were declared by the Board of Directors during the years ended December 31, 2022, 2021 and 2020.

### *Redemption*

The redeemable convertible preferred stock is recorded in mezzanine equity because while it is not mandatorily redeemable, it will become redeemable at the option of the preferred stockholders upon the occurrence of certain deemed liquidation events that are considered not solely within the Company's control.

## **Note 16. Stockholders' Equity**

On February 4, 2022, the Class A common stock and Warrants began trading on the New York Stock Exchange under the ticker symbols "SES" and "SES WS," respectively.

### *Class A and Class B Common Stock*

Pursuant to the Company's certificate of incorporation, the Company is authorized to issue 2,100,000,000 shares of Class A common stock, par value \$0.0001 per share and 200,000,000 shares of Class B common stock, par value \$0.0001 per share. Class A common stock and Class B common stock are referred to as common stock throughout the notes to these financial statements, unless otherwise noted.

The rights of holders of Class A common stock and Class B common stock are identical, except with respect to voting. The holder of each share of Class A common stock is entitled to one vote, while the holder of each share of Class B common stock is entitled to ten votes. Each share of Class B common stock is convertible on a one-for-one basis into a share of Class A common stock at the holder's option or otherwise automatically upon the occurrence of certain events, namely: (i) each share of Class B common stock that is transferred by SES Founder Group, or certain permitted transferee holders ("Qualified Holders"), will convert into a share of Class A common stock; (ii) all outstanding shares of Class B common stock will convert into shares of Class A common stock if the SES Founder Group or Qualified Holders collectively cease to beneficially own at least 20 percent of the number of shares of Class B common stock (as such number of shares is equitably adjusted in respect of any reclassification, stock dividend, subdivision, combination or recapitalization of the Class B common stock) collectively held by the SES Founder Group and Qualified Holders of Class B common stock as of the time the Business Combination took effect; or (iii) all outstanding shares of Class B common stock will convert into shares of Class A common stock upon the date specified by the affirmative vote of the holders of at least two-thirds of the then-outstanding shares of Class B common stock, voting as a separate class. Each outstanding share of Class B common stock is entitled to ten votes per share and each outstanding share of Class A common stock is entitled to one vote per share.

As of December 31, 2022, the Company had 305,833,589 and 43,881,251 shares of Class A common stock and Class B common stock issued and outstanding, respectively. For accounting purposes, only shares that are fully vested or that are not subject to repurchase are considered issued and outstanding.



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Below is a reconciliation of shares of common stock issued and outstanding:

	<b>December 31, 2022</b>
Total shares of common stock legally issued and outstanding	349,714,840
Less: Shares subject to future vesting:	
Escrowed Earn-Out Shares	(27,690,978)
Sponsor Earn-Out Shares	(5,520,000)
Earn-Out Restricted Shares	(1,931,044)
RSAs	(1,270,726)
<b>Total shares issued and outstanding</b>	<b>313,302,092</b>

*Preferred Stock*

Pursuant to the Company's certificate of incorporation, the Company is authorized to issue 20,000,000 shares of preferred stock having a par value of \$0.0001 per share. The Company's board of directors has the authority to issue preferred stock and to determine the rights, preferences, privileges, and restrictions, including voting rights of such preferred stock. As of December 31, 2022, no shares of the Company's preferred stock were issued and outstanding.

*Dividends*

Common stock is entitled to dividends when and if declared by the Company's board of directors, subject to the rights of all classes of stock outstanding having priority rights to dividends. The Company has not paid any cash dividends on common stock to date. The Company may retain future earnings, if any, for the further development and expansion of its business and has no current plans to pay cash dividends for the foreseeable future.

*Common Stock Warrants*

Prior to the Business Combination, Ivanhoe issued 9,200,000 Public Warrants and 5,013,333 Private Warrants and prior to the Closing, Ivanhoe amended the terms of the Warrants, as discussed in "Note 2 – Summary of Significant Accounting Policies," which resulted in the Warrants being classified as a component of stockholders' equity. There is an effective registration statement and prospectus relating to the shares issuable upon exercise of the Warrants.

*Public Warrants*

Public Warrants have an exercise price of \$11.50 and the Company may, in its sole discretion, reduce the exercise price of the Public Warrants to induce early exercise, provided that adequate notice is provided to warrant holders pursuant to the terms of the Warrant Agreement. The exercise price and number of shares of Class A common stock issuable upon exercise of the Warrants may also be adjusted in certain circumstances including in the event of a share dividend, recapitalization, reorganization, merger or consolidation. In no event is the Company required to net cash settle the Public Warrants.

The Public Warrants became exercisable 30 days following the Business Combination and expire at the earliest of five years following the Business Combination, liquidation of the Company, or the date of redemption elected at our option provided that the value of the Class A common stock exceeds \$18.00 per share.

Under certain circumstances, the Company may elect to redeem the Public Warrants at a redemption price of \$0.01 per Public Warrant at any time during the term of the Warrant in which the Class A common stock share trading price has been at least \$18.00 per share for 20 trading days within the 30 trading-day period. If the Company elects to redeem the Warrants, it must notify the Public Warrant holders in advance, who would then have at least 30 days from the date of notification to exercise their respective Warrants. If any such Warrants are not exercised within that 30-day period, they will be redeemed pursuant to this provision.

As of December 31, 2022, the Company had outstanding Public Warrants to purchase 9,199,947 shares of Class A common stock.

*Private Warrants*

The Private Warrants have similar terms to the Public Warrants, except that the Private Warrants are not redeemable. As of December 31, 2022, the Company had outstanding Private Warrants to purchase 5,013,333 shares of Class A common stock.

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The Company has the following shares of common stock available for future issuance on an as-if converted basis:

	December 31,	
	2022	2021
Shares reserved for issuance under the SES AI Corporation 2021 Plan	32,738,052	—
Shares reserved for issuance under the SES Holdings Pte. Ltd. 2021 Plan	—	599,780
Common stock options outstanding	18,308,233	20,750,755
Public Warrants	9,199,947	—
Private Warrants	5,013,333	—
RSUs	2,807,660	—
PSUs	2,116,942	—
Redeemable convertible preferred stock	—	213,960,286
RSAs	—	2,261,862
<b>Total common stock available for future issuance</b>	<b>70,184,167</b>	<b>237,572,683</b>

**Note 17. Stock-Based Compensation**

*Equity Award Plan*

Old SES established its initial share incentive plan in 2013 (the “2013 Plan”), which was subsequently replaced with a new share incentive plan in 2018 (the “2018 Plan”). Under the terms of the 2013 Plan and 2018 Plan, certain number of shares were reserved for the issuance of incentive stock options (“ISOs”) and non-statutory stock options (“NSOs”) to employees, officers, directors, consultants and advisors. On March 30, 2021, the Company amended the 2018 Plan with the SES Holdings Pte. Ltd. 2021 Share Incentive Plan (the “2021 Plan”) and increased the total shares reserved for future issuance by 486,975 shares. Upon approval of the 2021 Plan, any shares that, as of the date of stockholder approval, were reserved but not issued pursuant to any awards granted under the Company’s 2018 Plan were rolled into the 2021 Plan. In addition, any shares issued pursuant to or subject to stock options or similar awards granted under the 2018 Plan that expired or otherwise terminated without having been exercised in full or that were forfeited or repurchased by the Company, rolled into the 2021 Plan. The 2021 Plan provided for the discretionary grant of ISOs, NSOs, and Restricted Share Awards (“RSAs”).

In connection with the Business Combination, the 2021 Plan was terminated and the remaining unallocated share reserve was cancelled and no new awards will be granted under the 2021 Plan. At Closing, a total of 20,748,976 ISOs and NSOs and 2,273,727 RSAs (as converted, due to retroactive application of reverse recapitalization) outstanding under the 2021 Plan were assumed by the Company under the SES AI Corporation 2021 Plan (defined below).

*SES AI Corporation 2021 Plan*

In connection with the Business Combination, the Company adopted the SES AI Corporation 2021 Incentive Award Plan (the “SES 2021 Plan”) under which 36,862,002 shares of Class A common stock were initially reserved for issuance of ISOs, NSOs, stock appreciation rights (“SARs”), RSAs, restricted stock units (“RSUs”), performance compensation awards (“PSUs”), other stock-based and cash-based awards, and dividend equivalents. In addition and subject to certain limitations, any shares issued pursuant to or subject to awards granted under the 2021 Plan that expired or otherwise terminated without having been exercised in full or that were forfeited or repurchased by the Company, rolled into the SES 2021 Plan. The SES 2021 Plan allows for the maximum number of shares issuable to automatically increase on January 1st of each year for a period of ten years commencing on January 1, 2022 and ending on (and including) January 1, 2031, in an amount equal to two percent of the total number of shares of Class A common stock outstanding on December 31<sup>st</sup> of the preceding year. As of December 31, 2022, 32,738,052 shares remain available for future issuance under the SES 2021 Plan.

*Stock-Based Compensation Expense*

Compensation expense related to stock-based awards was recorded as follows:

(in thousands)	Years Ended December 31,		
	2022	2021	2020
Research and development	\$ 6,630	\$ 344	\$ 72
General and administrative	16,145	4,227	82
<b>Total</b>	<b>\$ 22,775</b>	<b>\$ 4,571</b>	<b>\$ 154</b>

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The following table summarizes share-based compensation expense by award type:

(in thousands)	Years Ended December 31,		
	2022	2021	2020
Earn-Out Restricted Shares	\$ 7,890	\$ —	\$ —
RSUs	7,136	—	—
PSUs	3,786	—	—
RSAs	3,510	1,540	—
Stock options	453	3,031	154
<b>Total</b>	<b>\$ 22,775</b>	<b>\$ 4,571</b>	<b>\$ 154</b>

*Restricted Stock Units*

RSUs granted under the SES 2021 Plan vest in equal annual installments over a three-year period and have only service vesting conditions. The fair value of RSUs is estimated based on the closing price of the Company's Class A common stock at the date of grant and is amortized to expense on a straight-line basis over the vesting period. RSU activity is as follows:

	Number of Shares	Weighted Average Fair Value
Outstanding at December 31, 2021	—	\$ —
Granted	3,438,233	8.41
Vested	(185,944)	4.27
Forfeited and canceled	(444,629)	8.93
Outstanding at December 31, 2022	2,807,660	\$ 8.61

The total fair value of RSUs vested was \$0.8 million for the year ended December 31, 2022.

As of December 31, 2022, there was \$17.8 million of unrecognized compensation cost related to RSUs, which is expected to be recognized over a weighted-average period of 2.2 years.

*Restricted Stock Awards*

RSAs granted under the 2021 Plan and assumed under the SES 2021 Plan generally vest 1/4<sup>th</sup> upon completion of one year of service and 1/48<sup>th</sup> per month thereafter and have only service vesting conditions. The fair value of RSAs is estimated based on the closing price of the Company's Class A common stock at the date of grant and is amortized to expense on a straight-line basis over the vesting period. RSA activity is as follows:

	Number of Shares	Weighted Average Fair Value
Outstanding at December 31, 2021	2,261,862	\$ 5.12
Granted	11,865	5.30
Vested	(958,506)	5.16
Forfeited and canceled	(44,495)	5.30
Outstanding at December 31, 2022	1,270,726	\$ 5.09

The weighted-average grant date fair value per share of RSAs granted was \$5.12 for the year ended December 31, 2021. No RSAs were granted in the year ended December 31, 2020. The total fair value of RSAs vested was \$4.9 million for the year ended December 31, 2022. No RSAs vested during the year ended December 31, 2021.

As of December 31, 2022, there was \$6.4 million of unrecognized compensation cost related to RSAs, which is expected to be recognized over a weighted-average period of 2.3 years.

*Performance Stock Units*

PSUs granted under the SES 2021 Plan generally vest over a three-year period and have both service and market vesting conditions. PSUs are measured at their estimated fair value using a Monte Carlo simulation valuation model with the effect of the market condition reflected in the grant date fair value of the award. The fair value of PSU awards is amortized to expense on a straight-line basis over the requisite

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service period, irrespective of whether the market vesting condition is satisfied, which is generally two to three years. The key inputs used in the Monte Carlo simulation model for PSUs granted during the current year at their measurement date were as follows:

	<b>April 18, 2022</b>
Contractual term (in years)	5.0
Risk free rate	2.79%
Expected volatility	75.7%
Expected dividends	0%
Stock price	\$ 9.10

PSU activity is as follows:

	<b>Number of Shares</b>	<b>Weighted Average Fair Value</b>
Outstanding at December 31, 2021	—	\$ —
Granted	2,340,405	5.89
Vested	—	—
Forfeited and canceled	(223,463)	5.09
Outstanding at December 31, 2022	<u>2,116,942</u>	<u>\$ 5.98</u>

As of December 31, 2022, there was \$8.9 million of unrecognized compensation cost related to PSUs, which is expected to be recognized over a weighted-average period of 1.9 years.

*Earn-Out Restricted Shares*

The Earn-Out Restricted Shares granted in connection with the Business Combination vest over a five-year period and have both service and market vesting conditions. The Earn-Out Restricted Shares have been measured at their estimated fair value using a Monte Carlo simulation valuation model with the effect of the market condition reflected in the grant date fair value of the award. The aggregate grant date fair value of the Earn-Out Restricted Shares is \$15.0 million and is amortized to expense on a straight-line basis over the requisite service period, irrespective of whether the market vesting condition is satisfied, which is 1.45 years. The key inputs used in the Monte Carlo simulation model for the Earn-Out Restricted Shares at their measurement dates were as follows:

	<b>February 3, 2022 (Closing Date)</b>
Contractual term (in years)	5.0
Risk-free rate	1.63%
Expected volatility	81.0%
Expected dividends	0%
Expected stock price	\$ 7.68

Earn-Out Restricted Shares activity is as follows:

	<b>Number of Shares</b>	<b>Weighted Average Fair Value</b>
Outstanding at December 31, 2021	—	\$ —
Granted	2,308,969	6.50
Vested	—	—
Forfeited and canceled	(377,925)	6.37
Outstanding at December 31, 2022	<u>1,931,044</u>	<u>\$ 6.53</u>

As of December 31, 2022, there was \$4.7 million of unrecognized compensation cost related to Earn-Out Restricted Shares, which is expected to be recognized over a weighted-average period of 0.5 years.

*Stock Options*

Options granted under the 2021 Plan and assumed under the SES 2021 Plan vest 1/4th upon completion of one year of service and 1/48th per month thereafter, however in certain instances options have been granted with immediate vesting. Options under the Plan generally expire 10 years from the date of grant and have only service vesting conditions. Stock option activity is as follows:

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	Number of Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in millions)
Outstanding at December 31, 2021	20,750,755	\$ 0.17	8.5	\$ 106.5
Granted	—	\$ —		
Exercised	(2,089,351)	\$ 0.14		\$ 10.8
Forfeited and canceled	(353,171)	\$ 0.26		
Outstanding at December 31, 2022	<u>18,308,233</u>	\$ 0.17	7.6	\$ 54.6
Vested, December 31, 2022	9,789,050	\$ 0.15	7.2	\$ 29.3
Vested or expected to vest, December 31, 2022	18,308,233	\$ 0.17	7.6	\$ 54.6

The weighted-average grant date fair value per share of stock options granted was \$0.12 and \$0.08 for the years ended December 31, 2021 and 2020, respectively. The aggregate intrinsic value of options exercised was \$6.7 million for the year ended December 31, 2021. No options were exercised for the year ended December 31, 2020. No income tax benefit was recognized for stock options exercised as the Company does not anticipate realizing any such benefit in the near future. The fair value of stock options vested was not material during the years ended years ended December 31, 2021 and 2020.

The Company uses the Black-Scholes pricing model to determine the fair value of options granted. The calculation of the fair value of stock options is affected by the stock price on the grant date, the expected volatility of the Company's stock over the expected term of the award, the expected life of the award, the risk-free interest rate and the dividend yield. The assumptions used in the Black-Scholes pricing model for options granted during each year, along with the weighted-average grant-date fair values, were as follows:

	Years Ended December 31,		
	2022	2021	2020
Expected term of options (in years)	—	5.6 – 6.1	5.0 – 6.1
Risk-free interest rate	—	0.6% to 1.1%	0.4% to 0.9%
Expected volatility	—	68.0% to 69.9%	61.8% to 67.5%
Expected dividends	—	0%	0%
Weighted-average grant date fair value per option	—	\$ 0.12	\$ 0.08

As of December 31, 2022, there was \$0.9 million of unrecognized compensation cost related to stock options, which is expected to be recognized over a weighted-average period of 2.1 years.

**Note 18. Income Taxes**

As discussed in “Note 1 – Nature of Business,” SES Holdings Pte. Ltd. is a Singapore private limited company and was formed in November 2018. As a result of the reorganization the Company undertook in 2018, SES Holdings Pte. Ltd. is also treated as a U.S. taxpayer for U.S. Federal income tax purposes in accordance with Internal Revenue Code Section 7874. SES Holdings Pte. Ltd. is the parent of the U.S. Federal consolidated income tax group.

The U.S. and foreign components of loss before income taxes were as follows:

(in thousands)	Years Ended December 31,		
	2022	2021	2020
U.S.	\$ (35,543)	\$ (4,508)	\$ (9,696)
Foreign	(14,195)	(26,722)	(4,186)
<b>Loss before income taxes</b>	<u>\$ (49,738)</u>	<u>\$ (31,230)</u>	<u>\$ (13,882)</u>

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Income tax expense consists of the following:

(in thousands)	Years Ended December 31,		
	2022	2021	2020
<b>Current:</b>			
Federal	\$ —	\$ —	\$ —
State	55	—	1
Foreign	1,200	25	6
Total current expense	<u>1,255</u>	<u>25</u>	<u>7</u>
<b>Deferred:</b>			
Federal	—	—	—
State	—	—	—
Foreign	—	—	—
Total deferred expense	<u>—</u>	<u>—</u>	<u>—</u>
<b>Income tax expense</b>	<u>\$ 1,255</u>	<u>\$ 25</u>	<u>\$ 7</u>

Reconciliations of the federal statutory income tax rate to the Company's effective income tax rate are as follows:

	Years Ended December 31,		
	2022	2021	2020
Federal statutory income tax rate	21.0%	21.0%	21.0%
Foreign tax	(0.8)%	(0.1)%	(0.1)%
Other permanent items	(0.1)%	0.5%	(0.9)%
Stock-based compensation	4.1%	(1.1)%	0.0%
Research and development tax credits	2.4%	2.0%	2.2%
Unrecognized tax benefits	(0.6)%	(0.6)%	(0.7)%
Increase in valuation allowance	(33.3)%	(22.0)%	(21.7)%
Change in Sponsor Earn-out liability	10.7%	—	—
Transaction costs	(1.5)%	—	—
Section 162(m)	(3.8)%	—	—
Others	(0.6)%	0.2%	0.1%
<b>Effective tax rate</b>	<u>(2.5)%</u>	<u>(0.1)%</u>	<u>(0.1)%</u>

The Company files federal, state and foreign tax returns, which are subject to examination by the relevant tax authorities. Tax regulations within each jurisdiction are subject to the interpretation of the related tax laws and regulations and require significant judgment. The statute of limitations for assessment by the Internal Revenue Service ("IRS"), and state tax authorities remains open for all tax years ended after 2012. 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.

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The components of the net deferred tax asset at the end of each year are as follows:

(in thousands)	As of December 31,	
	2022	2021
<b>Deferred tax assets:</b>		
Net operating losses	\$ 25,338	\$ 18,540
Section 174	6,389	1,312
Lease Liabilities	3,803	—
Stock-based compensation	2,869	525
Research and development tax credits	2,358	1,759
Accruals and reserves	1,251	851
Fixed assets	131	—
Other	241	—
Total deferred tax assets	42,380	22,987
<b>Deferred tax liabilities:</b>		
ROU assets	(3,572)	(1,154)
Fixed assets	—	(228)
Other	—	(105)
Total deferred tax liabilities	(3,572)	(1,487)
Net deferred tax asset before valuation allowance	38,808	21,500
Valuation allowance	(38,808)	(21,500)
<b>Net deferred tax asset</b>	<b>\$ —</b>	<b>\$ —</b>

The Company maintained a valuation allowance of \$38.8 million and \$21.5 million as of December 31, 2022 and 2021, respectively, against U.S. federal, state and foreign deferred tax assets, as management has determined that it is more likely than not that these net deferred tax assets will not be realized.

The Company's net operating loss carryforwards consist of the following:

(in thousands)	As of December 31,	
	2022	2021
U.S. Federal	\$ 104,423	\$ 74,124
State	\$ 61,202	\$ 54,917

As of December 31, 2022, \$95.1 million of the U.S. federal net operating loss carryforwards were generated post-2017, which have an indefinite carryforward period that can only offset 80% of annual taxable income. The remaining U.S. federal carryforwards, if not utilized, expire through 2037, and the state net operating loss carryforwards expire through 2042. The utilization of such net operating loss carryforwards and the realization of tax benefits in future years depends predominantly upon the Company's ability to generate taxable income in the U.S. Research and development tax credits were \$3.6 million and \$2.8 million at December 31, 2022 and 2021, respectively, and if not utilized, will begin to expire in 2030.

The utilization of the Company's net operating losses and research and development tax credit carryforwards may be subject to a substantial annual limitation due to the "change in ownership" provisions under Section 382 of the Internal Revenue Code, and similar state provisions. An "ownership change" is generally defined as a greater than 50 percent change (by value) in its equity ownership over a three-year period. The annual limitation may result in the expiration of the net operating loss carryforwards before their utilization. Through December 31, 2018, the Company had completed several financings since its inception and performed the related analysis which concluded that changes in ownership had occurred, as defined by Sections 382 and 383 of the Internal Revenue Code. The annual limitation to apply to the pre-2018 net operating losses and research credits is \$0.5 million. To the extent that the Company raises additional equity financing or other changes in the ownership interest of significant stockholders occurs, additional tax attributes may become subject to an annual limitation. This could further limit the amount of tax attributes that can be utilized annually to offset future taxable income or tax liabilities. Based on analysis performed, the Company would not lose any material tax attribute due to Section 382 since 2018.

The Company records unrecognized tax benefits in accordance with ASC 740-10, *Income Taxes*. ASC 740-10 which prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of uncertain tax positions taken or expected

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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:

(in thousands)	As of December 31,	
	2022	2021
Beginning of the year	\$ 4,179	\$ 1,467
Increase – current year positions	511	1,069
Increase – prior year positions	—	1,643
Decrease – prior year positions	(117)	—
End of the year	<u>\$ 4,573</u>	<u>\$ 4,179</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's policy is to include interest and penalties, if any, related to unrecognized tax benefits as a component of its income tax provision. For the years ended December 31, 2022 and 2021, the total amount of gross interest accrued in each year was not material. The Company does not expect the unrecognized tax benefits to change significantly over the next 12 months.

Beginning in 2022, the 2017 Tax Cuts and Jobs Act amended Section 174 to eliminate current-year deductibility of research and experimentation (R&E) expenditures and software development costs (collectively, "R&E expenditures") and instead require taxpayers to charge their R&E expenditures to a capital account amortized over five years (15 years for expenditures attributable R&E activity performed outside the United States). The Company generated a deferred tax asset for capitalized R&E expenditures for the year ended December 31, 2022, which is fully offset with a valuation allowance.

**Note 19. Net Income (Loss) Per Share**

Basic net loss per share is computed by dividing net loss by the weighted average number of common shares outstanding for the period. Diluted net loss per share is computed by dividing net loss, as adjusted for changes in fair value recognized in earnings from equity contracts classified as liabilities, by the weighted average number of common shares outstanding and, when dilutive, common share equivalents from outstanding stock options and restricted stock units (using the treasury-stock method). The weighted-average number of common shares used in the computation of basic and diluted net income per share were as follows:

(in thousands, except share and per share amounts)	Years Ended December 31,		
	2022	2021	2020
Numerator:			
Net loss attributable to common stockholders - basic and diluted	\$ (50,993)	\$ (31,255)	\$ (13,889)
Denominator:			
Weighted average shares of common stock outstanding - basic and diluted	288,304,750	61,089,065	60,781,758
Net loss per share attributable to common stockholders - basic and diluted	\$ (0.18)	\$ (0.51)	\$ (0.23)

The number of common stock equivalents excluded from the computation of diluted net loss per share because either the effect would have been anti-dilutive, or the performance criteria related to such shares and awards had not been met, were as follows:



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	Years Ended December 31,		
	2022	2021	2020
Escrowed Earn-Out Shares	27,690,978	—	—
Options to purchase common stock	18,308,233	20,750,755	6,868,948
Public Warrants	9,199,947	—	—
Sponsor Earn-Out Shares	5,520,000	—	—
Private Warrants	5,013,333	—	—
Unvested RSUs	2,807,660	—	—
Unvested PSUs	2,116,942	—	—
Earn-Out Restricted Shares	1,931,044	—	—
Unvested RSAs	1,270,726	2,261,862	—
Redeemable convertible preferred stock	—	213,960,286	174,994,153
<b>Total</b>	<b>73,858,863</b>	<b>236,972,903</b>	<b>181,863,101</b>

**Note 20. Segment and Geographic Information**

The Company operates as one reportable segment as described in Note 2 to the consolidated financial statements.

The Company's long-lived assets consist primarily of property and equipment and intangible assets and are attributed to the geographic location in which they are located. Long-lived assets by geographical area were as follows:

(in thousands)	As of December 31,	
	2022	2021
Property and equipment, net:		
China	\$ 16,956	\$ 8,821
South Korea	7,386	—
United States	3,414	3,673
Total property and equipment, net	27,756	12,494
Intangible assets, net:		
Singapore	1,473	1,600
China	—	26
Total intangible assets, net	1,473	1,626
<b>Total long-lived assets</b>	<b>\$ 29,229</b>	<b>\$ 14,120</b>

**Note 21. Defined Contribution Plan**

The Company offers a defined contribution retirement savings plan under Section 401(k) of the Internal Revenue Code. This plan covers employees who meet minimum age and service requirements and allows participants to defer a portion of their annual compensation on a pre-tax basis. There were no contributions by the Company during the years ended December 31, 2022 and 2021.

## Note 22. Related-Party Transactions

The Company considered the following as related parties due to their role in the Company and/or status as a principal owner of at least 10% of the Company's voting interest on a fully diluted basis for the year ended December 31, 2021:

Name	Role In The Company	Fully Diluted Voting Interest
Dr. Qichao Hu	Chief Executive Officer, founder and board representation	13.3%
SK Holdings <sup>(1)</sup>	Board representation	12.7%
Affiliates of Temasek Holdings (Private) Limited <sup>(1)</sup>	Former board representation	10.5%
General Motors Ventures LLC and General Motors Holdings LLC	Board representation	9.7%
Vertex Legacy Continuation Fund Pte. Ltd. <sup>(1)</sup>	Board representation	9.6%
Tianqi Lithium HK Co., Ltd. <sup>(1)</sup>	Board representation	9.3%
Long Siang Pte. Ltd. <sup>(1)</sup>	Board representation	8.2%

<sup>(1)</sup> As of December 31, 2022 and in connection with the Closing of the Business Combination, the respective party no longer had representation on the Company's Board of Directors and no longer had status as a principal owner.

### *Director Nomination Agreement*

Concurrently with the execution of the Business Combination Agreement, the Company and Ivanhoe entered into the Director Nomination Agreement with GM Ventures, pursuant to which, among other things, GM Ventures has the right to nominate one person for election to the Board from and after the Effective Time for so long as GM Ventures together with its affiliates, collectively continue to beneficially own at least 5% of the fully diluted outstanding equity securities of SES. See "Note 4 – Partnerships" for related party transactions with General Motors.

### *Preferred Stock Purchase Agreements*

In April 2021, SES entered into a stock purchase agreement, in which various holders purchased \$138.5 million in Series D redeemable convertible preferred stock, \$0.000001 par value per share. This included investments by the following investors, who were considered related parties due to either their relationship with the Company or status as a principal owner, in the following amounts: \$27.0 million by Aranda Investments Pte. Ltd., an entity associated with Temasek Holdings Limited ("Aranda"), \$50.0 million by General Motors Ventures LLC and General Motors Holdings LLC (the "GM Funds"), \$36.0 million by SK Holdings ("SK"), and \$10.0 million by Vertex affiliates Vertex Legacy Continuation Fund Pte. Ltd. ("Vertex Legacy") and Vertex Ventures China IV, L.P. ("Vertex Ventures" and, with Vertex Legacy, the "Vertex Funds") collectively.

### *PIPE Financing*

In connection with the Closing of the Business Combination, Ivanhoe issued an aggregate of 27,450,000 shares of Class A common stock to the PIPE Investors at a purchase price of \$10.00 per share, for aggregate gross proceeds of \$274.5 million. This included purchases by the following investors, who were considered related parties due to either their relationship with the Company or status as a principal owner, in the following amounts: \$10.0 million by the GM Funds, \$1.0 million by Long Siang Pte. Ltd. ("Long Siang"), \$5.0 million by Vertex Legacy and \$75.0 million by Honda.

### *Old SES Shareholder Support Agreement*

Concurrently with the execution of the Business Combination Agreement, certain shareholders of Old SES representing the requisite votes necessary to approve the Business Combination, including among others, GM, Dr. Hu and his affiliated trusts, Long Siang, the Vertex Funds, SK, the Temasek Funds (Aranda and Anderson Investments Pte. Ltd.) and Tianqi Lithium HK Co., Ltd. ("Tianqi"), entered into a support agreement with the Company (formerly known as Ivanhoe Capital Acquisition Corp) and Old SES, pursuant to which each such holder agreed to (i) vote at any meeting of Old SES's shareholders, and in any action by written consent of Old SES's shareholders, all of its equity securities in favor of the adoption and approval of the Business Combination Agreement and the transactions contemplated thereby, including the Amalgamation, and not withdraw or rescind such vote or otherwise take action to make such vote ineffective, (ii) be bound by certain other covenants and agreements related to the Business Combination, (iii) waive and not to exercise or assert any rights, or make any demand or claims of oppression relating to the Amalgamation or any other transaction contemplated by the Business

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Combination Agreement that such Shareholder may have (under the Singapore Companies Act or otherwise) by virtue of, or with respect to, any outstanding equity securities of Old SES legally or beneficially owned by such shareholder and (iv) be bound by certain transfer restrictions with respect to such securities, in each case, on the terms and subject to the conditions set forth in the Support Agreements. Each Old SES shareholder party to the support agreement made certain representations and warranties to the Company. The support agreement terminated upon the consummation of the Business Combination.

*A&R Registration Rights Agreement*

At the Closing of the Business Combination, SES, the Sponsor and certain other holders of SES, including, but not limited to, the GM Funds, Dr. Hu and his affiliated trusts, Long Siang, SK, the Temasek Funds, Tianqi and the Vertex Funds, entered into the Amended and Restated Registration Rights Agreement, dated as of February 3, 2022 (the "Registration Rights Agreement"), pursuant to which, among other things, the Sponsor and such other holders were granted certain customary registration rights, demand rights and piggyback rights with respect to their respective shares of Class A common stock and any other equity securities of SES. The Registration Rights Agreement also prohibits the transfer (subject to limited exceptions) of the shares of our Class A common stock and Class B common stock held by the Sponsor and other holders party to the Registration Rights Agreement, in each case for a period of 180 days following the Closing.

*Other Transactions*

In connection with the closing of the PIPE Financing on February 3, 2022, the brother of one of the Company's board of directors, purchased 150,000 shares of Class A common stock from the Company for an aggregate purchase price of \$1,500,000, in accordance with the terms of that certain subscription agreement with the Company, dated July 12, 2021.

**Note 23. Subsequent Events**

In February 2023, the Company entered into an operating lease for a manufacturing space in Chungju, South Korea. Total undiscounted future minimum lease payments under the lease through the expected 5 year term will be approximately \$0.9 million.

## **Item 9. Changes in and Disagreements With Accountants On Accounting and Financial Disclosure**

None.

### **Item 9A. Controls and Procedures**

#### *Evaluation of Disclosure Controls and Procedures*

Under the supervision and with the participation of our management, including our chief executive officer (“CEO”) and chief financial officer (“CFO”), we conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures as of December 31, 2022, as such term is defined in Rules 13a-15(e) and 15d-15(e) under Securities Exchange Act of 1934, as amended (the “Exchange Act”). Disclosure controls and procedures include, without limitation, controls and procedures designed to provide reasonable assurance that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms, and that such information is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow for timely decisions regarding required disclosure. Based on this evaluation, our principal executive officer and principal financial officer have concluded that as of December 31, 2022, our disclosure controls and procedures were not effective due to material weaknesses in our internal control over financial reporting, as discussed in more detail below.

#### *Management’s Report on Internal Controls Over Financial Reporting*

As required by SEC rules and regulations implementing Section 404 of the Sarbanes-Oxley Act of 2002 (“SOX”), our management is responsible for establishing and maintaining adequate internal control over financial reporting, as this term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Our internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of our financial statements for external reporting purposes in accordance with U.S. GAAP. Our 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 our company,
- (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. GAAP, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors, and
- (3) 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.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect errors or misstatements in our financial statements. 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 or compliance with the policies or procedures may deteriorate.

Management with participation of the CEO and CFO under the oversight of our Board of Directors evaluated the effectiveness of our internal control over financial reporting as of December 31, 2022 using the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”) in Internal Control – Integrated Framework (2013). Based on that evaluation, management determined that our internal control over financial reporting was not effective as of December 31, 2022, because of the material weaknesses described below.

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 or interim financial statements will not be prevented or detected on a timely basis.

Certain components of the Company’s control environment were ineffective as the Company did not have a sufficient complement of resources with assigned responsibility and accountability for the design, operation and documentation of internal control over financial reporting. This created deficiencies in the Company’s risk assessment process that led to ineffective information and communication activities as the controls necessary to ensure the reliability of information used in financial reporting and communicate relevant information about roles and responsibilities for internal control over financial reporting were ineffective. As a result, process-level control activities were not designed, implemented or operated effectively in the substantial majority of our processes.

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Because there is a reasonable possibility that material misstatement of our consolidated financial statements will not be prevented or detected on a timely basis, we concluded the deficiencies represent material weaknesses in our internal control over financial reporting and our internal control over financial reporting was not effective as of December 31, 2022.

The material weaknesses did not result in any material misstatements to our consolidated financial statements as of and for the year ended December 31, 2022.

Our independent registered public accounting firm, KPMG LLP, who audited the consolidated financial statements included in this annual report, has expressed an adverse opinion on the operating effectiveness of our internal control over financial reporting. KPMG LLP's report appears in Item 8 of this Annual Report.

### *Remediation Plan*

We have identified the following plans to remediate the material weaknesses described in this Item 9A and to enhance our overall control environment, risk assessment, control activities, and information and communication. We are committed to ensuring that our internal control over financial reporting is effective.

- We are developing a detailed remediation plan, with appropriate executive sponsorship and with the assistance of third-party specialists, to specifically address the material weaknesses.
- We have hired, and will continue to hire, additional certified public accountants (including those with public company experience) who have the appropriate level of expertise in the areas of accounting, financial reporting, and internal controls commensurate with the volume and complexity of our reporting requirements.
- We plan to design and implement a comprehensive and continuous risk assessment process to identify and assess risks of material misstatement and ensure that the impacted financial reporting processes and related internal controls are properly designed and in place to respond to those risks in our financial reporting.
- We plan to enhance the design of existing control activities and implement additional process-level control activities and ensure they are operating effectively.
- We plan to design and implement additional information and communications controls to ensure use of and obtaining relevant and quality information to allow operation of effective control activities, including internal and external communication.

Although we intend to complete the remediation process as promptly as possible, we cannot at this time estimate how long it will take to remediate these material weaknesses. In addition, we may discover additional material weaknesses that require additional time and resources to remediate, and we may decide to take additional measures to address the material weaknesses or modify the remediation steps described above. Until these weaknesses are remediated, we plan to continue to perform additional analyses and other procedures to ensure that our consolidated financial statements are prepared in accordance with GAAP.

### *Changes in Internal Control over Financial Reporting*

Other than the material weaknesses discussed above and changes outlined in remediation activities, there have been no changes in our internal control over financial reporting during the most recent fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

### **Item 9B. Other Information**

None.

### **Item 9C. Disclosure Regarding Foreign Jurisdictions That Prevent Inspections**

Not applicable.

## **PART III – OTHER INFORMATION**

### **Item 10. Directors, Executive Offices and Corporate Governance**

The information required by this Item will be set forth in our definitive proxy statement for our 2022 Annual Meeting of Stockholders (the "Proxy Statement") and is incorporated herein by reference.

**Item 11. Executive Compensation**

The information required by this Item will be set forth in the Proxy Statement is incorporated herein by reference.

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

The information required by this Item will be set forth in the Proxy Statement is incorporated herein by reference.

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

The information required by this Item will be set forth in the Proxy Statement is incorporated herein by reference.

**Item 14. Principal Accounting Fees and Services**

The information required by this Item will be set forth in the Proxy Statement is incorporated herein by reference.

**PART IV**

**Item 15. Exhibits, Financial Statement Schedules**

(1) *Financial Statements and Schedules* – the required information is set forth in “Part 2, Item 8 – Financial Statements and Supplementary Data” in this Annual Report.

(2) *Exhibits* – the exhibits listed below are filed as part of this Annual Report or incorporated herein by reference to the location indicated.

<u>Exhibit No.</u>	<u>Description</u>
3.1	<a href="#">Certificate of Incorporation of SES AI Corporation (incorporated by reference to Exhibit 3.1 to the Company’s Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on February 8, 2022).</a>
3.2	<a href="#">Bylaws of SES AI Corporation (incorporated by reference to Exhibit 3.2 to the Company’s Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on February 8, 2022).</a>
4.1	<a href="#">Amended and Restated Warrant Agreement, dated as of February 3, 2022, by and between the Company and Continental Stock Transfer &amp; Company, as warrant agent (incorporated by reference to Exhibit 4.1 to the Company’s Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on February 8, 2022).</a>
4.2*	<a href="#">Description of Securities (incorporated by reference to Exhibit 4.2 to the Company’s Annual Report on Form 10-K (File No. 001-39845), filed with the Securities and Exchange Commission on March 31, 2022).</a>
10.1	<a href="#">Amended and Restated Registration Rights Agreement, dated February 3, 2022, by and among SES AI Corporation, the Sponsor and certain other holders of SES AI Corporation (incorporated by reference to Exhibit 10.1 to the Company’s Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on February 8, 2022).</a>
10.2#	<a href="#">Form of Director and Executive Officer Indemnification Agreement (incorporated by reference to Exhibit 10.2 to the Company’s Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on February 8, 2022).</a>
10.3#	<a href="#">SES AI Corporation 2021 Incentive Award Plan (incorporated by reference to Exhibit 10.3 to the Company’s Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on February 8, 2022).</a>
10.4#	<a href="#">SES Holdings Pte. Ltd. 2021 Share Incentive Plan (incorporated by reference to Exhibit 10.4 to the Company’s Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on February 8, 2022).</a>
10.5#	<a href="#">Employment Agreement, dated as of March 19, 2021, by and between Dr. Qichao Hu and SES Holdings Pte. Ltd. (incorporated by reference to Exhibit 10.5 to the Company’s Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on February 8, 2022).</a>

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<u>Exhibit No.</u>	<u>Description</u>
10.6#	<u>Employment Agreement, dated as of February 16, 2021, by and between Jing Nealis and SES Holdings Pte. Ltd. (incorporated by reference to Exhibit 10.6 to the Company's Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on February 8, 2022).</u>
10.7#	<u>Employment Agreement, dated as of February 15, 2021, by and between Rohit Makharia and SES Holdings Pte. Ltd. (incorporated by reference to Exhibit 10.7 to the Company's Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on February 8, 2022).</u>
10.8#	<u>Employment Agreement, dated as of May 24, 2016, by and between Yongkyu Son and SolidEnergy Systems Corporation (incorporated by reference to Exhibit 10.8 to the Company's Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on February 8, 2022).</u>
10.9#	<u>Employment Agreement, dated as of July 1, 2018, by and between Dr. Hong Gan and SolidEnergy Systems Corporation (incorporated by reference to Exhibit 10.10 to the Company's Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on February 8, 2022).</u>
10.10	<u>Director Nomination Agreement dated as of July 12, 2021, by and among Ivanhoe Capital Acquisition Corp., SES Holdings Pte. Ltd. and General Motors Ventures LLC (incorporated by reference to Exhibit 10.11 to the Company's Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on February 8, 2022).</u>
10.11	<u>Board Observation Agreement, dated as of July 12, 2021, by and among Ivanhoe Capital Acquisition Corp., SES Holdings Pte. Ltd. and Hyundai Motor Company (incorporated by reference to Exhibit 10.12 to the Company's Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on February 8, 2022).</u>
10.12	<u>Letter Agreement, dated January 6, 2021, by and among Ivanhoe, its executive officers and directors and Ivanhoe Capital Sponsor LLC (incorporated by reference to Exhibit 10.13 to the Company's Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on February 8, 2022).</u>
10.13	<u>IPO Letter Agreement Amendment, dated as of July 12, 2021, by Ivanhoe Capital Sponsor LLC and the officers and directors of Ivanhoe Capital Acquisition Corp. (incorporated by reference to Exhibit 10.14 to the Company's Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on February 8, 2022).</u>
10.14	<u>English Translation of Shanghai Lease Agreement, dated as of August 28, 2018 (incorporated by reference to Exhibit 10.15 to the Company's Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on February 8, 2022).</u>
10.15	<u>English Translation of Amendment to Shanghai Lease Agreement, dated as of August 28, 2021 (incorporated by reference to Exhibit 10.16 to the Company's Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on February 8, 2022).</u>
10.16	<u>English Translation of Amendment to Shanghai Lease Agreement, dated as of September 20, 2022 (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q (File No. 001-39845), filed with the Securities and Exchange Commission on November 14, 2022).</u>
10.17	<u>Commercial Lease Agreement, dated as of March 30, 2016, by and between SolidEnergy Systems Corp. and Cummings Properties, LLC (incorporated by reference to Exhibit 10.17 to the Company's Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on February 8, 2022).</u>
10.18	<u>Amendment No. 1 to Commercial Lease Agreement, dated as of January 10, 2020 (incorporated by reference to Exhibit 10.18 to the Company's Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on February 8, 2022).</u>

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<u>Exhibit No.</u>	<u>Description</u>
10.19	<u>Amendment No. 2 to Commercial Lease Agreement, dated as of February 19, 2020 (incorporated by reference to Exhibit 10.19 to the Company's Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on February 8, 2022).</u>
10.20	<u>Amendment No. 3 to Commercial Lease Agreement, dated as of March 26, 2021 (incorporated by reference to Exhibit 10.20 to the Company's Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on February 8, 2022).</u>
10.21	<u>Amendment No. 4 to Commercial Lease Agreement, dated as of December 30 2021 (incorporated by reference to Exhibit 10.21 to the Company's Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on February 8, 2022).</u>
10.22*	<u>Amendment No. 5 to Commercial Lease Agreement, dated as of October 21, 2022.</u>
10.23#	<u>Form of Restricted Share Award Grant (incorporated by reference to Exhibit 10.22 to the Company's Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on February 8, 2022).</u>
10.24#	<u>Form of Share Option Award Grant (incorporated by reference to Exhibit 10.23 to the Company's Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on February 8, 2022).</u>
10.25#	<u>Form of Non-Disclosure and Non-Competition Agreement (incorporated by reference to Exhibit 10.24 to the Company's Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on February 8, 2022).</u>
10.26#	<u>Form of Restricted Stock Unit Award Grant Notice pursuant to the SES AI Corporation 2021 Incentive Award Plan for restricted stock unit awards to employees, consultants and advisors (incorporated by reference to Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q (File No. 001-39845), filed with the Securities and Exchange Commission on May 13, 2022).</u>
10.27#	<u>Form of Restricted Stock Unit Award Grant Notice pursuant to the SES AI Corporation 2021 Incentive Award Plan for restricted stock unit awards to non-employee directors (incorporated by reference to Exhibit 10.6 to the Company's Quarterly Report on Form 10-Q (File No. 001-39845), filed with the Securities and Exchange Commission on May 13, 2022).</u>
10.28#	<u>Form of Performance Stock Unit Award Grant Notice pursuant to the SES AI Corporation 2021 Incentive Award Plan for performance vesting restricted stock unit awards to employees and consultants (incorporated by reference to Exhibit 10.7 to the Company's Quarterly Report on Form 10-Q (File No. 001-39845), filed with the Securities and Exchange Commission on May 13, 2022).</u>
10.29#	<u>Form of Restricted Share Award Grant pursuant to the SES Holdings Pte. Ltd. 2021 Share Incentive Plan (incorporated by reference to Exhibit 10.22 to the Company's Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on February 8, 2022).</u>
10.30#	<u>Form of Share Option Award Grant pursuant to the SES Holdings Pte. Ltd. 2021 Share Incentive Plan (incorporated by reference to Exhibit 10.23 to the Company's Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on February 8, 2022).</u>
10.31	<u>Form of Subscription Agreement for Institutional Investors (incorporated by reference to Exhibit 10.13 to the Company's Registration Statement on Form S-4/A (File No. 333-258691), filed with the Securities and Exchange Commission on January 5, 2022).</u>



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<u>Exhibit No.</u>	<u>Description</u>
10.32	<a href="#"><u>Form of Subscription Agreement for Individual Investors (incorporated by reference to Exhibit 10.14 to the Company's Registration Statement on Form S-4/A (File No. 333-258691), filed with the Securities and Exchange Commission on January 5, 2022).</u></a>
16.1	<a href="#"><u>Letter from Withum Smith+Brown, PC (incorporated by reference to Exhibit 16.1 to the Company's Current Report on Form 8-K (File No. 001-39845), filed with the Securities and Exchange Commission on April 18, 2022).</u></a>
13.1	<a href="#"><u>Management's Discussion and Analysis of Financial Condition and Results of Operations of Old SES for the fiscal year ended December 31, 2021 (incorporated by reference to Exhibit 99.2 to the Company's Amendment No. 1 to Current Report on Form 8-K/A (File No. 001-39845), filed with the Securities and Exchange Commission on March 31, 2022).</u></a>
21.1*	<a href="#"><u>List of Subsidiaries</u></a>
23.1*	<a href="#"><u>Consent of Independent Registered Public Accounting Firm (KPMG LLP)</u></a>
24.1	Power of Attorney (included on the signature page to this Annual Report).
31.1*	<a href="#"><u>Certification of Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u></a>
31.2*	<a href="#"><u>Certification of Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u></a>
32.1**	<a href="#"><u>Certification of Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u></a>
32.2**	<a href="#"><u>Certification of Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u></a>
101.INS*	Inline XBRL Instance Document – the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH*	Inline XBRL Taxonomy Extension Schema Document.
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document.
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document.
104*	Cover Page Interactive Data File (formatted in Inline XBRL and contained in Exhibit 101).

\* Filed herewith.

† Certain schedules and exhibits have been omitted pursuant to Item 601(a)(5) of Regulation S-K.

# Indicates management contract or compensatory plan or arrangement.

\*\* Furnished herewith.

### **Item 16. Form 10-K Summary**

None.

**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: March 16, 2023

**SES AI CORPORATION**

By: /s/ Qichao Hu  
Name: Qichao Hu  
Title: Chief Executive Officer  
(Principal Executive Officer)

By: /s/ Jing Nealis  
Name: Jing Nealis  
Title: Chief Financial Officer  
(Principal Financial Officer)

**POWER OF ATTORNEY**

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Kyle Pilkington and Jing Nealis, and each or any one of them, his or her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this Report, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the United States Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or his or her substitutes or substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed by the following persons on behalf of the registrant and in the capacities on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Qichao Hu</u> Qichao Hu	Chief Executive Officer and Chairman (Principal Executive Officer)	March 16, 2023
<u>/s/ Jing Nealis</u> Jing Nealis	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	March 16, 2023
<u>/s/ Jang Wook Choi</u> Jang Wook Choi	Director	March 16, 2023
<u>/s/ Kent Helfrich</u> Kent Helfrich	Director	March 16, 2023
<u>/s/ Eric Luo</u> Eric Luo	Director	March 16, 2023
<u>/s/ Jiong Ma</u> Jiong Ma	Director	March 16, 2023
<u>/s/ Michael Noonan</u> Michael Noonan	Director	March 16, 2023

CUMMINGS PROPERTIES, LLC STANDARD FORM

AMENDMENT TO LEASE # 5

In connection with a lease in effect between Cummings Properties, LLC, LESSOR, and SolidEnergy Systems, LLC and SolidEnergy Systems Securities Corporation, LESSEE, at 35-B Cabot Road and Roof Rack Area, Woburn, Massachusetts ("premises" or "leased premises"), fully executed on March 30, 2016 (as amended and/or extended, the "lease"), and currently scheduled to terminate on August 30, 2026, unless otherwise terminated or extended as provided in the lease, and in consideration of the mutual benefits to be derived herefrom, the parties hereby agree to amend said lease, including its terms, conditions, covenants, and obligations ("terms"), as follows:

- 1. Effective October 1, 2022, base rent shall be changed to nine hundred ninety five thousand nine hundred four (995,904) dollars per year or \$ 82,992 per month.
2. Effective October 1, 2022, the base month from which to determine the amount of each annual increase in the "Cost of Living" shall be November 2021, which figure shall be compared with the figure for November 2022, and each November thereafter to determine the increase (if any) in the base rent to be paid during the following calendar year.
3. LESSEE acknowledges and agrees that LESSOR is currently holding an irrevocable standby letter of credit (namely, Silicon Valley Bank Irrevocable Standby Letter of Credit Number SVBSF010899) (the "SVB L/C") with a face amount of \$489,100, pursuant to Paragraph N of the Rider to Lease, Section 7 of Lease Extension #1, Section 5 of Amendment to Lease #2, and Section 3 of Amendment to Lease #3. Within five business days of LESSEE's execution of this amendment, LESSEE shall amend the SVB L/C to increase the face amount of the SVB L/C from \$489,100 to \$614,100, by delivering to LESSOR an amendment to the SVB L/C, in a form acceptable to LESSOR's counsel, evidencing said increase of the face amount. All other terms of said Paragraph N shall continue to apply. Time is of the essence.
4. Effective upon the Addition Delivery Date (defined below), the size of 35-B Cabot Road ("35-B") shall be increased with the addition of approximately 4,994 square feet identified in shading and referred to as the "Shaded Area" (the "Shaded Area") on the mutually agreed upon plan attached hereto and incorporated herein (the "Addition Plan") as Exhibit A. The premises shall then consist of (a) approximately 28,364 square feet at 35-B and (b) approximately 1,290 square feet at the Roof Rack Area.
5. LESSOR, at a total charge to LESSEE of \$125,000, shall modify 35-B according to the Addition Plan (the "Addition Modifications") within 365 days following full execution of this amendment, LESSOR's receipt of the SVB L/C amendment pursuant to Section 3 above, and LESSOR's receipt of a building permit for the Addition Modifications. LESSOR agrees that the Addition Modifications shall be completed in a good and skillful manner, and that, upon delivery, the Addition Modifications shall comply with applicable laws other than those relating to LESSEE's particular use or occupancy or the particular needs of any LESSEE party(ies). The date upon which LESSOR (i) substantially completes the Addition Modifications, except for punch list items (that is, items of work that can be completed after LESSEE takes occupancy without causing material interference with LESSEE's use of the Shaded Area), and (ii) obtains a certificate of occupancy (including but not limited to a temporary certificate of occupancy) or equivalent authorization from the city of Woburn authorizing occupancy and use of the Shaded Area for the uses permitted in Section 3 of the lease shall be the "Addition Delivery Date." All \$125,000, plus interest at the rate of seven percent per annum, has been amortized into the base rent in Section 1 above. Notwithstanding anything to the contrary contained in the lease, LESSEE shall have no obligation to remove the Addition Modifications at the expiration or earlier termination of the lease.
6. LESSEE shall move its furniture, furnishings, equipment, inventory, and other property as requested by LESSOR to enable LESSOR to carry out the Addition Modifications, which shall be performed during LESSOR's normal business hours (only).

LESSEE LESSOR
LESSEE LESSEE

7. The date this amendment is fully executed and LESSOR receives and approves the original SVB L/C amendment shall be the "Go Date." LESSOR represents that it has submitted an initial permit application for the Additional Modifications to the City of Woburn and shall diligently pursue the issuance of a building permit. If LESSOR is unable to obtain a building permit for the Addition Modifications issued by the city of Woburn on or before the date that is 120 days following the Go Date (the "Permit Deadline"), then LESSEE may cancel Sections 1-6 above and Sections 9-12 below (the "Cancellable Sections"), by serving LESSOR with written notice as and how provided in the lease on or before the date that is three days following the Permit Deadline (the "Cancel Notice"). The Cancel Notice shall be effective only if LESSEE is not then in arrears of any rent or invoice payment or otherwise in default of the lease. Time is of the essence. If LESSEE exercises its option to cancel the Cancellable Sections in accordance with this Section 7 (the "Cancellation"), (a) the Cancellable Sections shall be immediately and automatically deleted and of no further force or effect, whereupon the terms of the lease that were in effect prior to the full execution of this amendment, including without limitation Sections 1 and 2 of Amendment to Lease #4, and Section 12 below shall then apply, and (b) LESSEE may amend the SVB L/C to decrease the face amount of the SVB L/C from \$614,100 to \$489,100 by delivering to LESSOR an amendment to the SVB L/C, in a form acceptable to LESSOR's counsel, evidencing said decrease of the face amount.
8. If, (i) LESSEE exercises the cancel option provided for in Section 7 above and (ii) on or before May 30, 2026 this lease is not extended for a minimum term of five years commencing on or about September 1, 2026 for a minimum of 23,370 square feet, then LESSEE shall pay to LESSOR \$62,500 as a non-renewal fee on or before 4:00 PM on June 5, 2026. Time is of the essence. Notwithstanding the foregoing, said non-renewal fee shall not be due from LESSEE if the building permit for the Addition Modifications is not issued solely due to LESSOR's failure to diligently pursue said permit.
9. Notwithstanding the monthly rental payment amount provided in Sections 1 and 2 above, LESSEE may deduct \$13,870 per month from each monthly rental payment (to be apportioned for any partial month) due from October 1, 2022 through the day immediately preceding the Addition Delivery Date (only). Except as otherwise specifically set forth in this amendment, this abatement of rent shall be LESSEE's exclusive remedy for any delay in completing the Addition Modifications.
10. The phrase "Sections 1 and 2 above" in Section 4 of Amendment to Lease #4 is hereby deleted and replaced with the phrase "Sections 1 and 2 in Amendment to Lease #5."
11. If LESSEE in any way delays LESSOR's substantial completion of the Addition Modifications (which shall include without limitation any additions and/or changes requested by LESSEE to the scope of LESSOR's work (even if LESSEE elects not to proceed with same), any delay in LESSEE making payment to LESSOR under the lease, any delay in LESSEE providing information to LESSOR for any permits and/or plans, any delay in LESSEE moving its property in accordance with Section 6 above, any delay in LESSEE providing access to the premises sufficient for LESSOR to complete said modifications, any delay attributable to additions and/or changes necessitated by LESSEE's particular use of the premises, and/or any interference by any LESSEE party(ies) with LESSOR's work), and provided in each case (i) LESSOR sends an email to aseem@ses.ai advising of any such delay and (ii) LESSOR provides LESSEE with 24 hours to rectify the delay so identified, there shall be no abatement of rent for the number of days of delay, the Addition Delivery Date shall be deemed to have occurred on the date said modifications would have been substantially completed, but for any LESSEE delay, the above date for substantial completion shall be extended by the number of days of delay, and any increase in the cost of LESSOR's work as a result of any such delay shall be LESSEE's responsibility. A LESSEE delay will be calculated to include any change in LESSOR's construction

\_\_\_\_\_LESSEE                      \_\_\_\_\_LESSOR  
 \_\_\_\_\_LESSEE                      \_\_\_\_\_LESSEE

schedule arising out of or resulting from said delay, but will not exceed the number of days for which LESSOR's work is actually delayed. Time is of the essence.

- 12. The parties acknowledge and agree that, as of the execution of this amendment, not all of the perimeter walls of the Shaded Area have been built. Accordingly, upon completion of the Addition Modifications, LESSOR shall carefully measure the Shaded Area, and if the size does not equal the total number of square feet set forth above, LESSOR shall notify LESSEE in writing of the actual square footage and the corresponding increase or decrease in rent and the discount provided for in Section 6 above, based on a rate of \$33.33 per square foot per year for the Shaded Area, and said actual square footage and adjusted rent and discount shall be substituted for the corresponding figures herein as of September 1, 2022.
- 13. \* Notwithstanding anything to the contrary in the lease, provided LESSEE is not, on October 12, 2022, in arrears of any rent or invoice payment or otherwise in default of the lease (a) SolidEnergy Systems Securities Corporation's liability as LESSEE under the lease shall not extend to any obligations arising under the lease after noon on October 12, 2022, and (b) SolidEnergy Systems Securities Corporation's possessory interest, if any, in the premises shall terminate as of noon on October 12, 2022.
- 14. \* SES AI Corporation (a DE corp.), 35-B Cabot Road, Woburn, MA 01801, is hereby added as LESSEE in addition to SolidEnergy Systems, LLC. "LESSEE" as used in the lease, including all amendments and extensions thereto, refers to SolidEnergy Systems, LLC, and SES AI Corporation, their responsibility is joint and several pursuant to Section 28(g) of the lease, and notices to any one such party are deemed to have been given to all such parties. SES AI Corporation will, upon its execution of this amendment, supply LESSOR with a policy of commercial general liability insurance, together with the declarations page and all applicable riders and endorsements, in the amount of \$1,000,000 naming LESSOR and the owner of the building (OWNER) as additional insureds. LESSOR and OWNER must be included as additional insureds using standard endorsement ISO form CG 20 26 11 85, ISO form CG 20 11 01 96 (without exclusions), ISO form CG 20 11 04 13 (without exclusions), or another similar form specifically approved in writing in advance by LESSOR.

This amendment shall not bind any party in any manner whatsoever until it has been executed by all parties. All other terms of the lease shall continue to apply, and to the extent any inconsistency exists between this amendment and the lease, the terms herein shall control and supersede any earlier provisions. In witness whereof, LESSOR and LESSEE, intending to be legally bound, have caused this amendment to be executed this \_\_\_\_\_ day of \_\_\_\_\_, 2022.

LESSOR: **CUMMINGS PROPERTIES, LLC**

LESSEE: **SOLIDENERGY SYSTEMS, LLC**

By: \_\_\_\_\_  
*Duly authorized*

By: \_\_\_\_\_  
*Duly authorized*

Print name: \_\_\_\_\_  
Title: \_\_\_\_\_

LESSEE: **SES AI CORPORATION**

LESSEE: **SOLIDENERGY SYSTEMS SECURITIES CORPORATION**

By: \_\_\_\_\_  
*Duly authorized*

By: \_\_\_\_\_  
*Duly authorized*

Print name: \_\_\_\_\_  
Title: \_\_\_\_\_

Print name: \_\_\_\_\_  
Title: \_\_\_\_\_



## List of Subsidiaries

<b>Name of Entity:</b>	<b>State/Country of Organization</b>
SES Holdings Pte. Ltd.	Singapore
SolidEnergy Systems, LLC	Massachusetts
SolidEnergy (Shanghai) Co., Ltd.	China
SolidEnergy Systems Securities Corporation	Massachusetts
Viking Power Systems Pte. Ltd.	Singapore
SES AI Korea Co., Ltd.	South Korea
SES Energy Pte. Ltd.	Singapore

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**Consent of Independent Registered Public Accounting Firm**

We consent to the incorporation by reference in the registration statement (No. 333-264284) on Form S-8 and registration statement (No. 333-262726) on Form S-1 of our reports dated March 16, 2023, with respect to the consolidated financial statements of SES AI Corporation and the effectiveness of internal control over financial reporting.

/s/ KPMG LLP

Boston, Massachusetts

March 16, 2023

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**CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER  
PURSUANT TO RULE 13a-14 AND 15d-14  
UNDER THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED**

I, Qichao Hu, certify that:

1. I have reviewed this Annual Report on Form 10-K of SES AI 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 controls over financial reporting.

Date: March 16, 2023

By: /s/ Qichao Hu  
Qichao Hu  
Chief Executive Officer  
(Principal Executive Officer)

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**CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER  
PURSUANT TO RULE 13a-14 AND 15d-14  
UNDER THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED**

I, Jing Nealis, certify that:

1. I have reviewed this Annual Report on Form 10-K of SES AI 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 controls over financial reporting.

Date: March 16, 2023

By: /s/ Jing Nealis  
Jing Nealis  
Chief Financial Officer  
(Principal Financial Officer)

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**CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER PURSUANT TO  
18 U.S.C. 1350, AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report on Form 10-K of SES AI Corporation (the "Company") for the period ended December 31, 2022, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Qichao Hu, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

- (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.

Date: March 16, 2023

By: /s/ Qichao Hu

Qichao Hu  
Chief Executive Officer  
(Principal Executive Officer)

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**CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER PURSUANT TO  
18 U.S.C. 1350, AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report on Form 10-K of SES AI Corporation (the “Company”) for the period ended December 31, 2022, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Jing Nealis, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

- (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.

Date: March 16, 2023

By: /s/ Jing Nealis  
Jing Nealis  
Chief Financial Officer  
(Principal Financial Officer)

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# Board of Directors

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## **Qichao Hu**

Founder, Chief Executive Officer and Chairman, SES AI Corp.  
Chairman of the Board of SES since 2012

## **Jiong Ma**

Founder and Chief Executive Officer, Chavant Capital Acquisition Corp.  
Lead Director

## **Eric Luo**

Chairman and Chief Executive Officer, GCL System Integration Limited,  
GCL New Energy USA

## **Kent Helfrich**

Chief Technology Officer and Vice President, Global Research and  
Development of GM and President of GM Ventures

## **Michael Noonan**

CEO of Swave Photonics

## **Jang Wook Choi**

Professor, Seoul National University

# Executive Officers

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Qichao Hu, Chief Executive Officer

Rohit Makharia, President and Chief Operating Officer

Jing Nealis, Chief Financial Officer

Hong Gan, Chief Science Officer

Yongkyu Son, Chief Technology Officer

Kyle Pilkington, Chief Legal Officer

Gang Li, Chief Manufacturing Officer