As filed with the Securities and Exchange Commission on March 4, 2022

Registration No. 333-
Registration No. 333-260693

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-1
REGISTRATION STATEMENT
AND
POST-EFFECTIVE AMENDMENT NO. 2 TO
FORM S-1
REGISTRATION STATEMENT
NO. 333-260693

Under
The Securities Act of 1933

ESS TECH, INC.

(Exact name of Registrant as specified in its charter)

Delaware	**3690**	**98-1550150**
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

26440 SW Parkway Ave., Bldg. 83
Wilsonville, OR 97070
(855) 423-9920
(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

Eric Dresselhuys
ESS Tech, Inc.
Chief Executive Officer
26440 SW Parkway Ave., Bldg. 83
Wilsonville, Oregon 97070
(855) 423-9920
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Mark B. Baudler **Alexandra Perry** **Christoph Luschin** **Wilson Sonsini Goodrich & Rosati** **Professional Corporation** **650 Page Mill Road** **Palo Alto, California 94304** **(650) 493-9300**	**Amir Moftakhar** **Chief Financial Officer** **26440 SW Parkway Ave., Bldg. 83** **Wilsonville, Oregon 97070 98101** **(888) 423-9920**

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this registration statement.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, as amended (“Securities Act”), check the following box. ☐

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

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 of 1934, as amended (“Exchange Act”).

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

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. ☐

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act or until this registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

EXPLANATORY NOTE

On October 8, 2021 (the "Closing Date"), ESS Tech, Inc., a Delaware corporation ("ESS", the "Company," "we," "us" or "our") f/k/a ACON S2 Acquisition Corp., a Cayman Islands exempted company ("STWO"), consummated the previously announced merger pursuant to that certain Agreement and Plan of Merger, dated May 6, 2021 (the "Merger Agreement"), by and among STWO, SCharge Merger Sub, Inc., a Delaware corporation and wholly owned direct subsidiary of STWO ("Merger Sub"), and ESS Subsidiary Tech, Inc., a Delaware corporation (f/k/a ESS Tech, Inc.) ("Legacy ESS") following the approval at a special meeting of the stockholders of STWO held on October 5, 2021 (the "Special Meeting").

Pursuant to the terms of the Merger Agreement, STWO deregistered by way of continuation under the Cayman Islands Companies Act (2021 Revision) and registered as a corporation in the State of Delaware under Part XII of the Delaware General Corporation Law (the "Domestication"), and a business combination between STWO and Legacy ESS was effected through the merger of Merger Sub with and into Legacy ESS, with ESS surviving as a wholly owned subsidiary of STWO (together with the other transactions described in the Merger Agreement, the "Merger"). On the Closing Date, the registrant changed its name from "ACON S2 Acquisition Corp." to "ESS Tech, Inc." On the Closing Date, a number of third-party purchasers (the "Other PIPE Investors") and certain existing securityholders of Legacy ESS (the "Insider PIPE Investors", and together with the Other PIPE Investors, the "PIPE Investors") purchased from ESS an aggregate of 25,000,000 newly issued shares of Common Stock (the "PIPE Financing"), for a purchase price of $10.00 per share and an aggregate purchase price of $250.0 million (the "PIPE Shares"), each pursuant to a separate subscription agreement (each, a "Subscription Agreement"), entered into effective as of May 6, 2021. Pursuant to the Subscription Agreements, ESS gave certain registration rights to the PIPE Investors with respect to their PIPE Shares. The sale of the PIPE Shares was consummated concurrently with the closing of the Merger (the "Closing"). Pursuant to the Merger Agreement, ESS entered into a Registration Rights Agreements, dated as of October 8, 2021, providing for certain registration rights to the Sponsor and certain securityholders of ESS.

Post-Effective Amendment No. 2 to Registration Statement on Form S-1 (File No. 333-260693)

On November 2, 2021, ESS filed a registration statement with the Securities and Exchange Commission (the "SEC"), on Form S-1 (File No. 333-260693) (the "Prior Registration Statement"), to initially register for resale by the selling stockholders named therein or their permitted transferees (i) 25,000,000 shares of our common stock, par value $0.0001 per share (the "Common Stock") purchased or owned by the PIPE Investors; and (ii) 100,952,180 shares of Common Stock consisting of (a) 86,477,462 shares of Common Stock beneficially owned by certain former stockholders of ESS Tech Subsidiary, Inc. (f/k/a ESS Tech, Inc.), (b) up to 13,638,114 to be issued to eligible ESS securityholders representing shares of earnout stock under the Merger Agreement, (c) up to 824,998 shares underlying restricted stock units issued to certain Legacy ESS stockholders and (d) 11,606 shares of restricted Common Stock held by Legacy ESS securityholders that were issued pursuant to the exercise of options issued pursuant to the ESS 2014 Equity Incentive Plan that were assumed by us pursuant to the Merger Agreement. The Prior Registration Statement was declared effective by the SEC on November 10, 2021. Subsequently, we issued a Current Report on Form 8-K on November 22, 2021 notifying investors that they should not rely on certain previously issued financial statements. On December 9, 2021, we filed the Post-Effective Amendment No. 1 to the Prior Registration Statement with the SEC to include restated financial statements and to update certain other information, which was declared effective by the SEC on December 13, 2021. Pursuant to Rule 429 this registration statement shall constitute Post-Effective Amendment No. 2 to the Prior Registration Statement with respect to the offering of any unsold shares thereunder and is being filed (i) to include information from our Annual Report on Form 10-K for the year ended December 31, 2021 that was filed on March 3, 2022 (the "Annual Report"); and (ii) to update certain other information in the Prior Registration Statement. No additional securities are being registered under this Post-Effective Amendment No. 2. All applicable registration fees were paid at the time of the original filing of the Registration Statement.

Registration Statement on Form S-1

This registration statement registers for resale from time to time by the selling stockholders described herein or their permitted transferees (the "Selling Stockholders") of up to 4,092,576 shares of Common Stock, which were previously registered pursuant to the registration statement on Form S-4 initially filed with the SEC on June 21, 2021 (File No. 333-257232). Since these shares are deemed "restricted" or "control" securities within the meaning of Rule 144, as promulgated under the Securities Act and are currently not freely tradable and may only be sold pursuant to an effective registration statement or an exemption from registration, if available, these shares are being registered for resale on this registration statement.

As used herein, unless otherwise stated or the context clearly indicates otherwise, the terms "Company," "Registrant," "we," "us," and "our" refer to the parent entity formerly named ACON S2 Acquisition Corp., after giving effect to the Merger, and as renamed "ESS Tech, Inc."

The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities, nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

PRELIMINARY PROSPECTUS **Subject to Completion** **March 4, 2022**

130,044,756 Shares of Common Stock

ESS INC

This prospectus relates to the registration of common stock, par value $0.0001 per share ("Common Stock"), of ESS Tech, Inc. as described herein.

This prospectus relates to the resale from time to time by the selling stockholders described in this prospectus or their permitted transferees (the "Selling Stockholders") of up to 130,044,756 shares of Common Stock beneficially owned by certain former stockholders of Legacy ESS (as defined herein).

The Selling Stockholders may sell any, all or none of the securities and we do not know when or in what amount the Selling Stockholders may sell their securities hereunder following the date of this prospectus. The Selling Stockholders may sell the securities described in this prospectus in a number of different ways and at varying prices. We provide more information about how the Selling Stockholders may sell their securities in the section titled "*Plan of Distribution*" beginning on page 119 of this prospectus.

We are registering the offer and sale of these securities to satisfy certain registration rights we have granted under certain agreements between us and the Selling Stockholders. We will not receive any of the proceeds from the sale of the securities by the Selling Stockholders. We will pay the expenses associated with registering the sales by the Selling Stockholders other than any underwriting discounts and commissions, as described in more detail in the section titled "*Use of Proceeds*" appearing in this prospectus beginning on page 54.

Of the 130,044,756 shares of Common Stock that may be offered or sold by the Selling Stockholders identified in this prospectus, certain of our Selling Stockholders are subject to lock-up restrictions with respect to 105,044,756 of those shares pursuant to our amended and restated bylaws until March 7, 2022.

Our Common Stock is listed on The New York Stock Exchange ("NYSE") under the symbol "GWH". On March 3, 2022, the last quoted sale price for our Common Stock as reported on NYSE was $4.89 per share.

We are an "emerging growth company," as defined under the federal securities laws, and, as such, may elect to comply with certain reduced public company reporting requirements for this prospectus and for future filings.

Investing in our securities involves a high degree of risk. Before buying any securities, you should carefully read the discussion of the risks of investing in our securities in "*Risk Factors*" beginning on page 12 of this prospectus.

You should rely only on the information contained in this prospectus or any prospectus supplement or amendment hereto. We have not authorized anyone to provide you with different information.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

Prospectus dated , 2022

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ABOUT THIS PROSPECTUS

Pursuant to Rule 429 under the Securities Act of 1933, as amended (the “Securities Act”), this prospectus is a combined prospectus relating to (a) up to 125,952,180 shares of our Common Stock previously registered for resale pursuant to the registration statement on Form S-1 initially filed with the Securities and Exchange Commission (the “SEC”) on November 3, 2021 (File No. 333-260693) and (b) of up to 4,092,576 shares of our Common Stock previously registered pursuant to the registration statement on Form S-4 initially filed with the SEC on June 21, 2021 (File No. 333-257232).

You should rely only on the information contained in this prospectus or in any applicable prospectus supplement prepared by us or on our behalf. Neither we nor the Selling Stockholders have authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. Neither we nor the Selling Stockholders are making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus is accurate only as of the date on the front cover of this prospectus. Our business, financial condition, results of operations and prospects may have changed since that date.

This prospectus is part of a registration statement on Form S-1 that we filed with the SEC using the “shelf” registration process. Under this shelf registration process, the Selling Stockholders hereunder may, from time to time, sell the securities offered by them described in this prospectus. Additionally, under the shelf process, in certain circumstances, we may provide a prospectus supplement that will contain certain specific information about the terms of a particular offering by one or more of the Selling Stockholders. We will not receive any proceeds from the sale by such Selling Stockholders of the securities offered by them described in this prospectus.

We may also provide a prospectus supplement or post-effective amendment to the registration statement to add information to, or update or change information contained in, this prospectus. You should read both this prospectus and any applicable prospectus supplement or post-effective amendment to the registration statement together with the additional information to which we refer you in the section of this prospectus titled “*Where You Can Find Additional Information*.”

Unless the context indicates otherwise, references to “we”, “us” and “our” refer to ESS Tech, Inc., a Delaware corporation, and its consolidated subsidiaries following the Business Combination (as defined herein).

The ESS Tech design logo and the ESS mark appearing in this prospectus are the property of ESS Tech, Inc. Trade names, trademarks and service marks of other companies appearing in this prospectus are the property of their respective holders. We have omitted the ® and TM designations, as applicable, for the trademarks used in this prospectus.

Within this prospectus, we reference information and statistics regarding the industries in which we operate. We have obtained this information and these statistics from various independent third-party sources, including independent industry publications, reports by market research firms and other independent sources. Some data and other information contained in this prospectus are also based on management’s estimates and calculations, which are derived from our review and interpretation of internal surveys and independent sources. Data regarding the industries in which we compete and our market position and market share within these industries are inherently imprecise and are subject to significant business, economic and competitive uncertainties beyond our control, but we believe they generally indicate size, position and market share within this industry. While we believe such information is reliable, we have not independently verified any third-party information. While we believe our internal company research and estimates are reliable, such research and estimates have not been verified by any independent source. In addition, assumptions and estimates of our and our industries’ future performance are necessarily subject to a high degree of uncertainty and risk due to a variety of factors. These and other factors could cause our future performance to differ materially from our assumptions and estimates. As a result, you should be aware that market, ranking and other similar industry data included in this prospectus, and estimates and beliefs based on that data, may not be reliable. Neither we nor the Selling Stockholders can guarantee the accuracy or completeness of any such information contained in this prospectus.

FREQUENTLY USED TERMS

In this document:

"2014 Plan" means the ESS 2014 Equity Incentive Plan, as amended, supplemented or modified from time to time.

"2021 Employee Stock Purchase Plan" means the ESS Tech, Inc. 2021 Employee Stock Purchase Plan, as amended, supplemented or modified from time to time.

"2021 Plan" means the ESS 2021 Equity Incentive Plan, as amended, supplemented or modified from time to time.

"**BEV**" means Breakthrough Energy Ventures, LLC.

"**Business Combination**" means the transactions contemplated by the Merger Agreement.

"**Closing**" means the consummation of the Business Combination.

"**Closing Date**" means October 8, 2021, the date on which the Closing occurred.

"**Code**" means the Internal Revenue Code of 1986, as amended.

"**Common Stock**" means ESS' common stock, par value $0.0001 per share.

"**Companies Act**" means the Companies Act (2021 Revision) of the Cayman Islands as the same may be amended from time to time.

"**DGCL**" means the General Corporation Law of the State of Delaware.

"**ESPP**" means the ESS Tech, Inc. 2021 Employee Stock Purchase Plan, as amended, supplemented or modified from time to time.

"**ESS**" or the "**Company**" means ESS Tech, Inc., a Delaware corporation (formerly known as ACON S2 Acquisition Corp.).

"**ESS Board**" means the board of directors of ESS.

"**Exchange Act**" means the U.S. Securities Exchange Act of 1934, as amended.

"**GAAP**" means United States generally accepted accounting principles.

"**Investment Company Act**" means the Investment Company Act of 1940, as amended.

"**JOBS Act**" means the Jumpstart Our Business Startups Act of 2012, as amended.

"**Legacy ESS**" means ESS Tech, Inc., a Delaware corporation, prior to the Closing.

"**Merger**" means the merging of Merger Sub with and into Legacy ESS with Legacy ESS surviving the Merger as a wholly-owned subsidiary of STWO.

"**Merger Agreement**" means the Agreement and Plan of Merger, dated as of May 6, 2021, among Legacy ESS, ESS and Merger Sub.

"**Merger Sub**" means SCharge Merger Sub, Inc., a Delaware corporation and wholly-owned direct subsidiary of ESS.

"**Merger Sub Common Stock**" means Merger Sub's common stock, par value $0.0001 per share.

"**NYSE**" means the New York Stock Exchange.

"**PIPE Financing**" means the sale of PIPE Shares to the PIPE Investors, for a purchase price of $10.00 per share and an aggregate purchase price of $250 million, in a private placement.

"**PIPE Investors**" means the purchasers of the PIPE Shares.

"**PIPE Shares**" means an aggregate of 25,000,000 shares of Common Stock issued to PIPE Investors in the PIPE Financing.

"**Private Placement Warrants**" means the warrants to purchase shares of Common Stock purchased by the Sponsor in a private placement in connection with the STWO IPO, exercisable for one share of Common Stock at a price of $11.50 per share, subject to adjustments.

"**Public Warrants**" means the warrants to purchase shares of Common Stock that are publicly traded on the NYSE under the ticker symbol "GWH.W," exercisable for one share of Common Stock at a price of $11.50 per share, subject to adjustments.

"**SBE**" means SB Energy Global Holdings One Ltd.

"**SEC**" means the U.S. Securities and Exchange Commission.

"**Securities Act**" means the U.S. Securities Act of 1933, as amended.

"**Sponsor**" means ACON S2 Sponsor, L.L.C., a Delaware limited liability company.

"**STWO**" means ACON S2 Acquisition Corp., a Cayman Islands exempted company.

"**STWO IPO**" means STWO's initial public offering of Class A ordinary shares, consummated on September 21, 2020.

"**Warrants**" means the Public Warrants and Private Placement Warrants.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements within the meaning of the federal securities laws, which statements involve substantial risks and uncertainties. Forward-looking statements generally relate to our future financial performance, strategy, future operations, financial position, estimated revenues, and losses, projected costs, prospects, plans and objectives of management. In some cases, you can identify forward-looking statements because they contain words such as “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intends,” “may,” “might,” “plan,” “possible,” “potential,” “predict,” “project,” “should,” “will,” “would” or the negative of these words or other similar terms or expressions that concern our expectations, strategy, plans or intentions. Forward-looking statements contained in this prospectus include statements about:

- our financial and business performance, including financial projections and business metrics;
- changes in our strategy, future operations, financial position, estimated revenues and losses, projected costs, prospects and plans;
- the implementation, market acceptance and success of our technology implementation and business model;
- our ability to scale in a cost-effective manner;
- developments and projections relating to our competitors and industry;
- the impact of health epidemics, including the COVID-19 pandemic, on our business and the actions we may take in response thereto;
- our expectations regarding our ability to obtain and maintain intellectual property protection and not infringe on the rights of others;
- expectations regarding the time during which we will be an emerging growth company under the JOBS Act;
- our future capital requirements and sources and uses of cash;
- our ability to obtain funding for our operations;
- our business, expansion plans and opportunities;
- our relationships with third-parties, including our suppliers;
- the outcome of any known and unknown litigation and regulatory proceedings;
- our ability to successfully deploy the proceeds from the Merger; and
- our ability to manage other risks and uncertainties set forth in the section titled “Risk Factors” beginning on page 12 of this prospectus. We caution you that the foregoing list does not contain all of the forward-looking statements made in this prospectus.

You should not rely upon forward-looking statements as predictions of future events. We have based the forward-looking statements contained in this prospectus primarily on our current expectations and projections about future events and trends that we believe may affect our business, operating results, financial condition and prospects. The outcome of the events described in these forward-looking statements is subject to risks, uncertainties and other factors, including those described in the section titled “*Risk Factors*” and elsewhere in this prospectus. Moreover, we operate in a very competitive and rapidly changing environment. New risks and uncertainties emerge from time to time and it is not possible for us to predict all risks and uncertainties that could have an impact on the forward-looking statements contained in this prospectus. We cannot assure you that the results, events and circumstances reflected in the forward-looking statements will be achieved or occur, and actual results, events or circumstances could differ materially from those described in the forward-looking statements.

Neither we nor the Selling Stockholders nor any other person assumes responsibility for the accuracy and completeness of any of these forward-looking statements. Moreover, the forward-looking statements made in this prospectus relate only to events as of the date on which the statements are made. We undertake no obligation to update any forward-looking statements made in this prospectus to reflect events or circumstances after the date of this prospectus or to reflect new information or the occurrence of unanticipated events, except as required by law. You should not place undue reliance on our forward-looking statements. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments we may make.

PROSPECTUS SUMMARY

The following summary highlights information contained elsewhere in this prospectus. It does not contain all the information you should consider before investing in our Common Stock. You should read this entire prospectus carefully, including the sections titled "Risk Factors," "Business," "Management's Discussion and Analysis of Financial Condition and Results of Operations," "Where You Can Find Additional Information," and our consolidated financial statements and related notes included elsewhere in this prospectus, before making an investment decision. In this prospectus, unless the context requires otherwise, all references to "we," "our," "us," "ESS," the "Registrant," and the "Company" refer to ESS Tech, Inc. and its consolidated subsidiaries.

ESS TECH, INC.

ESS is a long-duration energy storage company specializing in iron flow battery technology. We design and produce long-duration batteries predominantly using earth-abundant materials that we believe can be cycled over 20,000 times without capacity fade. Because we designed our batteries to operate using an electrolyte of primarily salt, iron and water, they are non-toxic and substantially recyclable. Our batteries provide flexibility to grid operators and energy assurance for commercial and industrial customers. Our technology addresses energy delivery, duration and cycle-life in a single battery platform that compares favorably to lithium-ion batteries, the most widely deployed alternative technology. Using our iron flow battery technology, we are developing two products, each of which is able to provide reliable, safe, long-duration energy storage. As of December 31, 2021, we did not have any second-generation products fully deployed and we had not yet met revenue recognition criteria, but we began shipping our second-generation of Energy Warehouses in the third quarter of 2021 and were in the process of installing and commissioning such units. With each battery deployed, we will further our mission to accelerate the transition to a zero-carbon energy future with increased grid reliability.

Our batteries are non-flammable, non-toxic, do not have explosion risk and can operate in temperatures ranging from -5°C to 50°C without requiring heating or cooling systems, so they can be located in sites where lithium-ion batteries cannot be placed due to fire, chemical or explosion risks. In addition, our batteries are environmentally sustainable, predominantly utilizing easily sourced materials and recyclable components.

Our batteries and technology can be purchased with a ten-year performance guarantee which is backed by an investment-grade, ten-year warranty and project insurance policies from Munich Reinsurance Company ("Munich Re"), a leading provider of reinsurance, primary insurance and insurance-related risk solutions, which stands behind the performance of our energy storage products. To our knowledge, we are the first long-duration energy storage company to receive this type of insurance, which provides a warranty backstop for our proprietary flow battery technology, supporting our performance guarantee regardless of project size or location and de-risking the technology for our customers. We have also collaborated with Munich Re to develop separate project finance coverage. This allows us to secure project financing when installing our energy storage products, reducing the cost of capital for deployment, and which can be extended in order to provide long-term assurance of project performance to our customers, investors and lenders. Bonding and surety capital are provided through Aon and OneBeacon Insurance Group ("OneBeacon") as well as qualification from the U.S. Export-Import Bank, which provides additional product assurance. We believe each of these elements allows us to increase our total addressable market, as customers have reduced technology risk, financing risk and importing risk.

We believe that as we scale up our production, our battery technology will be priced competitively. When comparing products on a lifetime levelized cost of storage ("LCOS") basis, which is the total cost of the investment in an electricity storage technology divided by its cumulative delivered electricity, we expect our batteries to be less expensive on a LCOS basis than lithium-ion alternatives for storage durations greater than four hours, which we believe is the operational maximum for lithium-ion technologies. Our cost advantage increases as the storage duration extends beyond four hours because of the scalable nature of our technology.

Energy storage solutions of various sizes and durations must be installed throughout global electrical grids to enable decarbonization in line with global climate objectives. Our energy storage products are intended to supply long-duration power across this expanding spectrum of use cases. As described below in the section entitled "*Business—Our Technology and Products*," we believe our energy storage products will be capable of addressing customer needs across multiple use cases and markets. We are an early mover in long-duration energy storage and we believe we will enable more rapid implementation of renewable energy while also improving grid stability. The safety, flexibility and durability of our energy storage products enable customers to use them in nearly any location globally. Examples of use cases range from localized energy storage at commercial and industrial sites to grid-scale use cases, such as peaker plant replacement and grid stabilization.

We are developing two products that provide reliable, safe, long-duration energy storage. Our first energy storage product, the Energy Warehouse, is a "behind-the-meter" solution (meaning that it is based at the energy consumer's location, or behind the service demarcation with the utility). The Energy Warehouse offers energy storage ranging from 50 kilowatts ("kW") to 90 kW and four to 12-hour duration. A 50 kW system, when used for eight hours of storage, can power the equivalent of 20 homes with a total output of 400 kilowatt-hours ("kWh"). Energy Warehouses are deployed in shipping container units, allowing for a fully turnkey system that can be installed easily at nearly any customer's site. Potential use cases for Energy Warehouses include microgrids, peaker plant replacement on a small-scale and commercial and industrial ("C&I") demand. For customers who require additional energy storage capacity, multiple units can be added to the same system. The first generation of our Energy Warehouse was deployed in 2015. Since then, all of our first-generation units have been returned to us except for two where the prototype trials continue. As of December 31, 2021, we did not have any second-generation products fully deployed and we had not yet met revenue recognition criteria, but we began shipping our second-generation of Energy Warehouses in the third quarter of 2021 and were in the process of installing and commissioning such units.

Our second, larger scale energy storage product, the Energy Center, is a "front-of-the-meter" solution, meaning that it is designed for use in front of the service demarcation with the utility. Energy Center solutions are designed specifically for utilities, independent power producers ("IPPs") and large C&I consumers. The Energy Center offers a fully customizable configuration range and is installed to meet our customers' power, energy and duration needs. We anticipate energy storage capacities starting at 3 megawatts ("MW") and six- to 12-hour duration. The Energy Center's modular design allows the product to scale to meet IPP and utility-scale applications, including large renewable-plus-storage projects and standalone energy storage projects. The modular design of the Energy Center also allows for it to be flexibly configured to meet varying power and energy capacity needs and deployment in a variety of settings.

Risk Factors Summary

Our business is subject to numerous risks and uncertainties, including those highlighted in the section titled "*Risk Factors*" immediately following this prospectus summary. The following is a summary of the principal risks we face:

- Our expectations for future operating and financial results and market growth rely in large part upon assumptions and analyses developed by us. If these assumptions or analyses prove to be incorrect, our actual operating results may be materially different from our anticipated results;
- We face significant barriers in our attempts to produce our energy storage products, our energy storage products are still under development, and we may not be able to successfully develop our energy storage products at commercial scale. If we cannot successfully overcome those barriers, our business will be negatively impacted and could fail;
- We are in the early stage of commercialization. In addition, certain aspects of our technology have not been fully field tested. If we are unable to develop our business and effectively commercialize our energy storage products as anticipated, we may not be able to generate revenues or achieve profitability;
- We depend on third-party suppliers for the development and supply of key raw materials and components for our energy storage products. In 2021 and 2020, we saw significant disruptions to key supply chains, shipping times, manufacturing times, and associated costs;
- Continued delays in our supply chain or the inability to procure needed raw materials and components could further harm our ability to manufacture and commercialize our energy storage products;

- We may experience delays, disruptions, or quality control problems in our manufacturing operations;
- Our ability to expand depends on our ability to hire, train and retain an adequate number of manufacturing employees, in particular employees with the appropriate level of knowledge, background and skills;
- We have experienced disruption related to COVID-19, which continues to cause significant uncertainty;
- We may be unable to adequately control the costs associated with our operations and the components necessary to build our energy storage products, and if we are unable to reduce our cost structure and effectively scale our operations in the future, our ability to become profitable may be impaired;
- We rely on complex machinery for our operations, and the production of our iron flow batteries involves a significant degree of risk and uncertainty in terms of operational performance and costs;
- We have a history of losses and have to deliver significant business growth to achieve sustained, long-term profitability and long-term commercial success;
- Our warranty insurance provided by Munich Re is important to many potential customers. Should we be unable to maintain our relationship with Munich Re and be unable to find a similar replacement, demand for our products may suffer;
- Failure to deliver the benefits offered by our technology, or the emergence of improvements to competing technologies, could reduce demand for our energy storage products and harm our business;
- Our plans are dependent on the development of a market acceptance of our products and the development of a market for long-duration batteries;
- We may face regulatory challenges to or limitations on our ability to sell our Energy Centers and Energy Warehouses directly in certain markets. Expanding operations internationally could expose us to additional risks;
- If we fail to protect, or incur significant costs in defending, our intellectual property and other proprietary rights, then our business and results of operations could be materially harmed; and
- As we endeavor to expand our business, we will incur significant costs and expenses, which could outpace our cash reserves. Unfavorable conditions or disruptions in the capital and credit markets may adversely impact business conditions and the availability of credit.

Emerging Growth Company Status

We are an "emerging growth company" as defined in Section 2(a) of the Securities Act and have elected to take advantage of the benefits of the extended transition period for new or revised financial accounting standards. We expect to remain an emerging growth company at least through the end of the 2022 fiscal year and expect to continue to take advantage of the benefits of the extended transition period, although we may decide to early adopt such new or revised accounting standards to the extent permitted by such standards. This may make it difficult or impossible to compare our financial results with the financial results of another public company that is either not an emerging growth company or is an emerging growth company that has chosen not to take advantage of the extended transition period exemptions because of the potential differences in accounting standards used.

Additional Information

On October 8, 2021 (the "Closing Date"), ESS Tech, Inc., a Delaware corporation ("ESS"), f/k/a ACON S2 Acquisition Corp., a Cayman Islands exempted company ("STWO"), consummated the previously announced merger pursuant to that certain Agreement and Plan of Merger, dated May 6, 2021 (the "Merger Agreement"), by and among STWO, SCharge Merger Sub, Inc., a Delaware corporation and wholly owned direct subsidiary of STWO ("Merger Sub"), and ESS Tech, Inc., a Delaware corporation ("Legacy ESS") following the approval at a special meeting of the stockholders of STWO held on October 5, 2021 (the "Special Meeting").

Pursuant to the terms of the Merger Agreement, STWO deregistered by way of continuation under the Cayman Islands Companies Act (2021 Revision) and registered as a corporation in the State of Delaware under Part XII of the Delaware General Corporation Law (the "Domestication"), and a business combination between STWO and ESS was effected through the merger of Merger Sub with and into Legacy ESS, with ESS surviving as a wholly owned subsidiary of STWO (together with the other transactions described in the Merger Agreement, the "Merger"). On the Closing Date, the registrant changed its name from "ACON S2 Acquisition Corp" to "ESS Tech, Inc."

On October 11, 2021, our Common Stock and Public Warrants, formerly those of STWO, began trading on the New York Stock Exchange ("NYSE") under the ticker symbols "GWH" and "GWH.W," respectively.

Our principal executive offices are located at 26440 SW Parkway Ave., Bldg. 83, Wilsonville, Oregon 97070, and our telephone number is (855) 423-9920.

Our website address is *https://essinc.com*. The information on, or that can be accessed through, our website is not part of this prospectus, and you should not consider information contained on our website in deciding whether to purchase shares of our Common Stock.

The Offering

Shares of Common Stock offered by the Selling Stockholders hereunder	130,044,756 shares.
Use of proceeds	We will not receive any proceeds from the sale of our Common Stock offered by the Selling Stockholders. See the section of this prospectus titled "Use of Proceeds" appearing on page 54 of this prospectus for more information.
Risk factors	See the section titled "Risk Factors" beginning on page 12 of this prospectus and other information included in this prospectus for a discussion of factors that you should consider carefully before deciding to invest in our Common Stock.
NYSE symbol	"GWH" for our Common Stock.
Lock-up restrictions	Of the 130,044,756 shares of Common Stock that may be offered or sold by the Selling Stockholders identified in this prospectus, certain of our Selling Stockholders are subject to lock-up restrictions with respect to 105,044,756 of those shares (the "Lock-Up Shares"), pursuant to our amended and restated bylaws. Pursuant to our amended and restated bylaws, the Lock-Up Shares will be locked up until March 7, 2022.

RISK FACTORS

Investing in our Common Stock involves a high degree of risk. Before making an investment decision, you should consider carefully the risks and uncertainties described below, together with all of the other information in this prospectus, including the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" beginning on page *56* *of this prospectus and our consolidated financial statements and related notes thereto included elsewhere in this prospectus. Our business, operating results, financial condition or prospects could also be harmed by risks and uncertainties not currently known to us or that we currently do not believe are material. If any of the risks actually occur, our business, operating results, financial condition and prospects could be adversely affected. In that event, the market price of our Common Stock could decline, and you could lose part or all of your investment. References to "we," "our," or "us" generally refer to ESS, unless otherwise specified.*

Risks Related to Our Technology, Products and Manufacturing

Our expectations for future operating and financial results and market growth rely in large part upon assumptions and analyses developed by us. If these assumptions or analyses prove to be incorrect, our actual operating results may be materially different from our anticipated results.

We operate in rapidly changing and competitive markets and our expectations for future performance are subject to the risks and assumptions made by management with respect to our industry. Operating results are difficult to predict because they generally depend on our assessment of the timing of adoption of our technology and energy storage products, which is uncertain. Expectations for future performance are also subject to significant economic, competitive, industry and other uncertainties and contingencies, all of which are difficult or impossible to predict and many of which are beyond our control, and subsequent developments may affect such expectations. As discussed further elsewhere in this prospectus, any future sales and related future cash flows may not be realized in full or at all. Furthermore, our planned expansion into new revenue streams such as franchising opportunities for our energy storage products may never be realized or achieve commercial success, whether because of lack of market adoption of our energy storage products, competition or otherwise. Important factors that may affect the actual results and cause our operating and financial results and market growth expectations to not be achieved include risks and uncertainties relating to our business, industry performance, the regulatory environment, general business and economic conditions and other factors described under the section entitled "Cautionary Note Regarding Forward-Looking Statements" in this prospectus.

In addition, expectations for future performance also reflect assumptions that are subject to change and do not reflect revised prospects for our business, changes in general business or economic conditions or any other transaction or event that has occurred or that may occur and that was not previously anticipated. In addition, long-term expectations by their nature become less predictive with each successive year. There can be no assurance that our future financial condition or results of operations will be consistent with our expectations or with the expectations of investors or securities research analysts, which may cause the market price of our Common Stock to decline. If actual results differ materially from our expectations, we may be required to make adjustments in our business operations that may have a material adverse effect on our financial condition and results of operations.

We face significant barriers in our attempts to produce our energy storage products, our energy storage products are still under development, and we may not be able to successfully develop our energy storage products at commercial scale. If we cannot successfully overcome those barriers, our business will be negatively impacted and could fail.

Producing long-duration iron flow batteries that meet the requirements for wide adoption by commercial and utility-scale energy storage applications is a difficult undertaking. We are still in the early stage of commercialization and face significant challenges in completing the development of our containerized energy storage products and in producing our energy storage products in commercial volumes. We are currently in pre-production for our second-generation S200 iron flow battery design, which will be incorporated into our Energy Warehouses and Energy Centers. Some of the development challenges that could prevent the introduction of our iron flow batteries include difficulties with (i) increasing the volume, yield, reliability and uniformity of the porous polyethylene separators and cells housed within the power module of our batteries, (ii) increasing the size and layer count of the multi-layer cells within the power module of our batteries, (iii) increasing manufacturing capacity to produce the volume of cells needed for our energy storage products, (iv) installing and optimizing higher volume manufacturing equipment, (v) packaging our batteries to ensure adequate cycle life, (vi) cost reduction, (vii) the completion of rigorous and challenging battery safety testing required by our customers or partners, including but not limited to, performance, life and abuse testing and (viii) the development of the final manufacturing processes.

Our Energy Warehouses are in the development stage. As of December 31, 2021, we did not have any second-generation S200 iron flow batteries deployed and there may be significant yield, cost, performance and manufacturing process challenges to be solved prior to commercial production and use. We are likely to encounter engineering challenges as we increase the dimensions, reduce the thickness and increase the volume of our batteries. If we are not able to overcome these barriers in developing and producing our iron flow batteries, our business could fail.

Our second-generation energy storage products and S200 batteries are manufactured on our first-generation (“Gen I”) automation line. The Gen I automation line requires qualified labor to inspect the parts to ensure proper assembly. Lack of qualified labor to inspect our assemblies may slow our production and impact our production costs and schedule. We have commissioned third parties to develop more sophisticated automation lines to minimize the required skilled labor, however, delays in production and delivery of the new second-generation manufacturing line are not in our control. If we experience delivery or installation delays under our customer contracts, we could experience order cancellations and lose business.

Even if we complete development and achieve volume production of our iron flow batteries, if the cost, performance characteristics or other specifications of the batteries fall short of our targets, our sales, product pricing and margins would likely be adversely affected.

We are in the early stage of commercialization. In addition, certain aspects of our technology have not been fully field tested. If we are unable to develop our business and effectively commercialize our energy storage products as anticipated, we may not be able to generate revenues or achieve profitability.

The growth and development of our operations will depend on the successful commercialization and market acceptance of our energy storage products and our ability to manufacture products at scale while timely meeting customers’ demands. There is no certainty that, once shipped, our products will operate as expected, and we may not be able to generate sufficient customer confidence in our latest designs and ongoing product improvements. There are inherent uncertainties in our ability to predict future demand for our energy storage products and, as a consequence, we may have inadequate production capacity to meet demand, or alternatively, have excess available capacity. Our inability to predict the extent of customer adoption of our proprietary technologies in the already-established traditional energy storage market makes it difficult to evaluate our future prospects.

As of December 31, 2021, we did not have any second-generation products fully deployed and we had not yet met revenue recognition criteria, but we began shipping our second-generation Energy Warehouses in the third quarter of 2021 and were in the process of installing and commissioning such units. Any significant problems in the production process could result in unplanned increases to production costs and production delays. In addition, although we believe our iron flow battery technology is field tested and ready for sale, there are no assurances that our proprietary technologies, such as our Proton Pump, will operate as expected and with consistency. Our Energy Center product is still being developed and has not been completely designed or produced. In addition, certain operational characteristics of our Energy Warehouse or Energy Center products with S200 batteries, such as cyclability with no degradation, have never been witnessed in the field. If our batteries are damaged during shipment, we may be required to replace such units. Once our Energy Warehouse or Energy Center products with S200 batteries are installed and used, we may discover further aspects of our technology that require improvement. Any significant improvement needed to our technology could delay existing contracts and new sales, result in order cancellations and negatively impact the market’s acceptance of our technology. If we experience significant delays or order cancellations, or if we fail to develop and install our energy storage products in accordance with contract specifications, then our operating results and financial condition could be adversely affected. In addition, there is no assurance that if we alter or change our energy storage products in the future, that the demand for these new products will develop, which could adversely affect our business and any possible revenues. If our energy storage products are not deemed desirable and suitable for purchase and we are unable to establish a customer base, we may not be able to generate revenues or attain profitability.

We depend on third-party suppliers for the development and supply of key raw materials and components for our energy storage products. We also depend on vendors for the shipping of our energy storage products. Continued delays in our supply chain and shipments could further harm our ability to manufacture and commercialize our energy storage products.

We depend on third-party suppliers for the development and supply of key raw materials and components for our energy storage products, including power module components (e.g., bipolar plates, frames, end plates and separators), shipping containers and chemicals. We will need to maintain and significantly grow our access to key raw materials and control our related costs. We use various raw materials and components to construct our energy storage products, including polypropylene, iron and potassium chloride, that are critical to our manufacturing process. We also rely on third-party suppliers for injected molded parts, and power electronics suppliers must undergo a qualification process, which takes four to 12 months.

The cost of electronic components for our iron flow batteries, whether manufactured by our suppliers or by us, depends in part upon the prices and availability of raw materials. In recent periods, we have seen an increase in costs for a wide range of materials and components. Additionally, supply chain disruptions and access to materials have impacted our vendors and suppliers' ability to deliver materials and components to us in a timely manner. In 2020 and 2021, we saw significant disruptions to key supply chains, shipping times, shipping availability, manufacturing times, and associated costs, both with respect to the sourcing of supplies and the delivery of our products. We experienced and continue to experience delays to deliveries, vendor quality issues, as well as increases in our supply costs of many of our key components, including polypropylene, resin, power electronics, circuit board components and shipping containers. We expect such delays to continue in 2022. It is also possible that the semiautomated and automated production lines that we have contracted for the second quarter of 2022 and the fourth quarter of 2022, respectively, may also face delays in delivery and/or installation due to similar supply chain issues. If these issues persist, they may further delay our ability to produce our products and to recognize revenue, particularly for our larger scale Energy Center products (see also "*Management's Discussion and Analysis of Financial Condition and Results of Operations—Components of Results of Operations—Revenue*"). Any delay or impediment to our ability to recognize revenue for any given period could materially adversely affect our results of operations and the market price of our Common Stock.

We expect prices for these materials to continue to fluctuate and their available supply may be unstable, depending on market conditions and global demand for these materials, including as a result of increased global production of batteries and energy storage products. For example, our Proton Pump is manufactured with certain raw materials, which not only include precious and non-precious metals but also carbon, graphite and thermoplastics, the prices of which have historically fluctuated on a cyclical basis and depend on a variety of factors over which we have no control. We have also experienced increased prices and/or inconsistent quality and supply of other electrical components and power module components including frames, end plates and separators. Any reduced availability of these materials may impact our access to cells and any further increases in their prices may reduce our profitability if we cannot recoup the increased costs through increased prices for our products. In addition, we utilize shipping containers to house our iron flow batteries within our Energy Warehouses and Energy Centers. Recent shipping delays caused by various economic, weather and COVID-19 pandemic effects have created a shortage in shipping containers and other supply chain delays. We have limited visibility into these supply chain disruptions and increased shipping container costs. Given that our energy storage products rely on the availability of shipping containers, such shortages may reduce our profitability if we are not able to pass the increased costs to our customers. Moreover, any such attempts to increase product prices may harm our brand, prospects and operating results.

In addition, the conflict between Russia and Ukraine could lead to disruption, instability and volatility in global markets and industries that could negatively impact our operations and our supply chain. The U.S. government and other governments have already imposed severe sanctions and export controls against Russia and Russian interests and may yet impose additional sanctions and controls. The impact of these measures, as well as potential responses to them by Russia, is currently unknown and they could adversely affect our business, supply chain, partners or customers.

We depend on third-party vendors for the shipping of our energy storage products. Recent conditions have also created disruptions in the logistics sector making it more challenging to find trucks to ship our products. The failure to deliver our products in a timely fashion or within budget may also harm our brand, prospects and operating results.

We do not know whether we will be able to maintain long-term supply relationships with our critical suppliers, or secure new long-term supply relationships on terms that will allow us to achieve our objectives, if at all.

We continually evaluate new suppliers, and we are currently qualifying several new suppliers. However, there are a limited number of suppliers for some of the key components of our products and we have, to date, fully qualified only a very limited number of such suppliers. Therefore, we have limited flexibility in changing suppliers. For example, we currently only have one supplier of bipolar plates, which is a critical component of our iron flow batteries. This vendor is limited to supplying approximately 16 battery stacks per week, which is sufficient for our immediate needs. However, we will need to find additional suppliers of bipolar plates in order to meet our manufacturing needs as we grow. In addition, we have had issues with inconsistent quality and supply of other key power module components. We do not know whether we will be able to maintain long-term supply relationships with our critical suppliers, or secure new long-term supply relationships on terms that will allow us to achieve our objectives, if at all. A supplier’s failure to develop and supply components in a timely manner or to supply components that meet our quality, quantity or cost requirements or our technical specifications, or our inability to obtain alternative sources of these components on a timely basis or on terms acceptable to us, could each harm our ability to manufacture and commercialize our energy storage products. In addition, to the extent the processes that our suppliers use to manufacture components are proprietary, we may be unable to obtain comparable components from alternative suppliers, all of which could harm our business, financial condition and results of operations.

In the long term, we intend to supplement electronic components from our suppliers by manufacturing them ourselves, which we believe will be more efficient, manufacturable at greater volumes and cost-effective than currently available electronic components. However, our efforts to develop and manufacture such electronic components have required and may require significant investments, and there can be no assurance that we will be able to accomplish this in the timeframes that we have planned or at all. If we are unable to do so, we may have to curtail our iron flow battery and energy storage product production or procure additional raw materials and electronic components from suppliers at potentially greater costs, either of which may harm our business and operating results.

We may experience delays, disruptions, or quality control problems in our manufacturing operations.

Our manufacturing and testing processes will require significant technological and production process expertise and modification to support our projected business objectives. Any change in our processes could cause one or more production errors, requiring a temporary suspension or delay in our production line until the errors can be researched, identified, and properly addressed and rectified. This may occur particularly as we introduce new products, modify our engineering and production techniques, and/or expand our capacity. In addition, our failure to maintain appropriate quality assurance processes could result in increased product failures, loss of customers, increased warranty reserves, increased production, and logistical costs and delays. Any of these developments could have a material adverse effect on our business, financial condition and results of operations.

The ongoing COVID-19 pandemic has caused significant uncertainty in the United States and global economies as well as the markets we serve and could adversely affect our business, financial condition and results of operations.

COVID-19 cases (including the spread of variants and mutant strains, such as the omicron variant) continue to surge in certain parts of the world and have resulted in authorities implementing numerous measures to contain the virus, including travel bans and restrictions, quarantines, shelter-in-place orders, and business limitations and shutdowns. We remain unable to accurately predict the full impact that COVID-19 will have on our results of operations, financial condition, liquidity and cash flows due to numerous uncertainties, including the duration and severity of the pandemic and containment measures. Our compliance with containment and mitigation measures materially impacted our day-to-day operations, and there can be no guaranty that the pandemic will not disrupt our business and operations or impair our ability to implement our business plan successfully.

To support the health and well-being of our employees, customers, partners and communities, in March 2020, we temporarily suspended operations at our Wilsonville, Oregon manufacturing facility, and also required all of our non-essential employees to work remotely. This represented approximately 20% of our workforce at the time. While we resumed operations in the manufacturing facility within several weeks, we instituted a split schedule shift, staggered workdays, and significant limitations on various areas of our physical building. In addition, we understand that the employees of many of our customers are working remotely, which may delay the timing of some orders as well as shipments and cash collections. There can be no guaranty that disruptions to our operations caused by COVID-19, such as staff not being allowed to enter our manufacturing facility in Wilsonville, Oregon or our supply chain being disrupted, will not result in further inefficiencies, delays and additional costs in our product development, sales, marketing, and customer service efforts that we cannot fully mitigate through remote or other alternative work arrangements.

More generally, the pandemic raises the possibility of an extended global economic downturn and has caused volatility in financial markets, which could affect demand for our products and services and impact our results and financial condition even after the pandemic is contained. For example, we may be unable to collect receivables from those customers significantly impacted by COVID-19. Also, a decrease in orders in a given period could negatively affect our revenues in future periods, particularly if experienced on a sustained basis. The pandemic may also have the effect of heightening many of the other risks described in these "Risk Factors", particularly those risks associated with our customers and supply chain.

We may be unable to adequately control the costs associated with our operations and the components necessary to build our energy storage products, and if we are unable to reduce our cost structure and effectively scale our operations in the future, our ability to become profitable may be impaired.

Our ability to become profitable in the future will not only depend on our ability to successfully market our iron flow batteries, Energy Centers and Energy Warehouses, but also to control costs to manufacture our iron flow batteries, Energy Centers, and Energy Warehouses. Our S100 battery stack design utilizes O-rings to seal against overboard and crossover leakage from iron plating reactions. This process was expensive with respect to materials, labor and quality compared to our second-generation S200 design. Our S200 battery stack design uses a glued-up design, eliminating the need for O-rings, which will ultimately result in a more reliable stack design and cost savings. However, we expect our costs to increase in the near term as we implement these design changes with our vendors. If we are unsuccessful in our cost-reduction plans or if we experience design or manufacturing defects or other failures of our S200 battery as result of these design changes, we could incur significant manufacturing and re-engineering costs. In addition, we will require significant capital to further develop and grow our business and expect to incur significant expenses, including those relating to research and development, raw material procurement, leases, sales and distribution as we build our brand and market our products, and general and administrative costs as we scale our operations. If we are unable to cost-efficiently design, manufacture, market, sell and distribute our energy storage products, our margins, profitability and prospects would be materially and adversely affected.

In addition, our Proton Pump is manufactured with certain raw materials, such as platinum, the prices of which have historically fluctuated on a cyclical basis and depend on a variety of factors over which we have no control. Substantial increases in the prices of raw materials would increase our operating costs and could adversely affect our profitability. The price of oil likewise fluctuates on a cyclical basis and may be subject to sustained cost pressure given geopolitical uncertainty, which in turn could affect the cost of making, distributing and transporting our products. If we are unable to pass any such increased costs to our customers, this could have a material adverse effect on our business, financial condition and results of operations.

In order to achieve our business plan, we must continue to reduce the manufacturing and development costs for our iron flow batteries, Energy Centers and Energy Warehouses to expand our market. Additionally, certain of our existing customer contracts were entered into based on projections regarding costs reductions that assume continued advances in our manufacturing and services processes that we may be unable to realize. The cost of components and raw materials, for example, could increase in the future, offsetting any successes in reducing our manufacturing costs. Any such increases could slow our growth and cause our financial results and operational metrics to suffer. In addition, we may face increases in our other expenses including increases in wages or other labor costs as well as installation, marketing, sales or related costs. In order to expand into new markets (especially markets in which the price of electricity from the grid is lower) we will need to continue to reduce our costs. Increases in any of these costs or our failure to achieve projected cost reductions could adversely affect our results of operations and financial condition and harm our business and prospects. If we are unable to reduce our cost structure in the future, we may not be able to achieve profitability, which could have a material adverse effect on our business and our prospects.

Further, we have not yet produced any iron flow batteries, Energy Warehouses or Energy Centers at volume and our expected cost advantage for the production of these products at scale, compared to conventional lithium-ion cells, will require us to achieve rates of throughput, use of electricity and consumables, yield, and rate of automation demonstrated for mature battery, battery material, and ceramic manufacturing processes, that we have not yet achieved. If we are unable to achieve these targeted rates, our business will be adversely impacted.

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

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

Our manufacturing facilities will require large-scale machinery. Such machinery is likely to suffer unexpected malfunctions from time to time and will require repairs and spare parts to resume operations, which may not be available when needed. Unexpected malfunctions of our production equipment may significantly affect the intended operational efficiency or yield. Some examples would be inadequate bonding of the battery cells resulting in overboard or internal leakage, damage to the separator, or cracked bipolar or monopolar plates. In addition, because this equipment has never been used to build iron flow batteries, the operational performance and costs associated with this equipment can be difficult to predict and may be influenced by factors outside of our control, such as, but not limited to, failures by suppliers to deliver necessary components of our energy storage products in a timely manner and at prices and volumes acceptable to us, environmental hazards and remediation, difficulty or delays in obtaining governmental permits, damages or defects in systems, industrial accidents, fires, seismic activity and other natural disasters.

Operational problems with our manufacturing equipment could result in the personal injury to or death of workers, the loss of production equipment, damage to manufacturing facilities, monetary losses, delays and unanticipated fluctuations in production. In addition, operational problems may result in environmental damage, administrative fines, increased insurance costs and potential legal liabilities. All of these operational problems could have a material adverse effect on our business, cash flows, financial condition or results of operations.

Our future success depends in part on our ability to increase our production capacity, and we may not be able to do so in a cost-effective manner. If we elect to expand our production capacity by constructing one or more new manufacturing facilities, we may encounter challenges relating to the construction, management and operation of such facilities.

In order to grow our business, we will need to increase our production capacity. For example, our current manufacturing capacity may not be sufficient to meet our planned 2022 production targets and we are currently seeking to expand our capacity. Our ability to plan, construct and equip additional manufacturing facilities is subject to significant risks and uncertainties, including but not limited to the following:

- The expansion or construction of any manufacturing facilities will be subject to the risks inherent in the development and construction of new facilities, including risks of delays and cost overruns as a result of factors outside our control, which may include delays in government approvals, burdensome permitting conditions, and delays in the delivery or installation of manufacturing equipment and subsystems that we manufacture or obtain from suppliers, similar to or more severe than what we have experienced recently.

- In order for us to expand internationally, we anticipate entering into strategic partnerships, joint venture and licensing agreements that allow us to add manufacturing capability outside of the United States. Adding manufacturing capacity in any international location will subject us to new laws and regulations including those pertaining to labor and employment, environmental and export / import. In addition, any such expansion brings with it the risk of managing larger scale foreign operations.

- We may be unable to achieve the production throughput necessary to achieve our target annualized production run rate at our current and future manufacturing facilities.

- Manufacturing equipment may take longer and cost more to engineer and build than expected, and may not operate as required to meet our production plans.

- We may depend on third-party relationships in the development and operation of additional production capacity, which may subject us to the risk that such third parties do not fulfill their obligations to us under our arrangements with them.

- We may be unable to attract or retain qualified personnel.

If we are unable to expand our manufacturing facilities, we may be unable to further scale our business, which would negatively affect our results of operations and financial condition. We cannot provide any assurances that we would be able to successfully establish or operate our manufacturing facility in a timely or profitable manner, or at all, or within any expected budget for such a project. The construction of any such facility would require significant capital expenditures and result in significantly increased fixed costs. If we are unable to transition manufacturing operations to any such new facilities in a cost-efficient and timely manner, then we may experience disruptions in operations, which could negatively impact our business and financial results. Further, if the demand for our products decreases or if we do not produce the expected output after any such new facility is operational, we may not be able to spread a significant amount of our fixed costs over the production volume, thereby increasing our per product fixed cost, which would have a negative impact on our business, financial condition and results of operations.

In addition, if any of our partners suffer from capacity constraints, deployment delays, work stoppages or any other reduction in output, we may be unable to meet our delivery schedule, which could result in lost revenue and deployment delays that could harm our business and customer relationships. If the demand for our iron flow batteries, Energy Centers and Energy Warehouses or our production output decreases or does not rise as expected, we may not be able to spread a significant amount of our fixed costs over the production volume, resulting in a greater than expected per unit fixed cost, which would have a negative impact on our financial condition and our results of operations.

Our ability to expand our manufacturing capacity would also greatly depend on our ability to hire, train and retain an adequate number of manufacturing employees, in particular employees with the appropriate level of knowledge, background and skills. Should we be unable to hire such employees, our business and financial results could be negatively impacted.

We have in the past and may be compelled in the future to undertake product recalls or take other actions, which could adversely affect our business, prospects, operating results, reputation and financial condition.

We have in the past and may be compelled in the future to undertake product recalls. For example, in the past we had to recall our Gen I battery modules due to vendors not properly manufacturing the parts to our specifications. Any quality issues can result in single module failures or can result in a cascade of numerous failures. Failures in the field can result in a single module replacement or may result in a total recall depending on the severity or contamination to the remainder of the system.

Any product recall in the future may result in adverse publicity, damage our reputation and adversely affect our business, financial condition and results of operations. In the future, we may, voluntarily or involuntarily, initiate a recall if any of our Energy Warehouses, Energy Centers, iron flow batteries, Proton Pump or components prove to be defective or noncompliant with applicable safety standards. Such recalls, whether caused by systems or components engineered or manufactured by us or our suppliers, would involve significant expense and diversion of management's attention and other resources, which could adversely affect our brand image in our target market and our business, financial condition and results of operations.

Our relationship with SBE, an affiliate of SoftBank Group Corp., is subject to various risks which could adversely affect our business and future prospects. There are no assurances that we will be able to commercialize iron flow batteries from our joint development relationship with SBE. In addition, SBE has no obligation to order any energy storage products from us under the framework agreement, including at any price point.

In April 2021, we signed a framework agreement, dated as of March 31, 2021, with SBE to supply our energy storage products to SBE in support of its market activities. Under this agreement, we have made various commitments to meet SBE's potential need for our energy storage products and are obligated to reserve a certain percentage of our manufacturing capacity to meet SBE's future needs, subject to periodic reviews of its firm and anticipated orders, which may negate those capacity reservations if no firm demand is realized. However, SBE is under no obligation to place any firm orders with us at any price point, and any future orders may be subject to future pricing or other commercial or technical negotiations, which we may not be able to satisfy, resulting in a diminished potential value of this relationship to us. To date, no orders have been placed under the framework agreement.

SBE, and any other business partners in the future, may have economic, business or legal interests or goals that are inconsistent with our goals. Any disagreements with SBE or other future business partners may impede our ability to maximize the benefits of these partnerships and slow the commercialization of our iron-flow batteries. Future commercial or strategic counterparties may require us, among other things, to pay certain costs or to make certain capital investments or to seek their consent to take certain actions. In addition, if SBE is unable or unwilling to meet its economic or other obligations under our partnership arrangements, we may be required to fulfill those obligations alone. These factors could result in a material adverse effect on our business and financial results.

The execution of our strategy to expand into new markets through strategic partnerships, joint ventures and licensing arrangements is in a very early stage and is also subject to various risks which could adversely affect our business and future prospects.

We may enter into strategic partnerships, joint ventures and licensing arrangements to expand our business and enter into new markets. However, we currently have no such arrangements in place and there is no assurance that we will be able to consummate any such arrangements as contemplated to commercialize our energy storage products. For example, we may enter into the Australian market through a joint venture to be formed with the purpose of manufacturing, distributing and operating our energy storage products in the region. We are currently in discussions with a potential joint venture partner that will include building manufacturing facilities. However, there can be no assurance that we will be able to enter into a binding agreement or agree to pricing or other terms that are financially beneficial or otherwise not unfavorable for us. If we are unsuccessful in securing a joint venture arrangement, we will need to find an alternative plan to enter the Australian market. Even if we are able to successfully secure a joint venture arrangement in Australia, there can be no assurance that we will be able to complete the development of manufacturing facilities and successfully manufacture, distribute and operate our energy storage products in that region.

Any future strategic partnerships, joint ventures or licensing arrangements may require us, among other things, to pay certain costs, make certain capital investments or to seek the partner's consent to take certain actions. In addition, if a partner is unable or unwilling to meet its economic or other obligations under the respective arrangements, we may be required to either fulfill those obligations alone to ensure the ongoing success of, or to dissolve and liquidate, the partnership, joint venture or licensing arrangement. These factors could result in a material adverse effect on our business, prospects and financial results.

Risks Related to Our Business and Industry

We have a history of losses and have to deliver significant business growth to achieve sustained, long-term profitability and long-term commercial success.

We had net losses on a GAAP basis in each fiscal year since our inception. For the years ended December 31, 2021 and 2020, we had $477.1 million and $30.4 million in net losses, respectively. In order to achieve profitability as well as long-term commercial success, we must continue to execute our plan to expand our business, which will require us to deliver on our existing global sales pipeline in a timely manner, increase our production capacity, reduce our manufacturing costs, competitively price and grow demand for our products, and seize new market opportunities by leveraging our proprietary technology and our manufacturing processes for novel solutions and new products. Failure to do one or more of these things could prevent us from achieving sustained, long-term profitability.

As we transition from our research and development phase and into a full commercial phase, we expect, based on our sales pipeline, to grow revenues. However, our revenue may not grow as expected for a number of reasons, many of which are outside of our control, including a decline in global demand for iron flow battery storage products, increased competition, or our failure to continue to capitalize on growth opportunities. If we are not able to generate and grow revenue and raise the capital necessary to support our operations, we may be unable to continue as a going concern.

Our energy storage products are still under development, and there is no assurance nonbinding pre-orders will be converted into binding orders or sales.

Our business model is focused on building relationships with large customers. To date, we have engaged in limited marketing activities and we have only a limited number of contracts with customers. Our energy storage products are still subject to ongoing development and until the time that the design and development of our energy storage products is complete and is commercially available for purchase, and until we are able to scale up our marketing function to support sales, there will be uncertainty as to customer demand for our energy storage products. In particular, demand for our energy storage products by independent energy developers will depend upon a bankability determination by institutional sources of project finance capital and that determination may be difficult to obtain. The potentially long wait from the time an order is made until the time our energy storage products are delivered, and any delays beyond expected wait times, could also impact user decisions on whether to ultimately make a purchase. There is no assurance that nonbinding pre-orders will be converted into binding orders or sales. Even if we are able to obtain binding orders, customers may limit their volume of purchases initially as they assess our products and whether to make a broader transition to our energy storage products. This may be a long process and will depend on the safety, reliability, efficiency and quality of our energy storage products, as well as the support and service that we offer. It will also depend on factors outside of our control, such as general market conditions, that could impact customer buying decisions. As a result, there is significant uncertainty regarding demand for our energy storage products and the pace and levels of growth that we will be able to achieve.

For the year ended December 31, 2020, our independent registered public accounting firm included an explanatory paragraph relating to our ability to continue as a going concern in its report on our audited financial statements.

The report from our independent registered public accounting firm for the year ended December 31, 2020 included an explanatory paragraph stating that ESS' recurring losses from operations and cash outflows from operating activities raised substantial doubt about our ability to continue as a going concern. ESS' 2020 financial statements do not include any adjustments that may result from the outcome of this uncertainty and do not reflect the transactions as a result of the Business Combination.

Future reports from our independent registered public accounting firm could contain statements expressing substantial doubt about our ability to continue as a going concern. If there remains substantial doubt about our ability to continue as a going concern, investors or other financing sources may be unwilling to provide additional funding to us on commercially reasonable terms, or at all, and our business may be harmed. If we are unable to continue as a going concern, we may have to liquidate our assets and may receive less than the value at which those assets are carried on our audited financial statements, and it is likely that investors would lose part or all of their investment.

Our warranty insurance provided by Munich Re is important to many potential customers. Should we be unable to maintain our relationship with Munich Re and be unable to find a similar replacement, demand for our products may suffer.

Our business is substantially dependent on our relationship with Munich Re. Our warranty insurance provided by Munich Re is important to many potential customers, and such warranty insurance is a bespoke product not widely offered by multiple insurers. There is no assurance that we will be able to maintain our relationship with Munich Re. If Munich Re terminates or significantly alters its relationship with us in a manner that is adverse to our company, our business would be materially adversely affected. Similarly, if we are unable to maintain our relationship with Munich Re, or if our arrangement with Munich Re is modified so that the economic terms become less favorable to us, we may be unable to find a similar replacement warranty insurance and our business would be materially adversely affected.

Failure to deliver the benefits offered by our technology, or the emergence of improvements to competing technologies, could reduce demand for our energy storage products and harm our business.

We believe that, compared to lithium-ion batteries, our energy storage solutions offer significant benefits, including using widely-available, low-cost materials with no rare mineral components, being substantially recyclable at end-of-life, having an approximately twenty-five year product life requiring minimal maintenance, and having a wide thermal operating range that eliminates the need for fire suppression and heating, ventilation and air conditioning equipment, which would otherwise be required for use with lithium-ion batteries.

However, if our manufacturing costs increase, or if our expectations regarding the operation, performance, maintenance and disposal of our energy storage products are not realized, then we could have difficulty marketing our energy storage products as a superior alternative to already-established technologies and impact the market reputation and adoptability of our energy storage products.

We also currently market our energy storage products as having superior cyclability to other energy storage solutions on the market. However, in general, flow batteries have suffered challenges running multiple cycles over their lifetime without experiencing degradation in storage capacity and, in particular, our iron flow batteries have failed at cycling reliably in the past and may fail or have issues cycling in the future if our technology does not operate as expected. If our technology is inadequate or our energy storage solutions fail to operate as expected or designed, our business, financial condition and results of operations would be adversely affected.

In addition, developments of existing and new technologies could improve the cost and usability profile of such alternative technologies, reducing any relative benefits currently offered by our energy storage products, which would negatively impact the likelihood of our energy storage products gaining market acceptance.

Our plans are dependent on the development of a market acceptance of our products and the development of a market for long-duration batteries.

Our plans are dependent upon market acceptance of our products. Iron flow batteries represent an emerging market, and we cannot be sure that potential customers will accept iron flow batteries as a replacement for traditional power sources. In particular, traditional lithium-ion batteries, which are already produced on a large global scale and have widespread market acceptance, offer higher power density and round-trip efficiency than our iron flow batteries. If customers were to place greater value on power density and round-trip efficiency over what we believe to be the numerous other advantages of our technology, then we could have difficulty positioning our iron flow batteries as a viable alternative to traditional lithium-ion batteries and our business would suffer.

As is typical in a rapidly evolving industry, demand and market acceptance for recently introduced products and services are subject to a high level of uncertainty and risk. It is difficult to predict with certainty the size of the energy storage market and its growth rate. The development of a market for our products may be affected by many factors that are out of our control, including:

- the cost competitiveness of our products including availability and output expectations and total cost of ownership;
- the future costs associated with renewable energies;
- perceived complexity and novelty of our technology and customer reluctance to try a new product;
- the market for energy storage solutions and government policies that affect those markets;
- government incentives, mandates or other programs favoring zero carbon energy sources;
- local permitting and environmental requirements;
- customer preference for lithium-ion based technologies, including but not limited to the power density offered by lithium-ion batteries; and
- the emergence of newer, more competitive technologies and products.

If a sufficient market fails to develop or develops more slowly than we anticipate, we may be unable to recover the losses we will have incurred in the development of our products, and we may never achieve profitability.

Our future growth and success depend on our ability to sell effectively to large customers.

Many of our potential customers are electric utilities, and C&I businesses that tend to be large enterprises. Therefore, our future success will depend on our ability to effectively sell our products to such large customers. Sales to these end-customers involve risks that may not be present (or that are present to a lesser extent) with sales to smaller customers. These risks include, but are not limited to, (i) increased purchasing power and leverage held by large customers in negotiating contractual arrangements with us and (ii) longer sales cycles and the associated risk that substantial time and resources may be spent on a potential end customer that elects not to purchase our solutions.

Large organizations often undertake a significant evaluation process that results in a lengthy sales cycle. In addition, product purchases by large organizations are frequently subject to budget constraints, multiple approvals and unanticipated administrative, processing and other delays. Finally, large organizations typically have longer implementation cycles, require greater product functionality and scalability, require a broader range of services, demand that vendors take on a larger share of risks, require acceptance provisions that can lead to a delay in revenue recognition and expect greater payment flexibility. All of these factors can add further risk to business conducted with these potential customers.

If we are unable to establish and maintain confidence in our long-term business prospects among developers, utilities and others within our industry, then our business, financial condition and results of operations may suffer materially.

Commercial utilities may be less likely to purchase our products now if they are not convinced that our business will succeed or that our operations will continue for many years. Similarly, suppliers and other third parties will be less likely to invest time and resources in developing business relationships with us if they are not convinced that our business will succeed. Accordingly, to build, maintain and grow our business, we must maintain confidence among commercial utilities, suppliers, analysts and other parties with respect to our liquidity and long-term business prospects. Maintaining such confidence may be particularly complicated by certain factors, such as our limited operating history, others’ unfamiliarity with our products, competition and uncertainty regarding the future of energy storage solutions. Many of these factors are largely outside our control, and any negative perceptions about our long-term business prospects or the renewable energy sector as a whole, even if exaggerated or unfounded, would likely harm our business and make it more difficult to raise capital in the future.

Our project awards and sales pipeline may not convert to contracts, which may have a material adverse effect on our revenue and cash flows.

We expect a significant portion of the business that we will seek in the foreseeable future will be awarded through competitive bidding against other energy storage technologies and other forms of power generation. The competitive bidding process involves substantial costs and a number of risks, including the significant cost and managerial time to prepare bids and proposals for contracts that may not be awarded to us and our failure to accurately estimate the resources and costs that will be required to fulfill any contract we win. In addition, following a contract award, we may encounter significant expense, delay or contract modifications or award revocation as a result of our competitors protesting or challenging contracts awarded to us in competitive bidding. Our failure to compete effectively in this procurement environment could adversely affect our revenue and/or profitability.

Some of the project awards we receive and orders we accept from customers require certain conditions or contingencies (such as permitting, interconnection, financing or regulatory approval) to be satisfied, some of which are outside of our control. Certain awards are cancellable or revocable at any time prior to contract execution. The time periods from receipt of an award to execution of a contract, or receipt of a contract to installation may vary widely and are determined by a number of factors, including the terms of the award, governmental policies or regulations that go into effect after the award, the terms of the customer contract and the customer's site requirements. These same or similar conditions and contingencies may be required by financiers in order to draw on financing to complete a project. If these conditions or contingencies are not satisfied, or changes in laws affecting project awards occur, or awards are revoked or cancelled, project awards may not convert to contracts, and installations may be delayed or canceled. This could have an adverse impact on our revenue and cash flow and our ability to complete construction of a project.

Our contracted sales are subject to the risk of termination by the contracting party.

The majority of our commercial contracts contain provisions which allow the customer to terminate an agreement if certain conditions are not met or for extended force majeure (which could include inability to perform due to COVID-19). We have issued several force majeure notices to customers as a result of delays caused by COVID-19 and the impact of COVID-19 on such agreements, or the applicable agreements' termination provisions, is uncertain and could result in the termination of such agreements. In addition, certain of our contracts can be terminated simply for convenience. If a contracted sale were to be terminated, it could have an adverse impact on our revenues, longer term potential and market reputation, which would have an even greater impact on our ability to achieve future sales.

Our limited operating history makes it difficult for us to evaluate our future business prospects.

We are a company with a limited operating history. As we continue the transition from research and development activities to commercial production and sales, it is difficult, if not impossible, to forecast our future results, and we have limited insight into trends that may emerge and affect our business. The estimated costs and timelines that we have developed to reach full scale commercial production are subject to inherent risks and uncertainties involved in the transition from a start-up company focused on research and development activities to the large-scale manufacture of Energy Warehouses and sale of our Energy Centers and Energy Warehouses. Market conditions, many of which are outside of our control and subject to change, including general economic conditions, the availability and terms of financing, the impacts and ongoing uncertainties created by the COVID-19 pandemic, fuel and energy prices, regulatory requirements and incentives, competition and the pace and extent of flow battery products generally, will impact demand for our Energy Centers and Energy Warehouses, and ultimately our success.

We may not be able to accurately estimate the future supply and demand for our batteries, which could result in a variety of inefficiencies in our business and hinder our ability to generate revenue. If we fail to accurately predict 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 expectations 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 iron flow batteries or our ability to develop, manufacture, and deliver iron flow batteries, or our profitability in the future. If we overestimate our requirements, our suppliers may have excess inventory, which indirectly would increase our costs. If we underestimate our requirements, our suppliers may have inadequate inventory, which could interrupt manufacturing of our products and result in delays in shipments and revenues. In addition, lead times for materials and components that our suppliers order may vary significantly and depend on factors such as the specific supplier, contract terms and demand for each component at a given time. If we fail to order sufficient quantities of product components in a timely manner, the delivery of batteries to our potential customers could be delayed, which would harm our business, financial condition and results of operations.

If we fail to manage our growth effectively, we may be unable to execute our business plan, maintain high levels of customer service, or adequately address competitive challenges.

We have experienced significant growth in customer contracts in recent periods and intend to continue to expand our business significantly within existing and new markets. This growth has placed, and any future growth may place, a significant strain on our management, operational, and financial infrastructure. In particular, we will be required to expand, train, and manage our growing employee base and scale and otherwise improve our information technology ("IT") infrastructure in tandem with that headcount growth. Our management will also be required to maintain and expand our relationships with customers, suppliers, and other third parties and attract new customers and suppliers, as well as manage multiple geographic locations.

Our current and planned operations, personnel, customer support, IT, information systems, and other systems and procedures might be inadequate to support future growth and may require us to make additional unanticipated investment in our infrastructure. Our success and ability to scale our business will depend, in part, on our ability to manage these changes in a cost-effective and efficient manner. If we cannot manage our growth, then we may be unable to take advantage of market opportunities, execute our business strategies, or respond to competitive pressures. This could also result in declines in quality or customer satisfaction, increased costs, difficulties in introducing new offerings, or other operational difficulties. Any failure to effectively manage growth could adversely impact our business and reputation.

Utility companies may resist the adoption of our products and could impose customer fees or interconnection requirements on our customers that could make our products less desirable.

Investor-owned utilities may resist adoption of our Energy Warehouses and Energy Centers as they are disruptive to the utility business model that primarily utilizes large central generation power plants and associated transmission and distribution. On-site energy storage that is on the customer-side of the electric meter competes with the utility. Energy storage on the utility-side of the meter generally has power output that is significantly less than central generation power plants and may be perceived by the utility as too small to materially impact its business, limiting its interest. Utilities have a regulatory mandate to ensure the reliability of the grid, and accordingly, perceived technology risk may limit utility interest in iron flow batteries. Finally, long-duration energy storage is supportive of, and even necessary for, increased penetration of renewable energy sources on the electric grid, a goal not all utilities support.

Utility companies commonly charge fees to larger, industrial customers for disconnecting from the electric grid or for having the capacity to use power from the electric grid for back up purposes. These fees could increase the cost to our customers of using our energy storage products and could make our products less desirable, thereby harming our business, financial condition and results of operations.

We have signed product sales contracts and expect to enter into long-term service agreements with customers subject to contractual, technology, operating and commodity risks as well as market conditions that may affect our operating results.

We expect to enter into long-term service agreements with certain customers to provide service on our energy storage products with terms of up to 25 years. Under the provisions of these contracts, we will provide services to maintain, monitor, and repair our energy storage products to meet minimum operating levels. While we have conducted tests to determine the overall life of our energy storage products, we have not run certain of our energy storage products over their projected useful life or in all potential conditions prior to large scale commercialization.

As a result, we cannot be sure that these energy storage products will last to their expected useful life or perform as anticipated in all conditions, which could result in warranty claims, performance penalties, maintenance, on-going servicing and module replacement costs and/or a negative perception of our energy storage products. Our ability to proceed with projects under development and complete construction of projects on schedule and within budget may be adversely affected by escalating costs for materials, tariffs, labor and regulatory compliance, inability to obtain necessary permits, interconnections or other approvals on acceptable terms or on schedule and by other factors. If any development project or construction is not completed, is delayed or is subject to cost overruns, we could become obligated to make delay or termination payments or become obligated for other damages under contracts, experience diminished returns or write off all or a portion of our capitalized costs in the project. Each of these events could have an adverse effect on our business, financial condition and results of operations. We currently face and will continue to face significant competition, including from products using other energy sources that may be lower priced or have preferred environmental characteristics.

We compete on the basis of our energy storage products' reliability, efficiency, environmental sustainability and cost. Technological advances in alternative energy products, improvements in the electric grid or other sources of power generation, or new battery technologies or market entrants may negatively affect the development or sale of some or all of our energy storage products or make our energy storage products less economically attractive, non-competitive or obsolete prior to or after commercialization. Significant decreases in the price of alternative technologies, or significant increases in the price of the materials we use to build our energy storage products could have a material adverse effect on our business because other generation sources could be more economically attractive to consumers than our energy storage products.

We may not succeed in establishing, maintaining and strengthening our brand, which would materially and adversely affect customer acceptance of our products and our business, revenues and prospects.

Our business and prospects heavily depend on our ability to develop, maintain and strengthen our brand. If we are not able to establish, maintain and strengthen our brand, we may lose the opportunity to build a critical mass of customers. Our ability to develop, maintain and strengthen our brand will depend heavily on the success of our marketing efforts. The utility industry is intensely competitive, and we may not be successful in building, maintaining and strengthening our brand. Our current and potential competitors, particularly lithium-ion battery technology suppliers owned by or promoted by electric vehicle automobile manufacturers headquartered in the United States, Japan, the European Union and China, have greater name recognition, broader customer relationships and substantially greater marketing resources than we do. If we do not develop and maintain a strong brand, our business, financial condition and results of operations will be materially and adversely impacted.

Other companies, some of which have substantially greater resources than ours, are currently engaged in the development of products and technologies that are similar to, or may be competitive with, our products and technologies. Several companies in the United States are engaged in non-lithium-ion environmentally sustainable battery development, although we believe we are the only domestic company engaged in the manufacturing and deployment of stationary energy units storing and utilizing the iron flow battery. Other emerging flow battery solution technologies (and the companies developing them) include the vanadium flow storage technology (UniEnergy Technologies LLC and Invinity Energy Systems plc), the organic flow battery (JenaBatteries GmbH), the zinc-bromine hybrid flow battery (Primus Power), and the zinc-iron flow battery (Vizn Energy Systems, Inc.). Each of these competitors has the potential to capture market share in our target markets. There are also other potential competitors internationally that could capture market share.

The loss of one or more members of our senior management team, other key personnel or our failure to attract additional qualified personnel may adversely affect our business and our ability to achieve our anticipated level of growth.

We depend on the continued services of our senior management team, including our Chief Executive Officer, President, Chief Technology Officer and Chief Financial Officer, and other key personnel, each of whom would be difficult to replace. The loss of any such personnel, or the inability to effectively transition to their successors, could have a material adverse effect on our business and our ability to implement our business strategy. All of our employees, including our senior management, are free to terminate their employment relationships with us at any time. Any changes to our senior management team, including hires or departures, could cause disruption to our business and have a negative impact on operating performance, while these operational areas are in transition.

Additionally, our ability to attract qualified personnel, including senior management and key technical personnel, is critical to the execution of our growth strategy. Competition for qualified senior management personnel and highly skilled individuals with technical expertise is extremely intense. We face and are likely to continue to face challenges identifying, hiring, and retaining qualified personnel in all areas of our business, and we can provide no assurance that we will find suitable successors as transitions occur. In addition, integrating new employees into our team, and key personnel in particular, could prove disruptive to our operations, require substantial resources and management attention, and ultimately prove unsuccessful. Our failure to attract and retain qualified senior management and other key technical personnel could limit or delay our strategic efforts, which could have a material adverse effect on our business, financial condition and results of operations.

We are highly dependent on the services of Craig Evans, our President and Co-Founder, and Dr. Julia Song, our Chief Technology Officer and Co-Founder, who are married to each other. The separation or divorce of the couple in the future could adversely affect our business.

We are highly dependent on the services of Craig Evans, our President and Co-Founder, and Dr. Julia Song, our Chief Technology Officer and Co-Founder, who are married to each other. If Mr. Evans or Dr. Song were to discontinue their service to us due to death, disability or any other reason, or if they were to become separated or divorced or could otherwise not amicably work with each other, we would be significantly disadvantaged. Alternatively, their work performance may not be satisfactory if they become preoccupied with issues relating to their personal situation. In these cases, our business could be materially harmed.

If demand for energy storage solutions does not continue to grow or grows at a slower rate than we anticipate, our business and results of operations may be impacted.

Our potential target customers include both utilities and C&I end users. Our potential customers are interested in several use cases including solar shifting, peak shaving, price arbitrage, utility ancillary services and microgrids. We cannot provide any assurances that utilities or C&I users will adopt our products as alternative energy storage solutions at levels sufficient to grow our business.

The viability and demand for our products may be affected by many factors outside of our control, including:

- cost competitiveness, reliability and performance of our products compared to lithium-ion products;
- levels of investment by end users of energy storage products, which may decrease when economic growth or energy demand slows resulting in a reduction in battery purchases generally;
- strength of the renewable energy industry and associated integration opportunities for our products;
- a favorable regulatory landscape, including: the upholding by the states in the United States of the Federal Energy Regulatory Commission's Order 841, which mandates that battery storage can participate in the demand response and ancillary markets; incentives for the implementation of battery storage by state regulators; and adoption by Congress of an investment tax credit for standalone battery storage; and
- the emergence, continuance or success of other alternative energy storage technologies and products.

If we do not manage these risks and overcome these potential difficulties outside of our control successfully, our business and results of operations may suffer.

Our results of operations may fluctuate from quarter to quarter, which could make our future performance difficult to predict and could cause our results of operations for a particular period to fall below expectations, resulting in a decline in the price of our Common Stock.

Our hardware takes many months to manufacture and prepare for delivery and any revenue in future periods may fluctuate based on underlying customer arrangements. Further, we expect our arrangements may have multiple deliverables and performance obligations and the amount and timing of recognizing revenue for those different performance obligations may vary which could cause our revenue to fluctuate. Our revenues also depend on a number of other factors, some of which are beyond our control, including the impact of supply chain issues (see also "*—Risks Related to Our Technology, Products and Manufacturing—We depend on third-party suppliers for the development and supply of key raw materials and components for our energy storage products. We also depend on vendors for the shipping of our energy storage products. Continued delays in our supply chain and shipments could further harm our ability to manufacture and commercialize our energy storage products.*"). As a result, our quarterly results of operations are difficult to predict and may fluctuate significantly in the future.

We will initially depend on revenue generated from a single product and in the foreseeable future will be significantly dependent on a limited number of products.

We will initially depend on revenue generated initially from our Energy Warehouses and later on, our Energy Centers, and in the foreseeable future will continue to be significantly dependent on a limited number of products. Given that for the foreseeable future our business will depend on a limited number of products, to the extent our products are not well-received by the market, our sales volume, business, financial condition and results of operations would be materially and adversely affected.

Our cost reduction strategy may not succeed or may be significantly delayed, which may result in our inability to achieve profitability.

Our ability to successfully implement our overall business strategy relies on our ability to reduce development and manufacturing costs in the future. Our cost reduction strategy is based on the assumption that increases in production will result in economies of scale. In addition, our cost reduction strategy relies on advancements in our manufacturing process, global competitive sourcing, engineering design, reducing the cost of capital and technology improvements (including stack life and projected power output). Its successful implementation also depends on a number of factors, some of which are beyond our control, including the impact of inflation and the timely delivery of key supplies at reasonable prices. For example, our current supply imbalance may result in additional costs that exceed our current expectations. There is no assurance that our cost reduction strategy will be successful and failure to achieve our cost reduction targets could have a material adverse effect on our business, financial condition and results of operations.

Our growth prospects depend on our ability to capitalize on market opportunities.

We believe that a number of market opportunities could help fuel our growth prospects, including the following:

- the pervasiveness of electric grid congestion, creating an opportunity to deploy batteries to reduce the peak energy usage of a customer in specific locations where infrastructure constraints create a need for transmission and/or distribution upgrades;
- increasing demand for longer duration energy storage of more than four hours;
- global interest in achieving higher penetration of renewable energy such as wind and solar power, which are fluctuating in nature and dependent upon effective energy storage solutions;
- the demand for co-location of battery assets on solar or wind farms to store off-peak intermittent renewable energy production and provide on-peak energy at higher prices than alternative energy;
- utilities turning to energy storage as an alternative to expanded transmission;
- C&I end users' adoption of alternative energy generation technologies to supplement or replace on-the-grid energy usage;
- microgrid expansion including for means of preventing wildfires in California and Australia; and
- the existence of various market mechanisms that would allow the owners and operators of our products to monetize their investments in our products, such as ancillary service markets, capacity markets and others.

If these expected market opportunities do not materialize, or if we fail to capitalize on them, then we may not be able to meet our growth projections.

Our planned expansion into new geographic markets or new product lines or services could subject us to additional business, financial, and competitive risks.

In the years ended December 31, 2021 and 2020, we entered into contracts and other agreements to sell our products in a number of different countries, including the United States, Chile, Spain, Belgium, Slovakia, and Australia. We have in the past, and may in the future, evaluate opportunities to expand into new geographic markets and introduce new product offerings and services that are a natural extension of our existing business. We also may from time to time engage in acquisitions of businesses or product lines with the potential to strengthen our market position, enable us to enter attractive markets, expand our technological capabilities, or provide synergy opportunities.

Our success operating in these new geographic or product markets, or in operating any acquired business, will depend on a number of factors, including our ability to develop solutions to address the requirements of the electric utility industry, renewable energy project developers and owners, and C&I end users, our timely qualification and certification of new products, our ability to manage increased manufacturing capacity and production, and our ability to identify and integrate any acquired businesses.

Further, any additional markets that we may enter could have different characteristics from the markets in which we currently sell products, and our success will depend on our ability to adapt properly to these differences. These differences may include regulatory requirements, including tax laws, trade laws, foreign direct investment review regimes, labor regulations, tariffs, export quotas, customs duties, or other trade restrictions, limited or unfavorable intellectual property protection, international, political or economic conditions, restrictions on the repatriation of earnings, longer sales cycles, warranty expectations, product return policies and cost, performance and compatibility requirements. In addition, expanding into new geographic markets will increase our exposure to presently existing and new risks, such as fluctuations in the value of foreign currencies and difficulties and increased expenses in complying with United States and foreign laws, regulations and trade standards, including the Foreign Corrupt Practices Act of 1977, as amended (the “FCPA”).

Failure to develop and introduce these new products successfully into the market, to successfully integrate acquired businesses or to otherwise manage the risks and challenges associated with our potential expansion into new product and geographic markets, could adversely affect our revenues and our ability to sustain profitability.

Our business and operations may be adversely affected by the novel coronavirus (COVID-19) outbreak or other similar outbreaks.

Any outbreaks of contagious diseases, including the global COVID-19 pandemic, and other adverse public health developments in countries where we and our suppliers operate, could have a material and adverse effect on our business, financial condition and results of operations. These effects could include disruptions to or restrictions on our employees’ ability to travel, as well as temporary closures of our facilities or the facilities of our customers, suppliers, or other vendors in our supply chain. In addition, COVID-19 has resulted in a widespread health crisis that has adversely affected, and may continue to adversely affect, the economies and financial markets of many countries, resulting in an economic downturn that could affect demand for our products or our ability to obtain financing for our business or projects. COVID-19 may impact the health of our team members, directors or customers, reduce the availability of our workforce or those of companies with which we do business, or otherwise cause human impacts that may negatively impact our business. Any of these events, which may result in disruptions to our supply chain or customer demand, could materially and adversely affect our business and our financial results. The extent to which COVID-19 will impact our business and our financial results will depend on future developments, which are highly uncertain and cannot be predicted. Such developments may include the geographic spread of COVID-19, the severity of the disease, the duration of the outbreak, the actions that may be taken by various governmental authorities in response to the outbreak, such as quarantine or “shelter-in-place” orders and business closures imposed by various states within the United States, and the impact on the U.S. or global economy. For example, in March 2020, in response to the escalating global COVID-19 outbreak, we temporarily suspended operations at our Wilsonville, Oregon manufacturing facility, and also required those employees that could work from home to do so. While we resumed operations in the manufacturing facility within several weeks, we instituted a split schedule shift, staggered workdays, and significant limitations on various areas of our physical building. These changes all resulted in significant disruption to our business. Currently, we continue to evaluate our ability to operate in light of recent resurgences of COVID-19, including the emergence of new variant strains of COVID-19, which have and may in the future necessitate renewed government restrictions, and the advisability of continuing operations, based on federal, state and local guidance, evolving data concerning the pandemic and the best interests of our employees, customers and stockholders. Accordingly, there can be no assurance that any of our facilities will remain open (in full or in part), that our employees that continue to work remotely will return to the office or that our other operations will continue at full or limited capacity. If we again have to shut down production either due to a worsening of the COVID-19 pandemic or due to an outbreak in one of our facilities, our project schedules and associated financing could be adversely affected. An extended period of remote working by our employees could strain our technology resources and introduce operational risks, including heightened cybersecurity risk. Further, we have experienced, and may continue to experience, increased costs and expenses, including as a result of (i) conducting periodic “fitness-for-duty” assessments for employees, including symptom checks and providing personal protective equipment, (ii) the expansion of benefits to our employees, including the provision of additional time off for employees who have contracted COVID-19 or are required to be quarantined or who are unable to obtain childcare to return to work, (iii) implementing increased health and safety protocols at all of our facilities, including increased cleaning and sanitization of workspaces, restricting visitor access, mandating social distancing guidelines and increasing the availability of sanitization products, and (iv) the increased cost of personal protective equipment. Taken together, these material impacts to our business caused us to issue several Force Majeure notices for customers anticipating shipments of our product and may result in additional delays in fulfilling customer orders. Although we believe our business is currently considered an “essential” business in our operating markets, if any of the applicable exceptions or exemptions are curtailed or revoked in the future, or any of these exemptions or exceptions do not extend to any of our key suppliers, our business, financial condition and results of operations could be adversely impacted. While we have attempted to continue business development activities during the pandemic, state and local shutdowns, shelter-in-place orders and travel restrictions have impeded our ability to meet with customers and solicit new business, and certain bids and solicitations in which we typically participate have been postponed. In addition, our supply chain is heavily dependent on key materials domestically and internationally, including from China. In 2020 and 2021, we saw significant disruptions to key supply chains, shipping times, shipping availability, manufacturing times, and associated costs, both with respect to the sourcing of supplies and the delivery of our products. These disruptions, delays, and increased costs can have a material impact to our business, operations, and financial condition and as a result, at this time, it is impossible to predict the overall impact of COVID-19 on our business, liquidity, capital resources, supply chain and financial results or its effect on clean energy demand, capital budgets of our customers, or demand for our products. Additionally, while we have continued to prioritize the health and safety of our team members and customers as we continue to operate during the pandemic, we face an increased risk of litigation related to our operating environments. Even after the COVID-19 pandemic has subsided, we may continue to experience adverse impacts to our business as a result of any economic recession that has occurred or may occur in the future because of the pandemic, or because the pandemic worsens again. Additional public health crises could also emerge in the future, including other pandemics or epidemics. Any such public health crisis could pose further risks to us and could also have a material adverse effect on our business, results of operations and financial position.

There may be limitations on the effectiveness of our internal controls, and a failure of our control systems to prevent error or fraud may materially harm our company. We may identify material weaknesses in the future that may cause us to fail to meet our reporting obligations or result in material misstatements of our financial statements. If we fail to remediate any material weaknesses or if we otherwise fail to establish and maintain effective control over financial reporting, our ability to accurately and timely report our financial results could be adversely affected.

In connection with the audits of the financial statements of Legacy ESS for the years ending December 31, 2019 and 2020, we identified two material weaknesses for Legacy ESS due to several deficiencies that were identified in the operating effectiveness of controls over (1) the identification and review of technical issues associated with research and development, raw materials purchase commitments and equity processes which resulted in adjustments to restate the 2019 financial statements and correct the 2020 financial statements; and (2) the review and analysis of certain transactions within Legacy ESS' financial statement close process. 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 our financial statements will not be prevented or detected on a timely basis.

In addition, in preparing STWO's unaudited condensed consolidated financial statements as of and for the quarterly period ended September 30, 2021, our management concluded that our control around the interpretation and accounting for certain complex features of the Class A ordinary shares and warrants issued by STWO was not effectively designed or maintained. This material weakness resulted in the restatement of STWO's balance sheet as of September 21, 2020, its annual financial statements for the period ended December 31, 2020 and its interim financial statements for the quarters ended September 30, 2020, March 31, 2021 and June 30, 2021. Additionally, this material weakness could result in a further misstatement of the warrant liability, Class A ordinary shares and related accounts and disclosures that would result in a material misstatement of the financial statements that would not be prevented or detected on a timely basis.

Our management has concluded that these material weaknesses in Legacy ESS' internal control over financial reporting are due to the fact that, at the time, Legacy ESS was a private company with limited resources and did not have the necessary business processes and related internal controls formally designed and implemented coupled with the appropriate resources with the appropriate level of experience and technical expertise to oversee our business processes and controls. Our management has concluded that the material weaknesses in STWO's internal control over financial reporting involved difficulty identifying and appropriately applying complex accounting standards and requirements relating to equity and warrants issued in connection with STWO's initial public offering.

We have determined that we have remediated the material weakness for Legacy ESS related to the identification and review of technical issues associated with research and development, raw materials purchase commitments and equity processes which resulted in adjustments to restate the 2019 financial statements and correct the 2020 financial statements and the material weakness related to STWO as of December 31, 2021. The second material weakness for Legacy ESS related to the operating effectiveness of controls over the review and analysis of certain transactions within ESS' financial statement close process remains unremediated. Therefore, our principal executive officer and principal financial officer have concluded that the Company's disclosure controls and procedures were not effective as of December 31, 2021.

We have begun to take steps to remediate the remaining identified unremediated material weakness and enhance our internal controls, and we are planning to do the following:

- We have hired additional personnel and are continuing to expand our team. We are further designing and implementing a formalized internal control framework, including over journal entries and management review controls.

- We are continuing our efforts to improve and strengthen our control processes and procedures to fully remediate these deficiencies. Our management will continue to work with our auditors and other outside advisors to ensure that our controls and procedures are adequate and effective.

We expect that the remediation of this material weakness will be completed by December 31, 2022. However, we cannot make any assurances that we will successfully remediate this material weakness within our anticipated timeframe. We also cannot provide any assurances that the measures that we have taken and are planning to take will be sufficient to prevent future material weaknesses from occurring. We also cannot assure you that we have identified all of our existing material weaknesses.

As a public company, we are required to comply with the SEC's rules implementing Sections 302 and 404 of the Sarbanes-Oxley Act of 2002 (the "Sarbanes-Oxley Act"), which requires management to certify financial and other information in our quarterly and annual reports and to provide an annual management report on the effectiveness of controls over financial reporting (see "Item 9A. Controls and Procedures" of our Annual Report on Form 10-K for the year ended December 31, 2021). When evaluating our internal control over financial reporting, we may identify material weaknesses that we may not be able to remediate in time to meet the applicable deadline for compliance with the requirements of Section 404. If we are unable to identify and remediate material weaknesses, it could result in material misstatements to our annual or interim financial statements that might not be prevented or detected on a timely basis or result in delayed filings of required periodic reports. If we are unable to assert that our internal control over financial reporting is effective, investors may lose confidence in the accuracy and completeness of our financial reports, the market price of our Common Stock could be adversely affected and we could become subject to litigation or investigations by the NYSE, the SEC, or other regulatory authorities, which could require additional financial and management resources (see also "*—Risks Related to the Business Combination and STWO—We may face litigation and other risks as a result of material weaknesses in our internal control over financial reporting*.").

Labor disputes could disrupt our ability to serve our customers and/or lead to higher labor costs.

As of December 31, 2021, we had approximately 160 full-time employees, none of whom were represented by unions or covered by collective bargaining agreements. If a union sought to organize any of our employees, such organizing efforts or collective bargaining negotiations could potentially lead to work stoppages and/or slowdowns or strikes by certain of our employees, which could adversely affect our ability to serve our customers. Further, settlement of actual or threatened labor disputes or an increase in the number of our employees covered by collective bargaining agreements can have unknown effects on our labor costs, productivity and flexibility.

We will extend product warranties for our energy storage products, which products are complex and could contain defects and may not operate at expected performance levels, which could impact sales and market adoption of our energy storage products, affect our operating results or result in claims against us.

We develop complex and evolving energy storage products and we continue to advance the capabilities of our battery technology, product design and associated manufacturing processes. Our energy storage products are designed primarily to serve the behind-the-meter and front-of-the-meter markets. Our core technology components are incorporated into energy storage products that serve both types of customers.

We will provide an insurance-backed warranty on our energy storage products. We also will provide certain warranties with respect to the energy generation and storage systems we sell, including on their installation, operations and maintenance, and for components not manufactured by us, we generally pass through to our customers the applicable manufacturers' warranties. As part of our energy generation and storage system contracts, we may provide the customer with performance guarantees that warrant that the underlying system will meet or exceed the minimum energy generation or other energy performance requirements specified in the contract. Under these performance guarantees, we bear the risk of electricity production or other performance shortfalls, even if they result from failures in components from third-party manufacturers. These risks are exacerbated in the event such manufacturers cease operations or fail to honor their warranties.

If our warranty reserves are inadequate to cover future warranty claims on our energy storage products, our financial condition and results of operations may be harmed. Warranty reserves will include our management's best estimates of the projected costs to repair or to replace items under warranty, which will be based on actual claims incurred and an estimate of the nature, frequency and costs of future claims. Such estimates are inherently uncertain and changes to our historical or projected experience, especially with respect to Energy Warehouse and Energy Center products which are still in development and which we expect to produce at significantly greater volumes than our past products, may cause material changes to our warranty reserves in the future.

We are still gaining field operating experience with respect to our energy storage products, and despite experience gained from trials and pilot testing performed by us, our partners and our suppliers, issues may be found in existing or new energy storage products. This could result in a delay in recognition or loss of revenues, loss of market share or failure to achieve broad market acceptance. The occurrence of defects could also cause us to incur significant warranty, support and repair costs in excess of our estimates, could divert the attention of our engineering personnel from our product development efforts, and could harm our relationships with our customers. Although we seek to limit our liability, a product liability claim brought against us, even if unsuccessful, would likely be time consuming, could be costly to defend, and may hurt our reputation in the marketplace. Our customers could also seek and obtain damages from us for their losses.

Defects or performance problems in our products could result in loss of customers, reputational damage, and decreased revenue, and we may face warranty, indemnity, and product liability claims that may arise from defective products.

We may become subject to product liability claims, even those without merit, which could harm our business, financial condition and results of operations. We face inherent risk of exposure to claims in the event our batteries do not perform as expected or malfunction resulting in personal injury or death. Our risks in this area are particularly pronounced given our S200 batteries have not yet been commercially tested or mass produced. A successful product liability claim against us could require us to pay a substantial monetary award. Moreover, a product liability claim could generate substantial negative publicity about our batteries and business and inhibit or prevent commercialization of other future battery candidates, which would have a material adverse effect on our brand, business, prospects and operating results. Any insurance coverage might not be sufficient to cover all potential product liability claims. Any lawsuit seeking significant monetary damages either in excess of our coverage, or outside of our coverage, may have a material adverse effect on our reputation, business and financial condition. We may not be able to secure additional product liability insurance coverage on commercially acceptable terms or at reasonable costs when needed, particularly if we do face liability for our products and are forced to make a claim under our policy.

In addition, as we grow our manufacturing volume, the chance of manufacturing defects could increase. We may be unable to correct manufacturing defects or other failures of our battery modules and the products in which they are incorporated, including the Energy Warehouse and Energy Center, in a manner satisfactory to our customers, which could adversely affect customer satisfaction, market acceptance and our business reputation.

Third parties might attempt to gain unauthorized access to our network or seek to compromise our products and services.

Our business is dependent on the security and efficacy of our networks and computer and data management systems. For example, our Energy Warehouses are connected to and controlled and monitored by our centralized remote monitoring service, and we rely on our internal computer networks for many of the systems we use to operate our business generally. From time to time, we may face attempts by others to gain unauthorized access through the Internet or otherwise or to introduce malicious software to our IT systems. We or our products may be a target of computer hackers, organizations or malicious attackers who attempt to:

- gain access to our network or Energy Warehouses or networks of our customers;
- steal proprietary information related to our business, products, employees, and customers; or
- interrupt our systems or those of our customers.

From time to time, we encounter attempts at gaining unauthorized access to our network and we routinely run intrusion checks. To date, none has resulted in any material adverse impact to our business or operations; however, there can be no guarantee that such intrusions will not be material in the future. While we seek to detect and investigate unauthorized attempts and attacks against our network and products of which we become aware, and to prevent their recurrence where practicable through changes to our internal processes and tools and/or changes to our products, we remain potentially vulnerable to additional known or unknown threats. In addition to intentional third-party cyber-security breaches, the integrity and confidentiality of company and customer data and our intellectual property may be compromised as a result of human error, product defects, or technological failures. We utilize third-party contractors to perform certain functions for us, and they face security risks similar to us.

Any failure or perceived failure by us or our service providers to prevent information security breaches or other security incidents or system disruptions, or any compromise of security that results in or is perceived or reported to result in unauthorized access to, or loss, theft, alteration, release or transfer of, our information, or any personal information, confidential information, or other data could result in loss or theft of proprietary or sensitive data and intellectual property, could harm our reputation and competitive position and could expose us to legal claims, regulatory investigations and proceedings, and fines, penalties, and other liability. Any such actual or perceived security breach, security incident or disruption could also divert the efforts of our technical and management personnel, and could require us to incur significant costs and operational consequences in connection with investigating, remediating, eliminating and putting in place additional tools, devices, policies, and other measures designed to prevent actual or perceived security breaches and other incidents and system disruptions, and in, for example, rebuilding internal systems, reduced inventory value, providing modifications to our products and services, defending against claims and litigation, responding to regulatory inquiries or actions, paying damages, or taking other remedial steps with respect to third parties. Moreover, we could be required or otherwise find it appropriate to expend significant capital and other resources to respond to, notify third parties of, and otherwise address the incident or breach and its root cause, and to notify individuals, regulatory authorities and others of security breaches involving certain types of data.

Further, we cannot assure that any limitations of liability provisions in our current or future contracts that may be applicable would be enforceable or adequate or would otherwise protect us from any liabilities or damages with respect to any particular claim relating to a security breach or other security-related matter. We also cannot be sure that our existing insurance coverage will continue to be available on acceptable terms or will be available in sufficient amounts to cover claims related to a security breach or incident, or that the insurer will not deny coverage as to any future claim. The successful assertion of claims against us that exceed available insurance coverage, or the occurrence of changes in our insurance policies, including premium increases or the imposition of large deductible or co-insurance requirements, could have a material adverse effect on our business, including our financial condition, operating results, and reputation.

The failure or breach of our IT systems could affect our sales and operations.

The availability and effectiveness of our energy storage products and our ability to conduct our business and operations, depend on the continued operation of IT and communications systems, some of which we have yet to develop or otherwise obtain the ability to use. Systems used in our business will be vulnerable to damage or interruption. Such systems could also be subject to break-ins, sabotage and intentional acts of vandalism, as well as disruptions and security incidents as a result of non-technical issues, including intentional or inadvertent acts or omissions by employees, service providers, or others. We expect to face significant challenges with respect to information security and maintaining the security and integrity of our systems and other systems used in our business, as well as with respect to the data stored on or processed by these systems. We also anticipate storing and otherwise processing confidential business information of ourselves and third parties, as well as personal information and other data. Advances in technology, an increased level of sophistication and expertise of hackers, and new discoveries in the field of cryptography can result in a compromise or breach of the systems used in our business or of security measures used in our business to protect confidential information, personal information, and other data. We may be a target for attacks by state-sponsored actors and others designed to disrupt our operations or to attempt to gain access to our systems or to data that is processed or maintained in our business.

We use outsourced service providers to help provide certain services. For example, we utilize email and collaboration tools, and other third-party services and service providers that store or otherwise process information, including personal information and confidential business information, on our behalf. Any such outsourced service providers face similar security and system disruption risks as us. We are at risk for interruptions, outages and breaches of our and our outsourced vendors' and service providers' operational systems and security systems, our products' and services' integrated software and technology, and customer data that we or our third-party service providers process. These may be caused by, among other causes, physical theft, viruses or other malicious code, denial or degradation of service attacks, ransomware, social engineering schemes, and insider theft or misuse. While we take steps to review security protections of services provided to us, there can be no guarantee that a failure or breach of such systems will not occur or be perceived to occur. If such failures were to occur, we may not be able to sufficiently recover to avoid the loss of data or any adverse impact on our operations that are dependent on such IT systems. This could result in lost sales as we may not be able to meet the demands for our product, and other harm to our business and results of operations. Further, some of the systems used in our business will not be fully redundant, and our disaster recovery planning cannot account for all eventualities. Any security breaches or incidents or other damage to or disruptions to any data centers or other systems used in our business could result in lengthy interruptions in our service and may adversely affect our business, prospects, financial condition and operating results.

Furthermore, because our IT systems are essential for the exchange of information both internally and in communicating with third parties, including our suppliers and manufacturers, cyber-security breaches could potentially lead to unauthorized acquisition or unauthorized release of sensitive, confidential or personal data or information, improper use of our systems, or, unauthorized access, use, disclosure, modification or destruction of information or defective products. Our IT systems also help us produce financial information. Any disruption or cyber-security breach could impact our ability to produce timely and accurate financial information needed for compliance, audit, and reporting purposes. If any such cyber-security breaches were to continue, our operations and ability to communicate both internally and with third parties may be negatively impacted.

Significant capital and other resources may be required in efforts to protect against information security breaches, security incidents, and system disruptions, or to alleviate problems caused by actual or suspected information security breaches and other security incidents and system disruptions. The resources required may increase over time as the methods used by hackers and others engaged in online criminal activities and otherwise seeking to obtain unauthorized access to systems or data, and to disrupt systems, are increasingly sophisticated and constantly evolving. In addition, laws, regulations, government guidance, and industry standards and practices in the United States and elsewhere are rapidly evolving to combat these threats. We may face increased compliance burdens regarding such requirements with regulators and customers regarding our products and services and also incur additional costs for oversight and monitoring of our supply chain. We also cannot be certain that these systems, networks, and other infrastructure or technology upon which we rely, including those of our third-party suppliers or service providers, will be effectively implemented, maintained or expanded as planned, or will be free from bugs, defects, errors, vulnerabilities, viruses, or malicious code. We may be required to expend significant resources to make corrections or to remediate issues that are identified or to find alternative sources. Any of these circumstances potentially could have a negative impact on our business, prospects, financial condition and operating results.

We may not be able to identify or complete transactions with attractive acquisition candidates. Future acquisitions may result in significant transaction expenses and we may incur significant costs. We may experience integration and consolidation risks associated with these future acquisitions.

We may from time to time selectively pursue on an opportunistic basis acquisitions of additional businesses that complement our existing business and footprint. The success of any such growth strategy would depend, in part, on selecting strategic acquisition candidates at attractive prices and effectively integrating their businesses into our own, including with respect to financial reporting and regulatory matters. There can be no assurance that we will be able to identify attractive acquisition candidates or complete the acquisition of any identified candidates at favorable prices and upon advantageous terms and conditions, including financing alternatives.

We may not have sufficient management, financial and other resources to integrate and consolidate any future acquisitions. Any significant diversion of management’s attention or any major difficulties encountered in the integration of the businesses we acquire could have a material adverse effect on our business, financial condition or results of operations, which could decrease our profitability and make it more difficult for us to grow our business. Among other things, these integration risks could include:

- the loss of key employees;
- the disruption of operations and business;
- the retention or transition of customers and vendors;
- the integration of corporate cultures and maintenance of employee morale;
- inability to maintain and increase competitive presence;
- customer loss and revenue loss;
- possible inconsistencies in standards, control procedures and policies;

- problems with the assimilation of new operations, sites or personnel, which could divert resources from our regular operations;
- integration of financial reporting and regulatory reporting functions; and/or
- potential unknown liabilities.

In addition, general economic conditions or unfavorable capital and credit markets could affect the timing and extent to which we can successfully acquire or integrate new businesses, which could limit our revenues and profitability.

Our facilities or operations could be damaged or adversely affected as a result of natural disasters and other catastrophic events.

Our facilities or operations could be adversely affected by events outside of our control, such as natural disasters, wars, health epidemics such as the ongoing COVID-19 pandemic, and other calamities. We cannot assure you that any backup systems will be adequate to protect our facilities or operations from the effects of fire, floods, typhoons, earthquakes, power loss, telecommunications failures, break-ins, war, riots, terrorist attacks or similar events. Any of the foregoing events may give rise to interruptions, breakdowns, system failures, technology platform failures or internet failures, which could cause the loss or corruption of data or malfunctions of software or hardware as well as adversely affect our ability to provide services.

Our ability to utilize our net operating loss and tax credit carryforwards to offset future taxable income may be subject to certain limitations.

In general, under Section 382 of the Code, a corporation that undergoes an “ownership change” is subject to limitations on its ability to use its pre-change net operating loss carryforwards, or NOLs, to offset future taxable income. The limitations apply if a corporation undergoes an “ownership change,” which is generally defined as a greater than fifty percentage point change (by value) in its equity ownership by certain stockholders over a three-year period. If we have experienced an ownership change at any time since our incorporation, we may already be subject to limitations on our ability to utilize our existing NOLs and other tax attributes to offset taxable income or tax liability. In addition, any business combination and future changes in our stock ownership, which may be outside of our control, may trigger an ownership change. Similar provisions of state tax law may also apply to limit ESS’ use of accumulated state tax attributes. As a result, even if we earn net taxable income in the future, our ability to use our pre-change NOL carryforwards and other tax attributes to offset such taxable income or tax liability may be subject to limitations, which could potentially result in increased future income tax liability to us. Currently, we do not expect to be able to utilize our NOLs and have recorded a full valuation allowance against the deferred tax assets attributable to NOLs.

There is also a risk that changes in law or regulatory changes made in response to the need for some jurisdictions to raise additional revenue to help counter the fiscal impact from the COVID-19 pandemic or for other unforeseen reasons, including suspensions on the use of net operating losses or tax credits, possibly with retroactive effect, may result in our existing net operating losses or tax credits expiring or otherwise being unavailable to offset future income tax liabilities. Our net operating losses may also be subject to limitations in certain states.

We may not have sufficient insurance coverage to cover business continuity.

A sustained or repeated interruption in the manufacturing of our products due to labor shortage, fire, flood, war, pandemic, natural disasters and similar unforeseen events beyond our control may interfere with our ability to manufacture our products and fulfil customers’ demands in a timely manner, and make it difficult, or in certain cases, impossible for us to continue our business for a substantial period of time. Failure to manufacture our products and meet customer demands would impair our ability to generate revenues which would adversely affect our financial results. We currently do not have a formal disaster recovery or business continuity plan in place and any disaster recovery and business continuity plans that we may put in place may prove inadequate in the event of a serious disaster or similar event. As part of our risk management, we maintain insurance coverage for our business. However, we cannot assure you that the amounts of insurance will be sufficient to satisfy any damages or losses we may incur. If our insurance coverage is not sufficient, we may incur substantial expenses, which, could have a material adverse effect on our business.

As we grow our business, the need for business continuity planning and disaster recovery plans will grow in significance. If we are unable to maintain adequate insurance at reasonable terms or are unable to develop adequate plans to ensure that our business functions continue to operate during and after a disaster or emergency, and successfully execute on those plans in the event of a disaster or emergency, our business and reputation would be harmed.

We face risks associated with expanding our international operations, including unfavorable and uncertain regulatory, political, economic, tax and labor conditions.

We are subject to legal and regulatory requirements, political uncertainty and social, environmental and economic conditions in numerous jurisdictions, over which we have little control and which are inherently unpredictable. Our operations in such jurisdictions, particularly as a company based in the United States, create risks relating to conforming our products to regulatory and safety requirements and charging and other electric infrastructures; organizing local operating entities; establishing, staffing and managing foreign business locations; attracting local customers; navigating foreign government taxes, regulations and permit requirements; enforceability of our contractual rights; trade restrictions, foreign direct investment review regimes, customs regulations, tariffs and price or exchange controls; and preferences in foreign nations for domestically manufactured products. Such conditions may increase our costs and tax liabilities, impact our ability to sell our products and require significant management attention, and may harm our business if we are unable to manage them effectively.

Changes in the U.S. trade environment, including the recent imposition of import tariffs, could adversely affect the amount or timing of our revenues, results of operations or cash flows.

We currently procure the injected molded and machined plastic parts as well as cast aluminum parts for our products from China, as we believe that the materials procured from our Chinese suppliers currently have the best overall performance and price compared to domestic alternatives. Escalating trade tensions between the United States and China have recently led to certain increased tariffs and trade restrictions. There can be no guaranty that these developments will not negatively impact the price of the positive electrode used in our products. It is possible we could obtain similar performing materials in the United States, but such sources would likely also charge a higher cost than our current suppliers, which would negatively impact our gross margins. There is no guaranty that we will be able to identify alternate suppliers that meet our quality, volume and price requirements. Failure to meet these requirements could result in supply disruptions and increased costs. It is difficult to predict what further trade-related actions governments may take, which may include additional or increased tariffs and trade restrictions, and we may be unable to react to such actions quickly and effectively, which could result in supply shortages and increased costs.

We could be subject to foreign exchange risk.

Our international sales are expected to be denominated in U.S. dollars. As a result, we will not have significant direct exposure to currency valuation exchange rate fluctuations. However, because our products are sold internationally, to the extent that the U.S. dollar strengthens against the foreign currency of a customer or potential customer, we may find our products at a price disadvantage as compared with other non-U.S. suppliers. This could lead to our receiving lower prices or being unable to compete for that specific customer’s business. Consequently, currency fluctuations could adversely affect the competitiveness of our products in international markets.

We may be required to take write-downs or write-offs, restructuring and impairment or other charges that could have a significant negative effect on our financial condition, results of operations and stock price, which could cause you to lose some or all of your investment.

Unexpected risks may arise that cause us to write-down or write-off assets, restructure our operations, or incur impairment or other charges that could result in losses. Even though these charges may be non-cash items and not have an immediate impact on our liquidity, the fact that we report charges of this nature could contribute to negative market perceptions about us or our securities. In addition, charges of this nature may cause us to violate net worth or other covenants to which we may be subject. Accordingly, our stockholders could suffer a reduction in the value of their shares.

Our results of operations could vary as a result of changes to our accounting policies or the methods, estimates and judgments we use in applying our accounting policies.

The method estimates and judgments we use in applying our accounting policies have a significant impact on our results of operations. Such methods, estimates and judgments are, by their nature, subject to substantial risks, uncertainties and assumptions, and factors may arise over time that could lead us to reevaluate our methods, estimates and judgments.

In future periods, management will regularly evaluate its estimates such as for service agreements, loss accruals, warranty, performance guarantees, liquidated damages and inventory valuation allowances. Changes in those estimates and judgments could significantly affect our financial condition and results of operations. We will also adopt changes required by the Financial Accounting Standards Board and the SEC.

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

We face increased legal, accounting, administrative and other costs and expenses as a public company that ESS did not incur as a private company prior to the Business Combination. The Sarbanes-Oxley Act, including the requirements of Section 404, as well as rules and regulations subsequently implemented by the SEC, the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 and the rules and regulations promulgated and to be promulgated thereunder, the Public Company Accounting Oversight Board and the securities exchanges impose additional reporting and other obligations on public companies. Compliance with public company requirements is expected to continue to increase costs and make certain activities more time-consuming. A number of those requirements will require us to carry out activities that ESS had not done prior to the Business Combination. For example, we have created new board committees and are adopting new internal controls and disclosure controls and procedures. In addition, additional expenses associated with SEC reporting requirements have been incurred and will continue to be incurred. Furthermore, if any issues in complying with those requirements are identified (for example, if our auditors identify a material weakness or significant deficiency in our internal control over financial reporting), we could incur additional costs rectifying those issues, and the existence of those issues could adversely affect our reputation or investor perceptions of us. It is also more expensive to obtain directors’ and officers’ liability insurance. Risks associated with our status as a public company may make it more difficult to attract and retain qualified persons to serve on our board of directors or as executive officers. The additional reporting and other obligations imposed by these rules and regulations increase legal and financial compliance costs and the costs of related legal, accounting and administrative activities. These increased costs will require us to divert a significant amount of money that could otherwise be used to expand our business and achieve strategic objectives. Advocacy efforts by stockholders and third parties may also prompt additional changes in governance and reporting requirements, which could further increase our costs.

Our management may not successfully or effectively manage our transition to a public company.

Our management team may not successfully or effectively manage our transition to a public company, which transition will be subject to significant regulatory oversight and reporting obligations under federal securities laws. Its limited experience in dealing with the increasingly complex laws pertaining to public companies could be a significant disadvantage in that it is likely that an increasing amount of management’s time may be devoted to these activities which will result in less time being devoted to our management and growth. We may not have adequate personnel with the appropriate level of knowledge, experience and training in the accounting policies, practices or internal controls over financial reporting required of public companies in the United States. The development and implementation of the standards and controls necessary for us to achieve the level of accounting standards required of a public company in the United States may require costs greater than expected. It is possible that we will be required to expand our employee base and hire additional employees to support our operations as a public company which will increase our operating costs in future periods.

We may be unable to introduce various financing programs to expand market reach.

Our energy storage products have a relatively high upfront capital cost which may prevent some customers from purchasing these products. In order to grow our customer base, we may work with financial institutions to develop and offer customer financing arrangements similar to those offered in the solar, lithium-ion battery storage and fuel cell sectors. These arrangements may include traditional customer lease or loan financing as well as long-term storage-as-a-service contracts. Such customer financing arrangements are bespoke products which take time to develop and are not widely offered by numerous financial institutions, so there is a chance we may fail to complete them and therefore fail to attract customers who are sensitive to the high upfront cost of our energy storage products. Additionally, if we do not successfully monitor and comply with applicable national, state and/or local financial regulations and consumer protection laws governing consumer financing transactions, we may become subject to enforcement actions or penalties.

Finally, our potential financing programs may involve reliance on periodic customer payments over a term of years, and therefore may expose us to customer credit risk. In the event of a widespread economic downturn or other catastrophic event, our customers may be unable or unwilling to satisfy their payment obligations to us on a timely basis or at all. If a significant number of our customers default, we may incur substantial credit losses and/or impairment charges with respect to the underlying assets.

We may engage in transactions with related parties and such transactions present possible conflicts of interest that could have an adverse effect on us.

We may enter into transactions with related parties. Related-party transactions create the possibility of conflicts of interest with regard to our management, including that:

- we may enter into contracts between us, on the one hand, and related parties, on the other, that are not as a result of arm's-length transactions;
- our executive officers and directors that hold positions of responsibility with related parties may be aware of certain business opportunities that are appropriate for presentation to us as well as to such other related parties and may present such business opportunities to such other parties; and
- our executive officers and directors that hold positions of responsibility with related parties may have significant duties with, and spend significant time serving, other entities and may have conflicts of interest in allocating time.

Such conflicts could cause an individual in our management to seek to advance his or her economic interests or the economic interests of certain related parties above ours. Further, the appearance of conflicts of interest created by related-party transactions could impair the confidence of our investors. Our board of directors regularly reviews these transactions. Notwithstanding this, it is possible that a conflict of interest could have a material adverse effect on our business, financial condition and results of operations.

Risks Related to Regulatory, Environmental and Legal Issues

We may face regulatory challenges to or limitations on our ability to sell our Energy Centers and Energy Warehouses directly in certain markets. Expanding operations internationally could expose us to additional risks.

While we intend to continue to sell our products across the United States both directly and through third parties, our ability to continue such sales may be affected by future limitations, either directly to the ability to sell energy storage or by broader regulation related to the sales and operation of distributed energy resources, which could have an impact on our ability to sell our products to the market.

Although we currently primarily operate in the United States, we continue to expand our business internationally. Any expansion internationally could subject our business to risks associated with international operations. In addition, there may be laws in international jurisdictions we have not yet entered or laws we are unaware of in jurisdictions we have entered that may restrict our sales or other business practices. Even for those jurisdictions we have analyzed, the laws in this area can be complex, difficult to interpret and may change over time.

Continued regulatory limitations and other obstacles interfering with our ability to sell our energy storage products may harm our business, financial condition and results of operations. Additionally, any regulation that affects the sale or operations of distributed energy resources could diminish the real or perceived value of our energy storage solutions in those markets. As a result of these risks, any potential future international expansion efforts that we may undertake may not be successful.

Our customers may be required to obtain environmental, health and safety or other certifications in order to install our products. If our customers are unable to obtain the necessary certifications, we will not be able to install our products, which would negatively impact our revenues.

While our engineering team has worked closely with the CSA Group, Intertek, UL and Technischer Überwachungsverein certification agencies to obtain certifications of our flow battery products against all applicable safety standards, there is no guarantee that such certifications shall continue to be obtained. From our prior certifications, we have expanded our flow battery product certification to the European Conformity marking in the European Union and intend to expand to other national standards such as the international certification of the International Electrotechnical Commission ("IEC"). Failure to obtain IEC certification may have impact on our revenues, as such certifications are required by some of our customers.

We are subject to multiple U.S. federal, state and local regulations. Changes in applicable law, regulations or requirements, or our material failure to comply with any of them, can increase our costs and have other negative impacts on our business.

Applicable laws and requirements address multiple aspects of our operations, such as worker safety, consumer rights, privacy, cybersecurity, employee benefits and more, and can often have different requirements in different jurisdictions. Changes in these requirements, or any material failure to comply with them, could increase our costs, affect our reputation, result in claims, litigation, and regulatory investigations or other proceedings, which may result in fines, penalties, and other liabilities, and which may limit our business, drain management's time and attention or otherwise, and generally impact our operations in adverse ways.

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

We are subject to numerous federal, state and local environmental laws and regulations governing, among other things, solid and hazardous waste storage, treatment and disposal, and remediation of releases of hazardous materials. There are significant capital, operating and other costs associated with compliance with these environmental laws and regulations. Environmental laws and regulations may become more stringent in the future, which could increase costs of compliance or require us to manufacture with alternative technologies and materials.

Federal, state and local authorities also regulate a variety of matters, including, but not limited to, health, safety and permitting in addition to the environmental matters discussed above. New legislation and regulations may require us to make material changes to our operations, resulting in significant increases to the cost of production.

Our manufacturing process will have hazards such as but not limited to hazardous materials, machines with moving parts, and high voltage and/or high current electrical systems typical of large manufacturing equipment and related safety incidents. There may be safety incidents that damage machinery or product, slow or stop production, or harm employees. Consequences may include litigation, regulation, fines, increased insurance premiums, mandates to temporarily halt production, workers' compensation claims, or other actions that impact our company brand, finances, or ability to operate.

We may be exposed to delays, limitations and risks related to the environmental permits and other operating permits required to operate our products.

Operation of our manufacturing facilities requires land use and environmental permits and other operating permits from federal, state and local government entities. While we have all permits necessary to carry out and perform our current plans and operations at our existing facility, we may require additional environmental, wastewater and land use permits for the commercial operation of any future manufacturing facilities. Delays, denials or restrictions on any of the applications for or assignment of the permits to operate our manufacturing facilities could adversely affect our ability to execute on our business plans and objectives.

We may collect and process certain information about our customers and about individuals and will be subject to various laws and regulations relating to privacy, data protection and cybersecurity.

We may collect and process certain battery data required for performance monitoring, safety and serviceability. This information is transmitted to our control center and stored. Such data currently is limited to battery operational and safety parameters. Additionally, we collect and otherwise process other data relating to individuals, including business partners, prospects, employees, vendors, and contractors. Our handling of data relating to individuals is subject to a variety of laws and regulations relating to privacy, data protection and cybersecurity, and we may become subject to additional obligations, including contractual obligations, relating to our maintenance and other processing of this data, and new or modified laws or regulations. Laws, regulations, and other actual and potential obligations relating to privacy, data protection, and cybersecurity are evolving rapidly, and we expect to potentially be subject to new laws and regulations, or new interpretations of laws and regulations, in the future in various jurisdictions. These laws, regulations, and other obligations, and changes in their interpretation, could require us to modify our operations and practices, restrict our activities, and increase our costs. Further, these laws, regulations, and other obligations are complex and compliance with them can be difficult. It is possible that these laws, regulations, and other obligations may be inconsistent with one another or be interpreted or asserted to be inconsistent with our business or practices. We anticipate needing to dedicate substantial resources to comply with laws, regulations, and other obligations relating to privacy and cybersecurity in order to comply. Any actual or alleged failure by us to comply with our privacy policy or any federal, state or international privacy, data protection or security laws or regulations or other obligations could result in claims and litigation against us, regulatory investigations and other proceedings, legal liability, fines, damages and other costs. Any actual or alleged failure by any of our vendors or business partners to comply with contractual or legal obligations regarding the protection of information about our customers could carry similar consequences. Should we become subject to additional privacy or data protection laws, regulations, or other obligations relating to privacy, data protection or cybersecurity, we may need to undertake compliance efforts that could carry a large cost and could entail substantial time and other resources.

Further, although we take steps to protect the security of our customers' personal information and other personal information within our control, we may face actual or perceived breaches of security, security incidents, or other misuses of this information, and many jurisdictions have enacted laws requiring companies to notify individuals, regulatory authorities and others of security breaches involving certain types of data. We may be required to expend significant resources to comply with security breach and security incident notification requirements if a third party accesses or acquires such personal information without authorization, if we otherwise experience a security breach or incident or loss or damage of personal information, or if this is perceived to have occurred. Any actual or perceived breach of our network security or systems, or those of our vendors or service providers, could result in claims, litigation, and proceedings against us by governmental entities or others, have negative effects on our business and future prospects, including possible fines, penalties and damages, and could result in reduced demand for our energy storage products and harm to our reputation and brand, resulting in negative impacts to our business, prospects, and financial results.

We could be subject to penalties and other adverse consequences for any violations of the FCPA, and other foreign anti-bribery and anti-corruption laws.

We are subject to the FCPA, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the United Kingdom Bribery Act 2010, and possibly other anti-bribery and anti-corruption laws in countries outside of the United States in which we conduct our activities. We may have business dealings with customers in certain countries that are high risk for corruption. Anti-corruption and anti-bribery laws have been enforced aggressively in recent years and are interpreted broadly to generally prohibit companies and their employees, agents, representatives, business partners, and third-party intermediaries from authorizing, offering, or providing, directly or indirectly, improper payments or benefits to recipients in the public or private sector.

We sometimes leverage third parties to sell our products and conduct our business abroad. We, our employees, agents, representatives, business partners or third-party intermediaries may have direct or indirect interactions with officials and employees of government agencies or state-owned or affiliated entities and may be held liable for the corrupt or other illegal activities of these employees, agents, representatives, business partners or third-party intermediaries even if we do not explicitly authorize such activities. We cannot assure you that all of our employees and agents will not take actions in violation of applicable law, for which we may be ultimately held responsible. We currently have contracts and may potentially operate in parts of the world that have experienced higher levels of governmental corruption and as we increase our international sales and business, our risks under these laws may increase. In addition, due to the level of regulation in our industry and related energy industries, our entry into certain jurisdictions may require substantial government contact where norms can differ from U.S. standards.

These laws also require that we keep accurate books and records and maintain internal controls and compliance procedures designed to prevent any such actions. While we have policies and procedures to address and to mandate compliance with such laws, we cannot assure you that none of our employees, agents, representatives, business partners or third-party intermediaries will take actions in violation of our policies and applicable law, for which we may be ultimately held responsible.

In the event that we believe, have reason to believe, or are notified that our employees, agents, representatives, business partners, or third party intermediaries have or may have violated applicable laws, including anti-bribery and anti-corruption laws, we may be required to investigate or have outside counsel investigate the relevant facts and circumstances, and detecting, investigating and resolving actual or alleged violations can be expensive and require significant time and attention from senior management. Any allegation or violation of U.S. federal and state and non-U.S. laws, regulations and policies regarding anti-bribery and anti-corruption could result in substantial fines, sanctions, civil and/or criminal penalties, whistleblower complaints, sanctions, settlements, prosecution, enforcement actions, damages, adverse media coverage, investigations, loss of export privileges, suspension or debarment from government contracts, or other curtailment of operations in the United States or other applicable jurisdictions. In addition, actual or alleged violations could damage our reputation and ability to do business. Any of the foregoing could materially adversely affect our reputation, business, financial condition, prospects and results of operations.

We are subject to governmental export and import controls and economic sanctions programs that could impair our ability to compete in international markets or subject us to liability if we violate these controls.

Our products and services are, or may in the future be, subject to U.S. export control laws and regulations including the Export Administration Regulations (“EAR”) and trade and economic sanctions maintained by the Office of Foreign Assets Control (“OFAC”) and to similar laws and regulations in all other jurisdictions in which we operate. As such, an export license may be required to export, re-export or transfer our products and services to certain countries or end-users or for certain end-uses. If we were to fail to comply with such export control laws and regulations or trade and economic sanctions, we could be subject to both civil and criminal penalties, including substantial fines, possible incarceration for employees and managers for willful violations, and the possible loss of our export and/or import privileges. Compliance with the EAR, OFAC sanctions, and other applicable regulatory requirements regarding the import and export of our products or the performance of services, may create delays in the introduction of our products and services in non-U.S. markets, prevent our customers with non-U.S. operations from deploying these products and services throughout their global systems or, in some cases, prevent the export of the products and services to some countries or users altogether. We may enter into agreements with customers and counterparties located in countries subject to list-based OFAC sanctions.

Obtaining the necessary export license for a particular sale or offering may not be possible, may be time-consuming, and may result in the delay or loss of sales opportunities. Further, U.S. export control laws and trade and economic sanctions as well as similar laws and regulations in other jurisdictions prohibit the export of products and services to certain U.S. embargoed or sanctioned countries, governments, and persons, as well as for prohibited end-uses. Even though we have taken precautions to ensure that we and our partners comply with all relevant import and export control laws and regulations and sanctions, monitoring and ensuring compliance with these complex laws and regulations is particularly challenging, and any failure by us or our partners to comply with such laws and regulations could have negative consequences for us, including reputational harm, government investigations and penalties.

Any change in domestic or international export or import laws or regulations, economic sanctions, or related legislation, shift in the enforcement or scope of existing export, import, or sanctions laws or regulations, or change in the countries, governments, persons, or technologies targeted by such export, import, or sanctions laws or regulations, could result in decreased use of our products and/or services by, or in our decreased ability to export or sell our products and/or services to, end-customers with international operations.

We may be exposed to various risks related to legal proceedings or claims that could adversely affect our operating results. The nature of our business exposes us to various liability claims, which may exceed the level of our insurance coverage resulting in our not being fully protected.

We may be party to lawsuits in the normal course of our business. Litigation can be expensive, lengthy and disruptive to normal business operations. Moreover, the results of complex legal proceedings are difficult to predict. Responding to lawsuits brought against us, or legal actions that we may initiate, can be expensive and time-consuming. Unfavorable outcomes from these claims and/or lawsuits could adversely affect our business, financial condition or results of operations, and we could incur substantial monetary liability and/or be required to change our business practices.

Our business may expose us to claims for personal injury, death or property damage resulting from the use of our products or from employee related matters. Additionally, we could be subject to potential litigation associated with compliance with various laws and governmental regulations at the federal, state or local levels, such as those relating to the protection of persons with disabilities, employment, health, safety, security and other regulations under which we operate.

We carry comprehensive insurance, subject to deductibles, at levels we believe are sufficient to cover existing and future claims made during the respective policy periods. However, we may be exposed to multiple claims, and, as a result, could incur significant out-of-pocket costs before reaching the deductible amount, which could adversely affect our financial condition and results of operations. In addition, the cost of such insurance policies may increase significantly upon renewal of those policies as a result of general rate increases for the type of insurance we carry as well as our historical experience and experience in our industry. Although we have not experienced any material losses that were not covered by insurance, our existing or future claims may exceed the coverage level of our insurance, and such insurance may not continue to be available on economically reasonable terms, or at all. If we are required to pay significantly higher premiums for insurance, are not able to maintain insurance coverage at affordable rates or must pay amounts in excess of claims covered by our insurance, then we could experience higher costs that could adversely affect our financial condition and results of operations.

The reduction, elimination or expiration of government tax credits, subsidies and economic incentives related to renewable energy solutions could reduce demand for our technology and harm our business.

The U.S. federal government and some state and local governments provide incentives to end users and potential purchasers of our energy storage products in the form of rebates, tax credits and other financial incentives, such as system performance payments and payments for renewable energy credits associated with renewable energy generation. We will rely on these governmental rebates, tax credits and other financial incentives to significantly lower the effective price of the energy storage products to our customers in the United States. However, these incentives may expire on a particular date, end when the allocated funding is exhausted, or be reduced or terminated as a matter of regulatory or legislative policy.

Our energy storage products have qualified for tax exemptions, incentives or other customer incentives in many states including California. Some states have utility procurement programs and/or renewable portfolio standards for which our technology is eligible. There is no guarantee that these policies will continue to exist in their current form, or at all. Such state programs may face increased opposition on the U.S. federal, state and local levels in the future. Changes in federal or state programs could reduce demand for our energy storage products, impair sales financing and adversely impact our business results.

We have historically entered into, and may in the future seek, government grants and contracts, which are subject to a number of uncertainties, challenges, and risks.

In the past, we have relied on government grants and contracts to partially fund our research and development activities. In the future, we may seek to enter into additional government grants and contracts. Contracts and grants with government entities are subject to a number of risks, and obtaining grant funding and selling to government entities can be highly competitive, expensive, and time consuming, often requiring significant upfront time and expense without any assurance that we will be successful. In the event that we are successful in being awarded a government contract or grant, such award may be subject to appeals, disputes, or litigation, including, but not limited to, bid protests by unsuccessful bidders.

Government contracts often contain provisions and are subject to laws and regulations that provide government customers with additional rights and remedies not typically found in commercial contracts. These rights and remedies allow government customers, among other things, to terminate existing contracts for convenience or with short notice. As a result of actual or perceived noncompliance with government contracting laws, regulations, or contractual provisions, we may be subject to non-ordinary course audits and internal investigations which may prove costly to our business financially, divert management time, or limit our ability to continue selling our products and services to our government customers. These laws and regulations may impose other added costs on our business, and failure to comply with these or other applicable regulations and requirements, including non-compliance in the past, could lead to claims for damages, downward contract price adjustments or refund obligations, civil or criminal penalties, and termination of contracts and suspension or debarment from government contracting for a period of time with government agencies. Any such damages, penalties, disruption, or limitation in our ability to do business with a government would adversely impact, and could have a material adverse effect on, our business, results of operations, financial condition, public perception, and growth prospects.

We are an emerging growth company and a smaller reporting company within the meaning of the Securities Act, and if we take advantage of certain exemptions from disclosure requirements available to "emerging growth companies" or "smaller reporting companies," this could make our securities less attractive to investors and may make it more difficult to compare our performance with other public companies.

We are an "emerging growth company" within the meaning of the Securities Act, as modified by the JOBS Act, and we may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not "emerging growth companies" including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved. As a result, our shareholders may not have access to certain information they may deem important. We could be an emerging growth company for up to five years from the STWO IPO, although circumstances could cause us to lose that status earlier, including if the market value of the Common Stock held by non-affiliates exceeds $700,000,000 as of any June 30 before that time, in which case we would no longer be an emerging growth company as of the following December 31. We cannot predict whether investors will find our securities less attractive because we expect to rely on these exemptions. If some investors find our Common Stock less attractive as a result of our reliance on these exemptions, the trading price of our Common Stock may be lower than it otherwise would be, there may be a less active trading market for our Common Stock and the trading price of our Common Stock may be more volatile.

Further, Section 102(b)(1) of the JOBS Act exempts emerging growth companies from being required to comply with new or revised financial accounting standards until private companies (that is, those that have not had a Securities Act registration statement declared effective or do not have a class of securities registered under the Exchange Act) are required to comply with the new or revised financial accounting standards. The JOBS Act provides that a company can elect to opt out of the extended transition period and comply with the requirements that apply to non-emerging growth companies but any such an election to opt out is irrevocable. We have elected not to opt out of such extended transition period which means that when a standard is issued or revised and it has different application dates for public or private companies, we, as an emerging growth company, can adopt the new or revised standard at the time private companies adopt the new or revised standard. This may make comparison of our financial statements with another public company which is neither an emerging growth company nor an emerging growth company which has opted out of using the extended transition period difficult or impossible because of the potential differences in accounting standards used.

Additionally, we are currently a “smaller reporting company” as defined in Item 10(f)(1) of Regulation S-K. Smaller reporting companies may take advantage of certain reduced disclosure obligations, including, among other things, providing only two years of audited financial statements. We will remain a smaller reporting company only until the last day of the fiscal year in which (i) the market value of the Common Stock held by non-affiliates exceeds $250,000,000 as of the prior June 30, or (ii) our annual revenues exceeded $100,000,000 during such completed fiscal year and the market value of the Common Stock held by non-affiliates exceeds $700,000,000 as of the prior June 30. To the extent we take advantage of such reduced disclosure obligations, it may also make comparison of our financial statements with other public companies difficult or impossible.

We are subject to changing laws and regulations regarding regulatory matters, corporate governance and public disclosure that have increased both our costs and the risk of non-compliance.

We are subject to rules and regulations by various governing bodies, including, for example, the SEC, which are charged with the protection of investors and the oversight of companies whose securities are publicly traded, and to new and evolving regulatory measures under applicable law. Our efforts to comply with new and changing laws and regulations have resulted in increased general and administrative expenses and a diversion of management time and attention.

Moreover, because these laws, regulations and standards are subject to varying interpretations, their application in practice may evolve over time as new guidance becomes available. This evolution may result in continuing uncertainty regarding compliance matters and additional costs necessitated by ongoing revisions to our disclosure and governance practices. If we fail to address and comply with these regulations and any subsequent changes, we may be subject to penalty and our business may be harmed.

Changes in tax laws or in their implementation or interpretation may adversely affect our business and financial condition.

We are or may become subject to income- and non-income-based taxes in the United States under federal, state and local jurisdictions and in certain foreign jurisdictions in which we operate. Tax laws, regulations and administrative practices in these jurisdictions may be subject to significant change, with or without advance notice. For example, the U.S. House of Representatives has proposed numerous changes to U.S. federal income tax law, including modifications of the provisions addressing taxation of international business operations and the imposition of a global minimum tax. Such changes, if enacted, may adversely affect our effective tax rates, cash flows and general business condition.

Risks Related to Our Intellectual Property

If we fail to protect, or incur significant costs in defending, our intellectual property and other proprietary rights, then our business and results of operations could be materially harmed.

Our success depends to a significant degree on our ability to protect our intellectual property and other proprietary rights. We rely on a combination of patent, trademark, copyright, trade secret, and unfair competition laws, as well as confidentiality and other contractual provisions with our customers, suppliers, employees, and others, to establish and protect our intellectual property and other proprietary rights. Our ability to enforce these rights is subject to general litigation risks, as well as uncertainty as to the enforceability of our intellectual property rights in various countries. When we seek to enforce our rights, we may be subject to claims that our intellectual property rights are invalid or not enforceable. Our assertion of intellectual property rights may result in another party seeking to assert claims against us, which could harm our business. Our inability to enforce intellectual property rights under any of these circumstances would likely harm our competitive position and business.

We have applied for patents in the United States, Europe, Australia, and under the Patent Cooperation Treaty, some of which have been issued. We cannot guarantee that any of our pending applications will be approved or that our existing and future intellectual property rights will be sufficiently broad to protect our proprietary technology, and any failure to obtain such approvals or finding that our intellectual property rights are invalid or unenforceable could force us to, among other things, rebrand or re-design our affected products. In countries where we have not applied for patent protection or where effective intellectual property protection is not available to the same extent as in the United States, we may be at greater risk that our proprietary rights will be misappropriated, infringed, or otherwise violated.

Our intellectual property may be stolen or infringed upon. In the event of such theft or infringement, we may be required to initiate lawsuits to protect our significant investment in our intellectual property. So far, we have been neither the subject of any lawsuits challenging the ownership or validity of our intellectual property, nor have we been required to initiate any lawsuits to protect our intellectual property. However, any such lawsuits may consume management and financial resources for long periods of time and may not result in outcomes that are favorable or readily enforceable, which may adversely affect our business, financial condition or results of operations.

Third parties may assert that we are infringing upon their intellectual property rights, which could divert management's attention, cause us to incur significant costs, and prevent us from selling or using the technology to which such rights relate.

Our competitors and other third parties hold numerous patents related to technology used in our industry. From time to time, we may also be subject to claims of intellectual property right infringement and related litigation, and, if we gain greater recognition in the market, we will face a higher risk of being the subject of claims that we have violated others' intellectual property rights. While we believe that our products and technology do not infringe in any material respect upon any valid intellectual property rights of third parties, we cannot be certain that we would be successful in defending against any such claims. If we do not successfully defend or settle an intellectual property claim, we could be liable for significant monetary damages and could be prohibited from continuing to use certain technology, business methods, content, or brands. To avoid a prohibition, we could seek a license from the applicable third party, which could require us to pay significant royalties, increasing our operating expenses. If a license is not available at all or not available on reasonable terms, then we may be required to develop or license a non-violating alternative, either of which could require significant effort and expense. If we cannot license or develop a non-violating alternative, we would be forced to limit or stop sales of our offerings and may be unable to effectively compete. Any of these results would adversely affect our business, financial condition and results of operations.

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

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

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

Risks Related to Our Indebtedness

As we endeavor to expand our business, we will incur significant costs and expenses, which could outpace our cash reserves. Unfavorable conditions or disruptions in the capital and credit markets may adversely impact business conditions and the availability of credit.

We expect to incur additional costs and expenses in the future related to the continued development and expansion of our business, including in connection with expanding our manufacturing capabilities to significantly increase production capacity, developing our products, maintaining and enhancing our research and development operations, expanding our sales, marketing, and business development activities in the United States and internationally, and growing our project management, field services and overall operational capabilities for delivering projects. We do not know whether our revenues will grow rapidly enough to absorb these costs or the extent of these expenses or their impact on our results of operations.

Disruptions in the global capital and credit markets as a result of an economic downturn, economic uncertainty, changing or increased regulation, or failures of significant financial institutions, as well as any negative perceptions about our long-term business prospects or the renewable energy sector as a whole, even if exaggerated or unfounded, could adversely affect our customers' ability to access capital and could adversely affect our access to liquidity needed for business in the future. Our business could be hurt if we are unable to obtain additional capital as required, resulting in a decrease in our revenues and profitability.

We have debt outstanding and may incur additional debt in the future, which may adversely affect our financial condition and future financial results. Our existing debt agreements contain restrictive covenants that may limit our ability to operate our business.

As of December 31, 2021, our total consolidated debt outstanding was $3.8 million, all of which was secured indebtedness with Silicon Valley Bank. Our indebtedness with Silicon Valley Bank contains and any future debt instruments likely will contain, a number of restrictive covenants that impose significant operating and financial restrictions on us, including restrictions our ability to, among other things:

- incur additional debt, including providing guarantees or credit support;
- incur liens securing indebtedness or other obligations;
- make certain investments;
- dispose of assets;
- make certain acquisitions;
- pay dividends or make distributions and make other restricted payments; and
- engage in any new businesses.

As a result of these covenants, our ability to respond to changes in business and economic conditions and engage in beneficial transactions, including to obtain additional financing as needed, may be restricted. Furthermore, our failure to comply with our debt covenants could result in a default under our debt agreements, which could permit the holders to accelerate our obligation to repay the debt. If any of our debt is accelerated, we may not have sufficient funds available to repay it.

Our ability to make scheduled payments of principal and interest and other required repayments depends on our future performance, which is subject to economic, financial, competitive and other factors beyond our control. Our business may not generate cash flows from operations in the future sufficient to service our debt and make necessary capital expenditures. If we are unable to generate such cash flows, we may be required to adopt one or more alternatives, such as selling assets, restructuring operations, restructuring debt or obtaining additional equity capital on terms that may be onerous or dilutive.

We may incur additional indebtedness in the future in the ordinary course of business, which could include onerous restrictions on us. If new debt is added to current debt levels, the risks described above could intensify. Our debt agreements contain representations and warranties, affirmative and negative covenants, and events of default that entitle the lenders to cause our indebtedness under such debt agreements to become immediately due and payable.

We may need additional capital in the future, and it may not be available on acceptable terms, if at all.

We may need to access the debt and equity capital markets. However, these sources of financing may not be available on acceptable terms, or at all. Our ability to obtain additional financing will be subject to a number of factors, including market conditions, our operating performance, investor sentiment generally or about the renewable energy sector specifically and our ability to incur additional debt in compliance with agreements governing our then-outstanding debt. These factors may make the timing, amount, terms or conditions of additional financings unattractive to us. If we raise additional funds by issuing equity, equity-linked or debt securities, those securities may have rights, preferences or privileges senior to the rights of our currently issued and outstanding equity or debt, and our existing stockholders may experience dilution. If we are unable to generate sufficient funds from operations or raise additional capital, our successful operation and growth could be impeded.

We are subject to certain restrictions and obligations on our business as a result of grants and/or loans received under certain governmental programs and we may be subject to similar or other restrictions to the extent we utilize governmental grants in the future.

Some of our research has been funded by grants from U.S. government agencies. In conjunction with the Advanced Research Projects Agency-Energy grant we received from the Department of Energy, we granted to the United States a non-exclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States inventions related to iron flow technology and made within the scope of the grant. When new technologies are developed with U.S. government funding, the government obtains certain rights in any resulting patents and technical data, generally including, at a minimum, a nonexclusive license authorizing the government to use the invention or technical data for noncommercial purposes. U.S. government funding must be disclosed in any resulting patent applications, and our rights in such inventions will normally be subject to government license rights, periodic progress reporting, foreign manufacturing restrictions and march-in rights. Therefore, if we failed to disclose to the Department of Energy an invention made with grant funds that we disclosed to patent counsel or for publication, or if we elect not to retain title to the invention, the United States may request that title to the subject invention be transferred to it.

March-in rights refer to the right of the U.S. government, under certain limited circumstances, to require us to grant a license to technology developed under a government grant to a responsible applicant or, if we refuse, to grant such a license itself. March-in rights can be triggered if the government determines that we have failed to work sufficiently towards achieving practical application of a technology or if action is necessary to alleviate health or safety needs, to meet requirements of federal regulations or to give preference to U.S. industry. If we breach the terms of our grants, the government may gain rights to the intellectual property developed in our related research. The government’s rights in our intellectual property may lessen its commercial value, which could adversely affect our performance.

To the extent we utilize governmental grants in the future, the governmental entities involved may retain certain rights in technology that we develop using such grant money. These rights could restrict our ability to fully capitalize upon the value of this research by reducing total revenues that might otherwise be available since such governmental rights may give the government the right to practice the invention without payment of royalties if we do not comply with applicable requirements. Such grants and other forms of government incentives may also subject us to additional disclosure or reporting requirements.

Risks Related to the Business Combination and STWO

We may face litigation and other risks as a result of material weaknesses in our internal control over financial reporting.

On April 12, 2021, the staff of the SEC issued a public statement entitled "Staff Statement on Accounting and Reporting Considerations for Warrants issued by Special Purpose Acquisition Companies" (the "SEC Staff Statement"). Following the issuance of the SEC Staff Statement, after consultation with Marcum LLP ("Marcum"), STWO's independent registered public accounting firm, our management and the audit committee of our board of directors (the "Audit Committee") concluded that it was appropriate to restate the previously issued audited financial statements of STWO as of December 31, 2020 and for the period from STWO's inception through December 31, 2020.

In preparing STWO's unaudited condensed consolidated financial statements as of and for the quarterly period ended September 30, 2021, we have re-evaluated STWO's application of ASC 480-10-S99-3A to its accounting classification of its outstanding Class A ordinary shares, par value $0.0001 per share (the "Public Shares"), issued as part of the units sold in the STWO IPO on September 21, 2020. Historically, a portion of the Public Shares was classified as permanent equity to maintain shareholders' equity greater than $5 million on the basis that STWO would not redeem its Public Shares in an amount that would cause its net tangible assets to be less than $5,000,001, as described in STWO's memorandum and articles of association (the "Charter"). Pursuant to such reevaluation, our management has determined that the Public Shares included certain provisions that require classification of all of the Public Shares as temporary equity regardless of the net tangible assets redemption limitation contained in the Charter. In addition, in connection with the change in presentation for the Public Shares, we determined we should restate STWO's earnings per share calculation to allocate income and losses shared pro rata between the two classes of shares. This presentation contemplates a business combination as the most likely outcome, in which case, both classes of shares share pro rata in the income and losses of STWO.

Therefore, on November 22, 2021, our management and Audit Committee concluded that STWO's previously issued (i) audited balance sheet as of September 21, 2020, as previously restated in STWO's Annual Report on Form 10-K, as amended, for the fiscal year ended December 31, 2020, filed with the SEC on May 13, 2021 (the "2020 Form 10-K/A No. 1"), (ii) audited financial statements included in the 2020 Form 10-K/A No. 1, (iii) unaudited interim financial statements included in the Form 10-Q for the quarterly period ended September 30, 2020 as previously restated in the 2020 Form 10-K/A No. 1; (iv) unaudited interim financial statements included in STWOs Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2021, filed with the SEC on May 13, 2021; and (v) unaudited interim financial statements included in STWO's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2021, filed with the SEC on August 11, 2021 (collectively, the "Affected Periods"), should be restated to report all Public Shares as temporary equity and should no longer be relied upon.

As such, we restated STWO's financial statements for the Affected Periods in our second amended annual report on Form 10-K/A filed with the SEC on December 3, 2021, our first amended quarterly report on Form 10-Q/A for the period ended March 31, 2021 and our first amended quarterly report on Form 10-Q/A for the period ended June 30, 2021, each filed with the SEC on December 6, 2021, and our Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2021, filed with the SEC on November 22, 2021.

As part of the restatements, we identified material weaknesses in our internal controls over financial reporting. As a result of these material weaknesses, the restatements, the change in accounting for the warrants, the reclassification of Class A ordinary shares, and other matters raised or that may in the future be raised by the SEC, we face potential for litigation or other disputes which may include, among others, claims invoking the federal and state securities laws, contractual claims or other claims arising from the restatements and material weaknesses in our internal control over financial reporting and the preparation of our financial statements. As of the date of this prospectus, we have no knowledge of any such litigation or dispute. However, we can provide no assurance that such litigation or dispute will not arise in the future. Any such litigation or dispute, whether successful or not, could have a material adverse effect on our business, results of operations and financial condition.

As a result of our Business Combination with a special purpose acquisition company, regulatory obligations may impact us differently than other publicly traded companies.

On October 8, 2021, we consummated the Business Combination, pursuant to which we became a publicly traded company. As a result of this transaction, regulatory obligations have, and may continue, to impact us differently than other publicly traded companies. For instance, the SEC and other regulatory agencies may issue additional guidance or apply further regulatory scrutiny to companies like us that have completed a business combination with a special purpose acquisition company. Managing this regulatory environment, which has and may continue to evolve, could divert management's attention from the operation of our business, negatively impact our ability to raise additional capital when needed, or have an adverse effect on the price of our Common Stock.

Risks Related to our Common Stock

The price of our Common Stock may be volatile.

The price of our Common Stock may fluctuate due to a variety of factors, including:

- changes in the industries in which we and our customers operate;
- variations in our operating performance and the performance of our competitors in general;
- material and adverse impact of the COVID-19 pandemic on the markets and the broader global economy;
- actual or anticipated fluctuations in our quarterly or annual operating results;
- the public's reaction to our press releases, our other public announcements and our filings with the SEC;
- our failure or the failure of our competitors to meet analysts' projections or guidance that we or our competitors may give to the market;
- additions and departures of key personnel;
- changes in laws and regulations affecting our business;
- commencement of, or involvement in, litigation involving us;
- changes in our capital structure, such as future issuances of securities or the incurrence of additional debt;
- publication of research reports by securities analysts about us or our competitors or our industry;
- sales of shares of our Common Stock by our existing stockholders;
- the volume of shares of our Common Stock available for public sale; and
- general economic and political conditions such as recessions, interest rates, fuel prices, foreign currency fluctuations, international tariffs, social, political and economic risks, hostilities or the perception that hostilities may be imminent, military conflict and acts of war, including an escalation of the situation in the Ukraine and the related response, including sanctions or other restrictive actions, by the United States and/or other countries, or terrorism.

These market and industry factors may materially reduce the market price of our Common Stock regardless of our operating performance.

In addition, we have been and in the future may again be the subject of a report issued by activist short sellers. Any such report, even if it contains false and misleading statements about our company, may cause our stock price to experience volatility.

A significant portion of our total outstanding shares are restricted from immediate resale but may be sold into the market in the near future. This could cause the market price of our Common Stock to drop significantly, even if our business is doing well.

Sales of a substantial number of shares of our Common Stock in the public market could occur at any time. These sales, or the perception in the market that the holders of a large number of shares intend to sell shares, could reduce the market price of our Common Stock.

On December 15, 2021, we filed a registration statement to register shares reserved for future issuance under our equity compensation plans. Pursuant to that registration statement, subject to the satisfaction of applicable vesting restrictions, the shares issued upon exercise of outstanding stock options will be available for immediate resale in the public market.

Certain holders of shares of our common stock have rights, subject to certain conditions, to require us to file registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. Registration of these shares under the Securities Act would result in the shares becoming freely tradeable in the public market, subject to the restrictions of Rule 144 in the case of our affiliates. Any sales of securities by these stockholders could have a material adverse effect on the market price for our common stock. Sales of our Common Stock pursuant to the exercise of registration rights may make it more difficult for us to sell equity securities in the future at a time and at a price that we deem appropriate. These sales also could cause the trading price of our Common Stock to fall and make it more difficult for you to sell shares of our Common Stock at a time and price that you deem appropriate.

We have warrants outstanding that are exercisable for our Common Stock, which, if exercised, would increase the number of shares eligible for future resale in the public market and result in dilution to our shareholders.

Outstanding Public Warrants to purchase an aggregate of 8,333,287 shares of our Common Stock became exercisable on November 7, 2021 in accordance with the terms of the warrant agreement governing those securities, outstanding Private Placement Warrants to purchase an aggregate of 3,500,000 shares of our Common Stock became exercisable at Closing in accordance with the Sponsor Letter Agreement, and outstanding Private Placement Warrants to purchase an additional 583,334 shares of our Common Stock became exercisable on November 9, 2021, upon the occurrence of earnout milestone events pursuant to the Sponsor Letter Agreement and the Merger Agreement (the “Earnout Milestone Events”). The exercise price of each of these warrants is $11.50 per share.

To the extent such warrants are exercised, additional shares of our Common Stock will be issued, which will result in dilution to the holders of our Common Stock and increase the number of shares eligible for resale in the public market. Sales of substantial numbers of such shares in the public market or the fact that such warrants may be exercised could adversely affect the prevailing market prices of our Common Stock.

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

We do not anticipate declaring any cash dividends to holders of the Common Stock in the foreseeable future. Consequently, investors may need to rely on sales of their shares after price appreciation, which may not occur for some time or not at all, as the only way to realize any future gains on their investment.

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

Our Common Stock is listed on the NYSE under the symbol “GWH.” If the NYSE delists our securities from trading on its exchange for failure to meet the listing standards and we are not able to list such securities on another national securities exchange, we expect such securities could be quoted on an over-the-counter market. If this were to occur, we and our stockholders could face significant material adverse consequences including:

- a limited availability of market quotations for our securities;
- reduced liquidity for our securities;
- a limited amount of news and analyst coverage; and

- a decreased ability to issue additional securities or obtain additional financing in the future.

Reports published by analysts, including projections in those reports that differ from our actual results, could adversely affect the price and trading volume of our Common Stock.

Securities research analysts may establish and publish their own periodic projections for us. These projections may vary widely and may not accurately predict the results we actually achieve. Our share price may decline if our actual results do not match the projections of these securities research analysts. Similarly, if one or more of the analysts who write reports on us downgrades our stock or publishes inaccurate or unfavorable research about our business, our share price could decline. If one or more of these analysts ceases coverage of us or fails to publish reports on us regularly, our share price or trading volume could decline.

Provisions in our amended and restated certificate of incorporation and amended and restated bylaws and Delaware law might discourage, delay or prevent a change in control of our company or changes in our management and, therefore, depress the market price of our Common Stock.

Our amended and restated certificate of incorporation and amended and restated bylaws contain provisions that could delay or prevent a change of control of our company or changes in our board of directors that our stockholders might consider favorable. These provisions, among other things:

- establish a classified board of directors so that not all members of our board are elected at one time;
- permit only the board of directors to establish the number of directors and fill vacancies on the board;
- provide that directors may only be removed "for cause" and only with the approval of a majority of the voting power of the issued and outstanding capital stock of the Company entitled to vote in the election of directors;
- authorize the issuance of "blank check" preferred stock that our board could use to implement a stockholder rights plan (also known as a "poison pill");
- eliminate the ability of our stockholders to call special meetings of stockholders;
- prohibit stockholder action by written consent, which requires all stockholder actions to be taken at a meeting of our stockholders;
- prohibit cumulative voting by stockholders at any election of directors;
- authorize our board of directors to amend the bylaws;
- establish advance notice requirements for nominations for election to our board or for proposing matters that can be acted upon by stockholders at annual stockholder meetings; and
- require a super-majority vote of stockholders to amend some provisions described above.

In addition, Section 203 of the DGCL, prohibits a publicly-held Delaware corporation from engaging in a business combination with an interested stockholder, generally a person which together with its affiliates owns, or within the last three years has owned, 15% of our voting stock, for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner.

Any provision of our amended and restated certificate of incorporation, amended and restated bylaws or Delaware law that has the effect of delaying or preventing a change in control could limit the opportunity for our stockholders to receive a premium for their shares of our capital stock and could also affect the price that some investors are willing to pay for our Common Stock.

Our amended and restated bylaws provide that the Court of Chancery of the State of Delaware and the federal district courts of the United States of America will be the exclusive forums for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated bylaws provide that the Court of Chancery of the State of Delaware (or, if the Court of Chancery does not have jurisdiction, another State court in Delaware or the federal district court for the District of Delaware) is the exclusive forum for the following (except for any claim as to which such court determines that there is an indispensable party not subject to the jurisdiction of such court (and the indispensable party does not consent to the personal jurisdiction of such court within 10 days following such determination), which is vested in the exclusive jurisdiction of a court or forum other than such court or for which such court does not have subject matter jurisdiction):

- any derivative action or proceeding brought on our behalf;
- any action asserting a claim of breach of fiduciary duty owed by any director, stockholder, officer or other employee of the Company to the Company or to the Company's stockholders;
- any action arising pursuant to any provision of the DGCL, our amended and restated certificate of incorporation or our amended and restated bylaws; and
- any action asserting a claim against us that is governed by the internal affairs doctrine.

This provision would not apply to suits brought to enforce a duty or liability created by the Securities Act, the Exchange Act or any other claim for which the U.S. federal courts have exclusive jurisdiction.

Our amended and restated bylaws further provide that, unless the Company consents in writing to the selection of an alternative forum, the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act. We note that investors cannot waive compliance with the federal securities laws and the rules and regulations thereunder.

These exclusive forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage lawsuits against us and our directors, officers and other employees. Any person or entity purchasing or otherwise acquiring any interest in any of our securities shall be deemed to have notice of and consented to these provisions. There is uncertainty as to whether a court would enforce such provisions, and the enforceability of similar choice of forum provisions in other companies' charter documents has been challenged in legal proceedings. While the Delaware courts have determined that such choice of forum provisions are facially valid, a stockholder may nevertheless seek to bring a claim in a venue other than those designated in the exclusive forum provisions, and there can be no assurance that such provisions will be enforced by a court in those other jurisdictions. If a court were to find these types of provisions to be inapplicable or unenforceable, and if a court were to find the exclusive forum provision in our amended and restated bylaws to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving the dispute in other jurisdictions, which could materially adversely affect our business.

Claims for indemnification by our directors and officers may reduce our available funds to satisfy successful third-party claims against us and may reduce the amount of money available to us.

Our amended and restated certificate of incorporation and amended and restated bylaws provide that we will indemnify our directors and officers, in each case to the fullest extent permitted by Delaware law.

In addition, as permitted by Section 145 of the DGCL, our amended and restated bylaws and our indemnification agreements that we have entered into with our directors and officers provide that:

- we indemnify our directors and officers for serving us in those capacities or for serving other business enterprises at our request, to the fullest extent permitted by Delaware law. Delaware law provides that a corporation may indemnify such person if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the registrant and, with respect to any criminal proceeding, had no reasonable cause to believe such person's conduct was unlawful;

- we may, in our discretion, indemnify employees and agents in those circumstances where indemnification is permitted by applicable law;
- we are required to advance expenses, as incurred, to our directors and officers in connection with defending a proceeding, except that such directors or officers shall undertake to repay such advances if it is ultimately determined that such person is not entitled to indemnification;
- we are not obligated, pursuant to our amended and restated bylaws, to indemnify a person with respect to proceedings initiated by that person against us or our other indemnitees, except with respect to proceedings authorized by our board of directors or brought to enforce a right to indemnification;
- the rights conferred in our amended and restated bylaws are not exclusive, and we are authorized to enter into indemnification agreements with our directors, officers, employees and agents and to obtain insurance to indemnify such persons; and
- we may not retroactively amend our amended and restated bylaw provisions to reduce our indemnification obligations to directors; officers, employees and agents.

While we maintain a directors' and officers' insurance policy, such insurance may not be adequate to cover all liabilities that we may incur, which may reduce our available funds to satisfy third-party claims and may materially adversely affect our cash position.

USE OF PROCEEDS

All of the shares of Common Stock offered by the Selling Stockholders pursuant to this prospectus will be sold by the Selling Stockholders for their respective accounts. We will not receive any of the proceeds from the sale of the shares of Common Stock hereunder. With respect to the registration of all shares of Common Stock offered by the Selling Stockholders pursuant to this prospectus, the Selling Stockholders will pay any underwriting discounts and commissions and expenses incurred by them for brokerage, accounting, tax or legal services or any other expenses incurred by them in disposing of the securities. We will bear the costs, fees and expenses incurred in effecting the registration of the shares of Common Stock covered by this prospectus, including all registration and filing fees and fees and expenses of our counsel and our independent registered public accounting firm.

MARKET PRICE OF THE REGISTRANT'S
COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

Market Information and Holders

Our Common Stock is listed on the NYSE under the symbol "GWH" and our Public Warrants are listed on the NYSE under the symbol "GWH.W".

As of December 31, 2021, we had 151,839,058 shares of Common Stock issued and outstanding held of record by approximately 93 holders (excluding DTC participants or beneficial owners holding shares through nominee names) and 11,461,247 Warrants (consisting of 7,377,913 public warrants, 3,500,000 Private Placement Warrants and 583,334 earnout warrants that vested upon meeting certain Earnout Milestone Events on November 9, 2021 (the "Earnout Warrants")), each exercisable for one share of Common Stock, at a price of $11.50 per share.

Offering Price

The actual offering price by the Selling Stockholders of the shares of our Common Stock covered by this prospectus will be determined by prevailing market prices at the time of sale, by private transactions negotiated by the Selling Stockholders or as otherwise described in the section entitled "*Plan of Distribution*."

Dividend Policy

We have not paid any cash dividends on the Common Stock to date. We may retain future earnings, if any, for future operations, expansion and debt repayment and have no current plans to pay cash dividends for the foreseeable future. Any decision to declare and pay dividends in the future will be made at the discretion of the board of directors and will depend on, among other things, our results of operations, financial condition, cash requirements, contractual restrictions and other factors that the board of directors may deem relevant. In addition, our ability to pay dividends may be limited by covenants of any existing and future outstanding indebtedness we or our subsidiaries incur. We do not anticipate declaring any cash dividends to holders of the Common Stock in the foreseeable future.

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

The following discussion and analysis of our financial condition and results of operations of should be read together with our consolidated financial statements and the related notes appearing elsewhere in this prospectus. Some of the information contained in this discussion and analysis or set forth elsewhere in this prospectus, including information with respect to our plans and strategy for our business, includes forward-looking statements that involve risks and uncertainties. You should read the sections titled "Risk Factors" and "Cautionary Note Regarding Forward-Looking Statements" for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

ESS is a long-duration energy storage company specializing in iron flow battery technology. We design and produce long-duration batteries predominantly using earth-abundant materials that can be cycled over 20,000 times without capacity fade. Because we designed our batteries to operate using an electrolyte of primarily salt, iron and water, they are non-toxic and substantially recyclable. Our batteries provide flexibility to grid operators and energy assurance for commercial and industrial customers. Our technology addresses energy delivery, duration and cycle-life in a single battery platform that compares favorably to lithium-ion batteries, the most widely deployed alternative technology. Using our iron flow battery technology, we are developing two products, each of which is able to provide reliable, safe, long-duration energy storage. As of December 31, 2021, we did not have any second-generation products fully deployed and we had not yet met revenue recognition criteria, but we began shipping our second-generation Energy Warehouses in the third quarter of 2021 and were in the process of installing and commissioning such units. With each battery deployed, we will further our mission to accelerate the transition to a zero-carbon energy future with increased grid reliability.

Our long-duration iron flow batteries are the product of nearly 50 years of scientific advancement. Our founders, Craig Evans and Dr. Julia Song, began advancing this technology in 2011 and formed ESS. Our team has significantly enhanced the technology, improved the round-trip efficiency and developed an innovative and patented solution to the hydroxide build-up problem that plagued previous researchers developing iron flow batteries. Our proprietary solution to eliminate the hydroxide formation is known as the Proton Pump, and it works by utilizing hydrogen generated by side reactions on the negative electrode. The Proton Pump converts the hydrogen back into protons in the positive electrolyte. This process eliminates the hydroxide and stabilizes the electrolytes' pH levels. The Proton Pump allows the electrolyte to be used for over 20,000 cycles without any capacity fade.

Our first energy storage product, the Energy Warehouse, is our "behind-the-meter" solution (referring to solutions that are located on the customers' premise, behind the service demarcation with the utility) that offers energy storage ranging from four to 12-hour duration. Our second, larger scale energy storage product, the Energy Center, is designed for "front-of-the-meter" (referring to solutions that are located outside the customer's premise, typically by the utility or by third-party providers who sell energy into the grid, often known as independent power producers) deployments specifically for utility and large commercial and industrial consumers.

The Business Combination

On October 8, 2021, ESS consummated the Business Combination. As a result, Legacy ESS merged with Merger Sub, with Legacy ESS surviving as a wholly owned subsidiary of STWO, which changed its name to "ESS Tech, Inc." The increase in cash resulting from the Business Combination will be used to fund our corporate growth strategy related to the commercial sale of our second-generation energy storage solution and the scaling of our manufacturing operations to meet customer demand. The cash raised from the Business Combination will also be used to fund investments in personnel and research and development as well as provide liquidity for the funding of our ongoing operating expenses.

The Business Combination was accounted for as a reverse recapitalization. Legacy ESS was deemed the accounting predecessor and the combined entity is the successor SEC registrant, meaning that Legacy ESS' financial statements for previous periods will be disclosed in our future periodic reports filed with the SEC. Under this method of accounting, STWO was treated as the acquired company for financial statement reporting purposes

As a result of the Business Combination, Legacy ESS became the successor to an SEC-registered and publicly traded company, which has required, and may further require, us to hire additional personnel and implement procedures and processes to address public company regulatory requirements and customary practices. We expect to incur additional annual expenses as a public company for, among other things, directors' and officers' liability insurance, director fees, and additional internal and external accounting, legal, and administrative resources, including increased personnel costs, audit and other professional service fees.

Key Factors and Trends Affecting our Business

We believe that our performance and future success depend on several factors that present significant opportunities for us but also pose risks and challenges, including those discussed below and in the section "*Risk Factors*."

We believe we have the opportunity to establish high margin unit economics when operating at scale. Our future performance will depend on our ability to deliver on these economies of scale with lower product costs to enable profitable growth. We believe our business model is positioned for scalability due to the ability to leverage the same product platform across our customer base. Further, the manufacturing model is a capital light model and does not require significant capital expenditures when compared to alternative technologies. Significant improvements in manufacturing scale are expected to decrease the cost of materials and direct labor. However, in the near term, we expect our operating expenses to increase as we ramp up our research and development and manufacturing activities including with respect to our supply chain, parts and launch of our second-generation Energy Warehouses as well as higher general and administrative expenses related to public company readiness. Achievement of margin targets and cash flow generation is dependent on finalizing development and manufacturing of Energy Centers.

Our near- and medium-term revenue is expected to be generated from our second-generation Energy Warehouses. We believe our unique technology provides a compelling value proposition for favorable margins and unit economics in the energy storage industry in the future.

COVID-19

The rapid global spread of the COVID-19 pandemic since December 2019 has disrupted supply chains and affected production and sales across a range of industries, and continues to impact the United States and other countries throughout the world. There have already been multiple waves of the COVID-19 pandemic and COVID-19 cases continue to surge in certain areas of the world, including in certain countries that were initially successful at containing the virus. The evolution of the disease, the extent of its economic impact and the results of steps taken and yet to be taken by governments and financial institutions are still unknown. Due to the number of variables involved, the significance and the duration of the pandemic's financial impact are difficult to determine. The extent of the impact of COVID-19 on our operational and financial performance will depend on certain developments, including the duration and spread of the virus, and the impact on our customers, employees and vendors. The ultimate outcome of these matters is uncertain and, accordingly, the impact on our financial condition or results of operations is also uncertain.

To support the health and well-being of our employees, customers, partners and communities, in March 2020, we temporarily suspended operations at our Wilsonville, Oregon manufacturing facility, and also required all of our non-essential employees to work remotely. This represented approximately 20% of our workforce at the time. While we resumed operations in the manufacturing facility within several weeks, we instituted a split schedule shift, staggered workdays, and significant limitations on various areas of our physical building. Currently, we continue to evaluate our ability to operate in light of recent resurgences of COVID-19, including the emergence of new variant strains of COVID-19 (such as the omicron variant), which have and may in the future necessitate renewed government restrictions, and the advisability of continuing operations, based on federal, state and local guidance, evolving data concerning the pandemic and the best interests of our employees, customers and stockholders. We have issued several force majeure notices to customers as a result of delays caused by COVID-19 and the impact of

COVID-19 on such agreements, or the applicable agreements' termination provisions, is uncertain and could result in the termination of such agreements.

Components of Results of Operations

As the Business Combination is accounted for as a reverse recapitalization, the operating results included in this discussion reflect the historical operating results of Legacy ESS prior to the Business Combination and the combined results of ESS following the closing of the Business Combination. The assets and liabilities of the Company are stated at their historical cost.

Revenue

We expect to earn revenue from the sale of our energy storage products and from service contracts. As of December 31, 2021, we did not have any second-generation products fully deployed and we had not yet met revenue recognition criteria, but we began shipping our second-generation Energy Warehouses in the third quarter of 2021 and were in the process of installing and commissioning such units. Revenue recognition will be deferred until customer acceptance has been received for each unit and customer required testing is complete, if applicable, or until we establish a history of successfully obtaining acceptance from each customer. In the near term, as our products are new, this is likely to be a longer process than when our products are more mature and we have more of a history with customer acceptance.

Operating expenses

Research and development expenses

Costs related to research and development consist of direct product development material costs and product development personnel-related expenses, depreciation charges, overhead related costs, consulting services and other direct expenses. Personnel-related expenses consist of salaries, benefits and stock-based compensation. We expect our research and development costs to increase for the foreseeable future as we continue to invest in research and development activities to achieve our product roadmap.

Sales and marketing expenses

Sales and marketing expenses consist primarily of salaries, benefits and stock-based compensation for marketing and sales personnel and related support teams. To a lesser extent sales and marketing expenses also includes professional services costs and trade show sponsorships. We expect that our sales and marketing expenses will increase over time as we continue to hire additional personnel to scale our business.

General and administrative expenses

General and administrative expenses consist of personnel-related expenses for our corporate, executive, finance, and other administrative functions, as well as expenses for outside professional services and insurance costs. Personnel-related expenses consist of salaries, benefits, and stock-based compensation. To a lesser extent, general and administrative expense includes depreciation and other allocated costs, such as facility-related expenses, and supplies. We expect our general and administrative expenses to increase for the foreseeable future as we scale headcount with the growth of our business, and as a result of operating as a public company, including compliance with the rules and regulations of the SEC, legal, audit, additional insurance expenses, investor relations activities, and other administrative and professional services.

Other income (expense)

Interest expense, net

Interest expense consists primarily of interest on our notes payable. Interest income consists primarily of earned income on our cash equivalents and restricted cash. These amounts will vary based on our cash, cash equivalents and restricted cash balances, and with market rates.

Loss on revaluation of warrant liabilities

The loss on revaluation of warrant liabilities consists of periodic fair value adjustments related to Legacy ESS' Series B and C warrants outstanding prior to the Business Combination and the Public Warrants and Private Placement Warrants.

Loss on revaluation of derivative liabilities

The loss on revaluation of derivative liability consists of periodic fair value adjustments associated with our derivative liability for the Legacy ESS Series C-2 Convertible Preferred Stock issuance right liability and contingently issuable warrants.

Loss on revaluation of earnout liabilities

The loss on revaluation of earnout liabilities represents the change in fair value associated with the Earnout Shares (defined below) from the date of the Business Combination through November 9, 2021, the date that the Earnout Milestone Events were achieved. Additionally, the loss on revaluation of earnout liabilities includes periodic fair value adjustments related to the Earnout Warrants.

Other income (expense)

Other income and expense consists of various other income and expense items but primarily consists of gain or loss on extinguishment of debt.

Results of Operations

Comparison of Year Ended December 31, 2021 to Year Ended December 31, 2020

The following table sets forth ESS' operating results for the periods indicated:

	Year Ended December 31,			
($ in thousands)	**2021**	**2020**	**$ Change**	**% Change**
Operating expenses:				
Research and development	$ 30,275	$ 12,896	$ 17,379	135 %
Sales and marketing	3,041	1,158	1,883	163
General and administrative	27,286	3,338	23,948	717
Total operating expenses	60,602	17,392	43,210	248
Loss from operations	(60,602)	(17,392)	(43,210)	248
Other income (expense):				
Interest expense, net	(1,886)	(132)	(1,754)	N/M
Loss on revaluation of warrant liabilities	(37,584)	(1,296)	(36,288)	N/M
Loss on revaluation of derivative liabilities	(223,165)	(11,532)	(211,633)	N/M
Loss on revaluation of earnout liabilities	(154,806)	—	(154,806)	N/M
Other income (expense), net	926	(67)	993	N/M
Total other income (expense)	(416,515)	(13,027)	(403,488)	N/M
Net loss	$ (477,117)	$ (30,419)	$ (446,698)	N/M

N/M = Not meaningful

Revenue

No revenue was recognized for the years ended December 31, 2021 or 2020. As of December 31, 2021, we did not have any second-generation products fully deployed and we had not yet met revenue recognition criteria, but we began shipping our second-generation Energy Warehouses in the third quarter of 2021 and were in the process of installing and commissioning such units. Revenue recognition will be deferred until customer acceptance has been received for each unit and customer required testing is complete, if applicable, or until we establish a history of successfully obtaining acceptance from each customer. In the near term, as our products are new, this is likely to be a longer process than when our products are more mature and we have more of a history with customer acceptance. We expect to recognize revenue on the first three units shipped in 2021 during the first quarter of 2022.

Operating expenses

Research and development expenses

Research and development expenses increased by $17,379 thousand or 135% from $12,896 thousand for the year ended December 31, 2020 to $30,275 thousand for the year ended December 31, 2021. The increase resulted primarily from increased personnel-related expenses due to significant effort on the development of the second-generation Energy Warehouse as well as efforts to create an efficient manufacturing process for our products and an increase in material purchase costs.

Sales and marketing expenses

Sales and marketing expenses increased by $1,883 thousand or 163% from $1,158 thousand for the year ended December 31, 2020 to $3,041 thousand for the year ended December 31, 2021. The increase is primarily due to costs incurred for marketing related activities to build awareness of our products' capabilities and increased personnel-related expenses.

General and administrative expenses

General and administrative expenses increased by $23,948 thousand or 717% from $3,338 thousand for the year ended December 31, 2020 to $27,286 thousand for the year ended December 31, 2021. The increase is primarily due to fees paid to outside service providers including external banking fees, legal fees covering a variety of corporate matters, accounting fees and external audit fees as well as increased personnel-related expenses including recruiting expenses as we expanded headcount and increased insurance fees.

Other expense, net

Interest expense, net

Interest expense, net increased by $1,754 thousand from $132 thousand for the year ended December 31, 2020 to $1,886 thousand for the year ended December 31, 2021. The net increase in interest expense resulted primarily from the previously outstanding Bridge Loan that was repaid in connection with the Closing of the Business Combination, including a final payment of $1.3 million in addition to accrued interest.

Loss on revaluation of warrant liabilities

The loss on revaluation of warrant liabilities increased $36,288 thousand from $1,296 thousand for the year ended December 31, 2020 to $37,584 thousand for the year ended December 31, 2021. The loss on revaluation of warrant liabilities increased as a result of a change in the fair value of the warrant liabilities due to ESS' increased equity value.

Loss on revaluation of derivative liabilities

The loss on revaluation of the Legacy ESS Series C-2 Convertible Preferred Stock Issuance Right increased $211,633 thousand from $11,532 thousand for the year ended December 31, 2020 to $223,165 thousand for the year ended December 31, 2021 as a result of ESS increased equity value.

Loss on revaluation of earnout liabilities

The loss on revaluation of earnout liabilities was $154,806 thousand for the year ended December 31, 2021, as a result of the change in the value of Common Stock between the Closing of the Business Combination and November

9, 2021, the date that the Earnout Milestone Events were achieved. Additionally, the loss on revaluation of earnout liabilities includes periodic fair value adjustments related to the Earnout Warrants.

Other income (expense)

Other expenses were $67 thousand for the year ended December 31, 2020 compared to other income of $926 thousand for the year ended December 31, 2021. The other income recognized in the year ended December 31, 2021 is due to the gain on extinguishment recognized upon the forgiveness of the promissory note under the Payroll Protection Program.

Liquidity and Capital Resources

Since our inception, we have financed our operations primarily through the issuance of and sale of equity and debt securities and loan agreements.

Legacy ESS' Series C redeemable convertible preferred stock financing agreement provided additional committed funding of up to $80 million, through the purchase of up to 39,971,716 shares of Legacy ESS Series C-2 Preferred Stock based on the completion of certain milestones at a predetermined price of $2.00, to certain Series C-1 investors, and collectively referred to as the Series C-2 Purchase Right. In March 2021, Legacy ESS entered into the Series C-2 preferred stock purchase agreement and amendment to the Legacy ESS Series C redeemable convertible preferred stock financing agreement, pursuant to which we issued 5,746,003 shares of Legacy ESS Series C-2 Preferred Stock for $2.00 per share, totaling $11.5 million.

On May 6, 2021, we entered into the Merger Agreement. In conjunction with the Merger Agreement, we entered into an amendment to the Series C redeemable convertible preferred stock financing agreement with the two holders of the remaining Series C-2 Purchase Right pursuant to which such holders agreed to waive the milestone conditions and reduce their remaining Series C-2 Purchase Right from 33,726,549 shares of ESS Series C-2 Preferred Stock to 7,994,442 shares in exchange for warrants to purchase up to 21,159,364 shares of ESS Series C-2 Preferred Stock with an exercise price of $0.0001 per share and the ability to participate in the PIPE Financing. The C-2 warrants and purchase rights were exercised in conjunction with the Business Combination, which closed on October 8, 2021, resulting in proceeds of approximately $16 million.

During 2020, Legacy ESS entered into an unsecured promissory note with a bank under the PPP administered by the United States Small Business Administration and authorized by the Keeping American Workers Employed and Paid Act, which is part of the CARES Act, enacted on March 27, 2020. The principal amount of the PPP loan was $936 thousand and bore interest of 1.0% per year. Principal payments were deferred until August 2021. In July 2021, Legacy ESS applied for and received forgiveness for this PPP loan.

We have a $1 million note payable with Silicon Valley Bank that is secured by significantly all of our property, except for our intellectual property. The note principal is due in monthly installments of $28 thousand beginning in March 2019 with an original maturity date of July 1, 2021; however, the maturity date was modified and extended to January 1, 2023. In March 2020, we amended the note payable and borrowed an additional $4 million. The $4 million note payable's original maturity date was on January 1, 2023; however, the maturity date was modified and extended to January 1, 2024. The note bears interest at 0.50% below the bank's prime rate (2.75% rate at December 31, 2021).

In July 2021, we entered into an agreement with Silicon Valley Bank providing for a $20.0 million bridge loan, which was fully drawn and matured on the earlier of January 13, 2022 or consummation of the Business Combination, which ultimately closed on October 8, 2021. The bridge loan bore interest at 9.0%, of which 2.25% was payable monthly and 6.75% paid-in-kind interest was due upon maturity. At maturity, a final payment of $1.3 million was due in addition to all outstanding principal and accrued interest, all of which was repaid in connection with the Business Combination.

The following table summarizes cash flows from operating, investing and financing activities for the periods presented.

	Years Ended December 31,	
($ in thousands)	2021	2020
Net cash used in operating activities	$ (51,849)	$ (16,645)
Net cash used in investing activities	(2,767)	(502)
Net cash provided by financing activities	288,454	4,722

Cash flows from operating activities:

Our cash flows used in operating activities to date have been primarily comprised of costs related to research and development, manufacturing of our energy storage products, building awareness of our products' capabilities and other general and administrative activities. We expect our expenses related to personnel, manufacturing, research and development, sales and marketing, and general and administrative activities to increase.

Net cash used in operating activities was $51,849 thousand for the year ended December 31, 2021, which is comprised of net loss of $477,117 thousand, offset by noncash changes in the fair value of derivative liabilities of $223,165 thousand, earnout liabilities of $154,806 thousand, warrant liabilities of $37,584 thousand, and stock-based compensation of $7,922 thousand. Net changes in operating assets and liabilities provided $2,087 thousand of cash driven by an increase in accounts payable and accrued and other current liabilities partially offset by an increase in prepaid expenses and other assets.

Net cash used in operating activities was $16,645 thousand for the year ended December 31, 2020, which is comprised of net loss of $30,419 thousand, offset by noncash changes in derivative liabilities of $11,532 thousand, warrant liabilities of $1,296 thousand, depreciation of $436 thousand and stock-based compensation of $310 thousand. Net changes in operating assets and liabilities provided $47 thousand of cash driven by a decrease in accrued and other current liabilities and customer deposits partially offset by an increase in accounts payable and increase in prepaid expenses.

Cash flows from investing activities:

Our cash flows from investing activities have been comprised primarily of purchases of property and equipment.

Net cash used in investing activities was $2,767 thousand and $502 thousand for the years ended December 31, 2021 and 2020, respectively, which relates to purchases of property and equipment.

Cash flows from financing activities:

Through December 31, 2021, we have raised capital from the Business Combination and financed our operations through the issuance of debt and equity securities and loan agreements.

Net cash provided by financing activities was $288,454 thousand for the year ended December 31, 2021 and included $258,730 thousand in net cash contributions from the Business Combination and PIPE Financing, $15,559 thousand in proceeds from the exercise of Legacy ESS Series C-2 redeemable convertible preferred stock purchase rights and C-2 warrants upon completion of the Business Combination and $10,995 thousand in proceeds from warrants exercised. Prior to the Business Combination, we additionally received $11,461 thousand in proceeds from the sale of Legacy ESS Series C-2 redeemable convertible preferred stock. These cash inflows were partially offset by payments made towards offering costs of $7,895 thousand.

Net cash provided by financing activities was $4,722 thousand for the year ended December 31, 2020 and included proceeds from the issuance of notes payable reduced by principal payments on borrowings.

Contractual Obligations and Commitments

Our contractual obligations and other commitments as of December 31, 2021 consist of operating lease commitments and notes payable. We also have a standby letter of credit that serves as security for certain operating leases for office and manufacturing space. The letter of credit is fully secured by restricted certificate of deposit accounts. There was no draw against the letter of credit during the year ended December 31, 2021. Additionally, we are committed to non-cancellable purchase commitments of $10,160 thousand as of December 31, 2021.

Off-Balance Sheet Arrangements

We are not a party to any off-balance sheet arrangements, including guarantee contracts, retained or contingent interests, or unconsolidated variable interest entities that either have, or are reasonably likely to have, a current or future material effect on our financial statements.

Critical Accounting Policies and Estimates

The preparation of consolidated financial statements in conformity with GAAP requires that management apply accounting policies and make estimates and assumptions that affect amounts reported in the statements. The following accounting policies represent those that management believes are particularly important to the consolidated financial statements and that require the use of estimates, assumptions, and judgments to determine matters that are inherently uncertain.

Stock-based compensation

We recognize the cost of stock-based awards granted to employees and directors based on the estimated grant-date fair value of the awards. For awards that vest solely based on a service condition, the cost is recognized on a straight-line basis over the service period, which is generally the vesting period of the award. For awards that vest based on service, performance and market conditions, we recognize stock-based compensation expense when the performance conditions are probable of being achieved. The compensation cost related to awards with market conditions is recognized regardless of whether the market condition is satisfied, if the requisite service is provided. We recognize stock-based compensation costs and reverse previously recognized costs for unvested options in the period forfeitures occur.

We determine the fair value of stock options that vest solely based on a service condition using the Black-Scholes option pricing model, which is impacted by the following assumptions:

- Expected term—We determine the expected term based on the average period the stock options are expected to remain outstanding, generally calculated as the midpoint of the stock options' vesting term and contractual expiration period, as we do not have sufficient historical information to develop reasonable expectations about future exercise patterns and post-vesting employment termination behavior.
- Expected volatility—The expected volatility rate is based on an average historical stock price volatility of comparable publicly-traded companies in the industry group as there has been no public market for our shares to date.
- Risk-free interest rate—The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the time of grant for periods corresponding with the expected term of the option.
- Expected dividend yield—We have not paid and do not expect to pay dividends. Consequently, we use an expected dividend yield of zero.

Fair Value of ESS Series C-2 Preferred Stock Issuance Right

The Legacy ESS Series C redeemable convertible preferred stock financing agreement provided additional committed funding of up to approximately $80 million, through the purchase of up to 39,971,716 shares of Legacy ESS Series C-2 Preferred Stock based on the completion of certain operational milestones at a predetermined price of $2.00, to certain Series C-1 investors. On May 6, 2021, Legacy ESS entered into an amendment to the Legacy

ESS Series C redeemable convertible preferred stock financing agreement with the two holders of the remaining Legacy ESS Series C-2 Purchase Right. Under the terms of the amended agreement, in conjunction with a successful Business Combination with STWO, two existing investors purchased 7,994,442 additional shares of Legacy ESS Series C-2 Preferred Stock and received warrants to purchase 21,159,364 shares of Legacy ESS Series C-2 Preferred Stock with an exercise price of $.00007 per share. The Legacy ESS Series C-2 Purchase Right was eliminated with the consummation of the Business Combination.

We determined that our obligation to issue, and our investors' obligation to purchase, shares of Legacy ESS Series C-2 Preferred Stock at a fixed price represents a freestanding derivative financial instrument and was initially recorded at fair value. Subsequent changes in fair value at each reporting date are recorded as a component of other income and expense. The value of the Legacy ESS Series C-2 Preferred Stock Issuance Right is determined based on significant inputs not observed in the market. Through the third quarter of 2020, the fair value of the Legacy ESS Series C-2 Preferred Stock Issuance Right was determined using a Black-Scholes option pricing model. Beginning December 31, 2020 and thereafter the fair value of the Legacy ESS Series C-2 Preferred Stock Issuance Right was determined using a Black-Scholes option pricing model with consideration for a remain private scenario and a SPAC transaction scenario as described above. We utilized key assumptions, such as the fair value of the Legacy ESS Series C-2 Preferred Stock, the volatility of peer companies' stock prices, the risk-free interest rate based on the U.S. treasury yield, and the expected term (based on the shorter of remaining term to a significant event or expiration date of the purchase right).

Convertible Preferred Stock Warrant Liabilities

Through the consummation of the Business Combination, we accounted for warrants to purchase shares of Legacy ESS Series B Preferred Stock and Legacy ESS Series C Preferred Stock as liabilities at their estimated fair values because these warrants may obligate us to transfer assets to the holders at a future date under certain circumstances, such as a merger, acquisition, reorganization, sale of all or substantially all of our assets, each a change of control event. The warrants were recorded at fair value upon issuance and are subject to remeasurement to fair value at each period end, with any fair value adjustments recognized in the statements of operations and comprehensive loss.

Through the third quarter of 2020, Legacy ESS measured the fair value of its warrant liabilities using unobservable inputs within the Black-Scholes option-pricing model. Beginning December 31, 2020 and thereafter, the fair value of the warrant liabilities was determined using a Black-Scholes option pricing model with consideration for a remain private scenario and a SPAC transaction scenario as described above. We utilized various key assumptions, such as the fair value of the Legacy ESS Series B Preferred Stock and Legacy ESS Series C Preferred Stock, the volatility of peer companies' stock prices, the risk-free interest rate based on the U.S. treasury yield, and the expected term (based on remaining term to a significant event).

All warrants were exercised prior to the consummation of the Business Combination.

Earnout Liabilities

Pursuant to the Merger Agreement, the Company was permitted to issue to eligible Legacy ESS securityholders, on a pro rata basis, up to 16,500,000 shares of additional common stock (the "Earnout Shares") less any RSUs issued pursuant to the Incentive RSU Pool, issuable in two equal tranches upon the occurrence of the respective Earnout Milestone Events. The initial fair value of the Earnout Shares was estimated using a model based on multiple stock price paths developed through the use of a Monte Carlo simulation that incorporated into the valuation the possibility that the market condition targets may not be satisfied. The Earnout Milestone Events were achieved on November 9, 2021 and Legacy ESS issued 15,674,965 shares to securityholders.

Research and Development

The Company is in the research and development phase. Our product offering relies heavily on new technology currently undergoing development and does not yet meet standard specifications to be sold commercially. Therefore, all related costs are currently accounted for as part of research and development expense in the consolidated statement of operations. The criteria established by the Company to determine when commercialization has been reached includes the length of time the units have been operational in the field and the level of performance at which those units operate. As the Company transitions from the research and development phase and into a full commercial phase, all inventoriable costs will be capitalized. As of December 31, 2021, the criteria for commercialization has not yet been met.

Revenue Recognition

Revenue is earned from the sales of energy storage systems and is derived from customer contracts. Revenue is recognized in an amount that reflects the consideration to which the Company expects to be entitled in exchange for transferring the promised goods and/or services to the customer, when or as the Company's performance obligations are satisfied. For product sales of energy storage systems, the Company's performance obligations are satisfied at the point in time when the customer obtains control of the system (i.e. after customer acceptance). Payment terms generally include advance payments to reserve capacity and/or upon issuance of the customer's purchase order, shipment readiness, with the remainder due upon delivery and commissioning of system.

In instances where there are multiple performance obligations in a single contract, we allocate the consideration to the various obligations in the contract based on the relative stand-alone selling price method. When the stand-alone selling price is not observable, revenue is determined based on a best estimate of selling price using cost plus a reasonable margin or by using market data for comparable products.

Revenue recognition will be deferred until customer acceptance has been received for each unit and customer required testing is complete, if applicable, or until we establish a history of successfully obtaining acceptance from each customer. In the near term, as our products are new, this is likely to be a longer process than when our products are more mature and we have more of a history with customer acceptance.

Emerging Growth Company Status

We are an "emerging growth company" as defined in Section 2(a) of the Securities Act and have elected to take advantage of the benefits of the extended transition period for new or revised financial accounting standards. We expect to remain an emerging growth company at least during the 2022 fiscal year and expect to continue to take advantage of the benefits of the extended transition period, although we may decide to early adopt such new or revised accounting standards to the extent permitted by such standards. This may make it difficult or impossible to compare our financial results with the financial results of another public company that is either not an emerging growth company or is an emerging growth company that has chosen not to take advantage of the extended transition period exemptions because of the potential differences in accounting standards used.

BUSINESS

Business Combination

On October 8, 2021 (the "Closing Date"), ACON S2 Acquisition Corp. ("STWO"), a publicly traded special purpose acquisition company, consummated a merger pursuant to the Agreement and Plan of Merger, dated May 6, 2021 (the "Merger Agreement"), by and among STWO, SCharge Merger Sub, Inc., a Delaware corporation and wholly owned direct subsidiary of STWO ("Merger Sub"), and ESS Tech, Inc., a Delaware corporation ("Legacy ESS") following the approval at a special meeting of the stockholders of STWO held on October 5, 2021.

Pursuant to the terms of the Merger Agreement, STWO deregistered by way of continuation under the Cayman Islands Companies Act (2021 Revision) and registered as a corporation in the State of Delaware under Part XII of the Delaware General Corporation Law (the "Domestication"), and a business combination between STWO and ESS was effected through the merger of Merger Sub with and into Legacy ESS, with ESS surviving as a wholly owned subsidiary of STWO (together with the other transactions described in the Merger Agreement, the "Business Combination"). On the Closing Date, STWO changed its name from "ACON S2 Acquisition Corp" to "ESS Tech, Inc." (the "Company" or "ESS"), and our Common Stock and Public Warrants began trading on the NYSE under the ticker symbols "GWH" and "GWH.W," respectively.

Business Overview

ESS is a long-duration energy storage company specializing in iron flow battery technology. We design and produce long-duration batteries predominantly using earth-abundant materials that we believe can be cycled over 20,000 times without capacity fade. Because we designed our batteries to operate using an electrolyte of primarily salt, iron and water, they are non-toxic and substantially recyclable. Our batteries provide flexibility to grid operators and energy assurance for commercial and industrial customers. Our technology addresses energy delivery, duration and cycle-life in a single battery platform that compares favorably to lithium-ion batteries, the most widely deployed alternative technology. Using our iron flow battery technology, we are developing two products, each of which is able to provide reliable, safe, long-duration energy storage. As of December 31, 2021, we did not have any second-generation products fully deployed and we had not yet met revenue recognition criteria, but we began shipping our second-generation Energy Warehouses in the third quarter of 2021 and were in the process of installing and commissioning such units. With each battery deployed, we will further our mission to accelerate the transition to a zero-carbon energy future with increased grid reliability.

Our batteries are non-flammable, non-toxic, do not have explosion risk and can operate in temperatures ranging from -5°C to 50°C without requiring heating or cooling systems, so they can be located in sites where lithium-ion batteries cannot be placed due to fire, chemical or explosion risks. In addition, our batteries are environmentally sustainable, predominantly utilizing easily sourced materials and recyclable components.

Our batteries and technology can be purchased with a ten-year performance guarantee which is backed by an investment-grade, ten-year warranty and project insurance policies from Munich Re, a leading provider of reinsurance, primary insurance and insurance-related risk solutions, which stands behind the performance of our energy storage products. To our knowledge, we are the first long-duration energy storage company to receive this type of insurance, which provides a warranty backstop for our proprietary flow battery technology, supporting our performance guarantee regardless of project size or location and de-risking the technology for our customers. We have also collaborated with Munich Re to develop separate project finance coverage. This allows us to secure project financing when installing our energy storage products, reducing the cost of capital for deployment, and which can be extended in order to provide long-term assurance of project performance to our customers, investors and lenders. Bonding and surety capital are provided through Aon and OneBeacon Insurance Group ("OneBeacon") as well as qualification from the U.S. Export-Import Bank, which provides additional product assurance. We believe each of these elements allows us to increase our total addressable market, as customers have reduced technology risk, financing risk and importing risk.

We believe that as we scale up our production, our battery technology will be priced competitively. When comparing products on a lifetime levelized cost of storage ("LCOS") basis, which is the total cost of the investment in an electricity storage technology divided by its cumulative delivered electricity, we expect our batteries to be less expensive on a LCOS basis than lithium-ion alternatives for storage durations greater than four hours, which we believe is the operational maximum for lithium-ion technologies. Our cost advantage increases as the storage duration extends beyond four hours because of the scalable nature of our technology.

Energy storage solutions of various sizes and durations must be installed throughout global electrical grids to enable decarbonization in line with global climate objectives. Our energy storage products are intended to supply long-duration power across this expanding spectrum of use cases. As described below in the section entitled "—Our Technology and Products," we believe our energy storage products will be capable of addressing customer needs across multiple use cases and markets. We are an early mover in long-duration energy storage and we believe we will enable more rapid implementation of renewable energy while also improving grid stability. The safety, flexibility and durability of our energy storage products enable customers to use them in nearly any location globally. Examples of use cases range from localized energy storage at commercial and industrial sites to grid-scale use cases, such as peaker plant replacement and grid stabilization.

Our Technology and Products

Our long-duration iron flow batteries are the product of nearly 50 years of scientific advancement. In the 1970's, researchers first developed the concept of iron flow batteries. Despite realizing the battery's promising ability to store energy, these researchers found that the reaction between the positive and negative sides created hydroxide formations that clogged the electrodes and reduced the activity of the electrolytes. Hydroxide formation caused rapid degradation in early iron flow batteries after only a few cycles. Unable to prevent the hydroxide from forming, these scientists were forced to abandon their work.

After years of neglect, our founders, Craig Evans and Dr. Julia Song, began advancing this technology in 2011 and formed Legacy ESS. Building upon this promising concept, our team has significantly enhanced the technology, improved round-trip efficiency and developed an innovative and patented solution to the hydroxide build-up problem. Our proprietary solution to eliminate the hydroxide formation is known as the Proton Pump, and it works by utilizing hydrogen generated by side reactions on the negative electrode. The Proton Pump converts the hydrogen back into protons in the positive electrolyte. This process eliminates the hydroxide and stabilizes the pH level of the system. The Proton Pump allows the electrolyte to be used for over 20,000 cycles without any capacity fade.

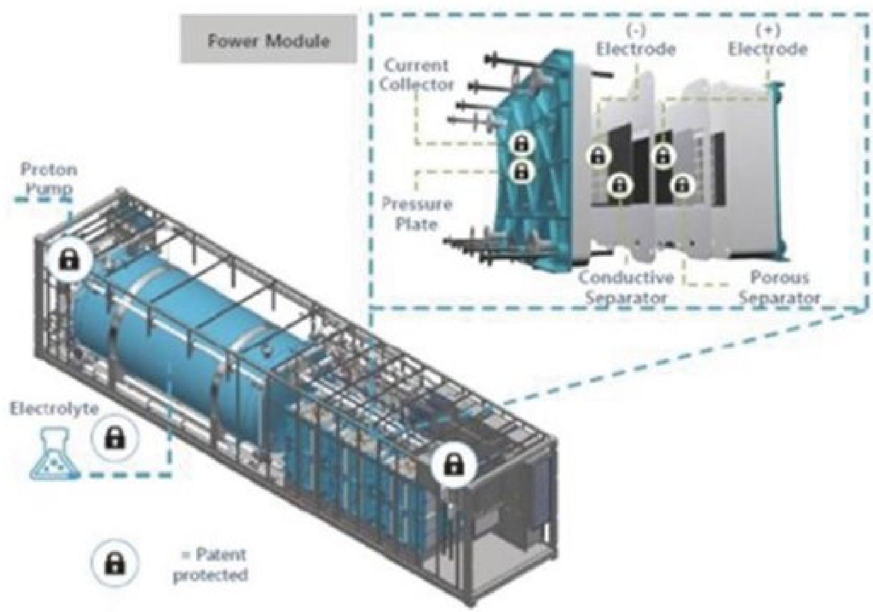
Our iron flow batteries store energy by converting electrical energy into chemical energy. Each battery module is made up of one or more cells and each of these cells are made up of a negative electrode, and a positive electrode and these two electrodes are separated by a porous separator. On the positive side (positive electrode) of the battery during charge, ferrous iron (Fe^{+2}) is oxidized into ferric iron (Fe^{+3}) and on the negative side (negative electrode) of the battery, ferrous iron is reduced to iron metal. The porous separator is used to minimize the positive and the negative electrolyte from mixing, which helps improve the coulombic efficiency of the battery. The positive and negative electrolytes are stored separately in tanks outside of the battery and this electrolyte is constantly pumped in and out of the battery while in operation. To convert the chemical energy back to electrical energy, the reaction is reversed; on the positive side of the battery, ferric iron is reduced to ferrous iron and on the negative side, metallic iron is oxidized into ferrous iron. During these charge and discharge cycles the pH of the positive and negative electrolyte can change dramatically. The Proton Pump ensures that the electrolyte pH remains stable and clear of any hydroxides. The duration of stored energy can be independently varied from the power. To add duration to our products all that is required is the addition of electrolytes to the tank. This electrolyte, consisting of iron, potassium or sodium chloride and water, is extremely inexpensive, allowing for very low marginal costs of energy and making our technology attractive for long-duration energy storage.

Our iron flow batteries store energy by charging positive and negative electrolyte tanks that are separated by a membrane. In order to release energy, we generate a reaction between the tanks via the membrane. The Proton Pump ensures that the membrane remains clear of hydroxide build-up and balances the electrolyte's pH level. The duration of storage we can offer is a factor of the tank sizes, while the power generated is a factor of the membrane size. We can increase the size of the electrolyte tanks at a relatively low cost, enabling us to offer longer durations of storage at an attractive price.

Using our iron flow battery technology, we are developing two products, each of which is able to provide reliable, safe, long-duration energy storage. Our first energy storage product, the Energy Warehouse, is our "behind-the-meter" solution (referring to solutions that are located on the customers' premise, behind the service demarcation with the utility) that offers energy storage ranging from 50 kilowatt ("kW") to 90 kW and four to 12-hour duration. A 50 kW system, when used for eight hours of storage, can power the equivalent of 20 homes with a total output of 400 kilowatt-hours ("kWh"). Energy Warehouses are deployed in shipping container units, allowing for a fully turnkey system that can be installed easily at nearly any customer's site. Potential use cases for Energy Warehouses include microgrids, peaker plant replacement on a small-scale and commercial and industrial ("C&I") demand. For customers who require additional energy storage capacity, multiple units can be added to the same system. The first generation of our Energy Warehouse was deployed in 2015. Since then, all of our first-generation units have been returned to us except for two where the prototype trials continue. As of December 31, 2021, we did not have any second-generation products fully deployed and we had not yet met revenue recognition criteria, but we began shipping our second-generation Energy Warehouses in the third quarter of 2021 and were in the process of installing and commissioning such units.

Our second, larger scale energy storage product, the Energy Center, is a "front-of-the-meter" solution, meaning that it is designed for use in front of the service demarcation with the utility. Energy Center solutions are designed specifically for utilities, independent power producers ("IPPs") and large C&I consumers. The Energy Center offers a fully customizable configuration range and is installed to meet our customers' power, energy and duration needs. We anticipate energy storage capacities starting at three megawatts ("MW") and six to 12-hour duration. The Energy Center's modular design allows the product to scale to meet IPP and utility-scale applications, including large renewable-plus-storage projects and standalone energy storage projects. The modular design of the Energy Center also allows for it to be flexibly configured to meet varying power and energy capacity needs and deployment in a variety of settings.

For both of our energy storage products, the intellectual property and points of differentiation are contained within the Proton Pump, power module and electrolyte. These components are protected by trade secrets, patents (both granted and in process) and years of research. The remainder of the Energy Warehouse and the Energy Center are intentionally designed to be easily produced. By using standard pumps and equipment and easily fabricated enclosures, our energy storage products can be assembled almost anywhere and produced at an efficient cost.



ESS' Critical Technology

Customers

Our potential customers include both utilities and commercial and industrial ("C&I") end users. Our potential customers are interested in several use cases including solar shifting, peak shaving, price arbitrage, utility ancillary services and microgrids.

We intend to serve customers in both behind-the-meter and front-of-the-meter markets. In behind-the-meter applications, customers will use our energy storage products to reduce energy costs, integrate with renewable energy solutions to achieve corporate sustainability goals, and to enhance their energy resiliency. Behind-the-meter customers may include microgrids and small-scale C&I customers.

Front-of-the-meter customers, in contrast, are primarily utilities experiencing high rates of renewable energy penetration and requiring energy storage to help balance the grid, and independent power producers who can leverage energy storage to improve the economics of renewable energy projects. These customers use our energy storage products to store energy on a utility scale that they can then utilize or sell to their customers when needed. Over time, we expect our front-of-the-meter customer base to expand to include additional types of energy suppliers. Current customers of ours include large utility companies. We also plan to sell products to IPPs and Project Developers.

We have designed the Energy Warehouse and Energy Center to address the needs of these two distinct markets. The Energy Warehouse is intended for behind-the-meter use owing to its small size and convenient turnkey packaging. The Energy Center can be used by larger customers in both the behind-the-meter and front-of-the-meter markets.

Suppliers

Our batteries are made predominantly of earth-abundant, non-toxic materials. These materials are considerably less expensive than rare earth metals that make up other batteries and as a result make up a low percentage of the total costs for our batteries. Because these materials are widely available, there are multiple suppliers for each input. In addition, we use limited high cost materials such as platinum in our manufacturing. The mechanical elements and control systems of our batteries are comprised of commercially available equipment that can be supplied by many manufacturers.

Partnerships

- *Munich Re*: Our batteries and technology can be purchased with a ten-year performance guarantee which is backed by investment-grade, ten-year warranty and project insurance policies from Munich Re, a leading provider of reinsurance, primary insurance and insurance-related risk solutions, which stands behind the performance of our energy storage products. We are the first long-duration energy storage company to receive this type of insurance, which provides a warranty backstop for our proprietary flow battery technology, supporting our performance guarantee regardless of project size or location and de-risking the technology for our customers. We have also collaborated with Munich Re to develop separate project finance coverage. This allows us to secure project financing when installing our energy storage products, reducing the cost of capital for deployment, and which can be extended in order to provide long-term assurance of project performance to our customers, investors and lenders.

- *OneBeacon Insurance*: Through OneBeacon, we will offer growing project surety capacity and corporate bonding options to our customers.

- *Export-Import Bank of the United States*: The Export-Import Bank of the United States ("EXIM") is the official export credit agency of the United States. EXIM equips U.S. businesses with the financing tools necessary to compete for global sales when the private sector lenders are unable or unwilling to provide financing. Our energy storage products are qualified by EXIM and can provide financing for qualified overseas buyers.

Research & Development

Since January 1, 2019, we have invested approximately $50 million on improving our technology and bringing our energy storage products to market. Our research and development efforts are conducted in Oregon and supported by our approximately 50 employees in research and development.

To maintain our leadership position in the long-duration energy storage market, it is essential to continue our ongoing research and development activities. We have a research and development roadmap for additional breakthroughs to extend our technology advantages further. Expanding our technological capabilities to alternate chemistries and technologies is also a long-term goal of our research and development team.

Intellectual Property

Intellectual property is an integral differentiator for our business, and we rely upon a combination of patents, copyrights and trade secrets to protect our proprietary technology. We believe that we have enforceable intellectual property protection over all critical design elements as well as the key enabling technologies for iron flow batteries. We have developed a significant patent portfolio. We have over 125 patents that are granted or in the pipeline and an undisclosed number of trade secrets and identified patents. We continually review our efforts to assess the existence and patentability of new intellectual, proprietary technology. We believe that we have the world-leading iron flow expertise and an identified roadmap to additional technological advancements.

Competition

The energy storage industry is highly competitive. The declining cost of renewable energy, the decrease in battery costs and improving battery technologies are shifting customer demands causing the industry to evolve and expand. The main competitive factors in the energy storage market include, but are not limited to, safety and reliability, duration, performance and uptime, operational flexibility, asset life length and cyclability, ease of integration, operability in extreme temperatures, environmental sustainability, historical track record, and field-proven technology.

With the rising demand for clean electric power solutions with lower greenhouse gas emissions, there has been a transition to renewable energy sources and increasing penetration of distributed energy infrastructure. This industry transformation has created an opportunity for an increased role for long-duration energy storage solutions like ours. Climate change will also result in more unpredictable weather events including extreme temperatures, hurricanes and wildfires. Our technology can operate efficiently and effectively in these extreme weather conditions and still maintain grid stability. As a pioneer of iron flow battery technology solutions that are well-suited for long-duration applications, we have a significant edge over our competition in this rapidly evolving environment. Our key competitors include different energy storage technologies such as lithium-ion batteries, lithium metal batteries, vanadium or zinc bromine batteries, sodium sulfur batteries, compressed air and pumped-storage hydropower. Key competitors in the traditional lithium-ion space include Samsung Electronics Co., Ltd., LG Chem, Ltd., Sungrow Power Supply Co., Ltd., Tesla, Inc. and Contemporary Amperex Technology Co. Limited. Key competitors in the non-lithium-ion space include Eos Energy Enterprises, Inc., Malta Inc., Enerox GmbH, Highview Power PTY Ltd., and VoltStorage GmbH. Many of our competitors have substantially greater financial, marketing, personnel and other resources than we do. Although we are small compared to our competitors, we believe we are well-positioned to compete successfully in the market supported by our innovative iron flow battery technology, strategic partnerships and premier leadership team with a proven track record of success.

New technologies may enter the market that may have additional or superior advantages to our offerings. A variety of newer and emerging companies have announced plans to develop energy storage products using a variety of technologies, including compressed air, thermal energy, and solid-state batteries among others. Although many of these companies are not in commercial production today, they may in the future offer solutions that become competitive with our offerings. We intend to continuously improve our product offerings and maintain robust research and development efforts in order to stay ahead of existing and emerging competitors.

Government Regulations and Compliance

We operate in the heavily regulated energy sector. As such, there are a variety of federal, state and local regulations and agencies that impact our operations. As a participant in the renewable energy sector specifically, there are additional regulations, tax incentives and support mechanisms in place to promote growth. Renewable energy is a priority for both the Biden administration as well as state and local governments across the country.

On the federal level, tax credits are currently in place that incentivize the deployment of renewable energy and battery storage. Battery storage projects storing energy from renewable energy sources are eligible for Investment Tax Credits that allow project developers to monetize and sell the tax losses they experience from the creation of their projects. Additionally, battery storage is eligible for accelerated depreciation via the federal government's Modified Accelerated Cost Recovery System. Both policies provide tax and financing advantages for battery storage projects. They lower the capital requirements for renewables projects to be developed and open a new source of funding for these projects.

While much is still to be determined, the possibility of additional federal incentives and investment from the Biden administration and Congress has garnered enthusiasm among renewable energy developers. The administration has announced goals of decarbonizing the electricity sector entirely by 2035, a goal that would necessitate billions in additional investment. Some of this money would need to be invested in long-duration battery storage, potentially a benefit for a company like ESS.

State incentives have also driven growth in the deployment of renewable battery and energy storage. States with high Renewable Portfolio Standards, for example, have seen greater deployment of renewables than states with similar renewable resources that lack such requirements.

In November 2020, PJM Interconnection L.L.C., a regional transmission organization that coordinates the movement of wholesale electricity in all or parts of 13 states and the District of Columbia, amended its manual for generation interconnection requests to allow all previously permitted wind and solar projects to add energy storage to their project application without forfeiting their spot in the queue. This type of regulation may expedite the deployment of energy storage across the region. Replicating this policy nationwide would have an even greater impact.

Finally, we are subject to federal, state and local requirements on the environment, health, safety and employment. We are subject to the requirements of the Occupational Safety and Health Act, local wage regulations and rigorous health and safety regulations in the State of Oregon.

Human Capital Management

We pride ourselves on our innovative technology and our employees are dedicated to our strategic mission. More than half of our employees are involved in product manufacturing. As of December 31, 2021, we employed 160 full-time employees, based primarily in our headquarters in Wilsonville, Oregon.

We are an Equal Employment Opportunity and Affirmative Action employer. All aspects of employment including the decision to hire, promote, discipline, or discharge, are based on merit, competence, performance, and business needs. We do not discriminate on the basis of any status protected under federal, state, or local law.

Many of our employees are highly skilled in technical areas related to energy storage. We also supplement our workforce with consultants or independent contractors as necessary.

Our employees are key to our success as a company, and we are committed to attracting, developing and retaining the best talent. We are currently establishing and/or improving our recruiting, retention and development processes.

We seek to provide employees with competitive compensation and benefits consistent with positions, skill levels, experience, knowledge, and geographic location.

The Compensation Committee assists our board of directors in its oversight of human capital management including, corporate culture, diversity and inclusion, recruiting, retention, attrition, talent management, career development and progression, succession and employee relations.

The success of our business is connected to the well-being of our team members. Accordingly, we are committed to the health, safety and wellness of our team members worldwide. In response to the COVID-19 pandemic, we implemented changes in our operations that we determined were in the best interest of our team members, our customers and partners, and the communities in which we operate.

Facilities

Our corporate headquarters is located in Wilsonville, Oregon. The approximately 200,000 square foot facility contains both our corporate and administrative functions as well as our automated battery manufacturing line. Currently, this facility's semi-automated production line has the capacity to manufacture about 250 MWh of batteries annually. We have procured a second semi-automated production line (250 MWh) that is expected to be installed in the second quarter of 2022, and we have a fully automated line under contract (250 MWh) that is expected to be installed in the fourth quarter of 2022.

Over time, we plan to increase efficiency at the Wilsonville facility to scale manufacturing capacity up to 2,000 MWh. We also envision opening additional manufacturing facilities globally. This global expansion plan may include the following levers that are currently under consideration:

- Strategic investments in the supply chain to grow capacity;
- Rollout of redesigned automation cells, which we expect will increase efficiency in production;
- Energy Warehouse and Energy Center production expansion to Europe and/or Australia;
- Production of power modules in Europe; and
- Vertical integration of power module comportments.

Legal Proceedings

From time to time, we may become involved in legal proceedings arising in the ordinary course of our business. We are not currently a party to any material legal proceedings, nor, to our knowledge, is any material legal proceeding threatened against us. In the future, we may become involved in legal proceedings that arise in the ordinary course of business, the outcome of which, if determined adversely to us, could individually or in the aggregate have a material adverse effect on our business, financial condition and results of operations.

MANAGEMENT

Executive Officers and Directors

The following table sets forth the names and positions of our executive officers and directors and their ages as of March 1, 2022:

Name	Age	Position
Executive Officers:		
Eric P. Dresselhuys	57	Chief Executive Officer and Director
Craig Evans	45	President, Co-Founder and Director
Julia Song	44	Chief Technology Officer and Co-Founder
Amir Moftakhar	45	Chief Financial Officer
Non-Employee Directors:		
Raffi Garabedian(2)	55	Director
Claudia Gast(1)	38	Director
Rich Hossfeld(1)	42	Director
Michael R. Niggli(3)	72	Director
Kyle Teamey(2)	45	Director
Alexi Wellman(1)	51	Director
Daryl Wilson(3)	62	Director

(1) Member of the audit committee
(2) Member of the compensation committee
(3) Member of the nominating and corporate governance committee

Eric P. Dresselhuys. Mr. Dresselhuys has served as our Chief Executive Officer since March 2021 and a member of our board of directors since May 2021. From March 2017 to March 2021, Mr. Dresselhuys served as Chief Executive Officer of Juncion, Inc., a private energy company he founded. Also, from January 2018 to July 2020, Mr. Dresselhuys served as President – Development of Smart Energy Water, a software-as-a-platform for the energy, water and utility sector. From July 2002 to March 2017, he served in various management roles at Silver Spring Networks, Inc., a smart grid products company he co-founded which is now subsidiary of Itron Inc. (Nasdaq: ITRI), most recently as Executive Vice President, Global Development. Mr. Dresselhuys has served on the boards of directors of various private companies, including Enian, LTD a provider of project management software for renewable energy professionals and AutoGrid Solutions, a provider of distributed resource management analytics and software. Mr. Dresselhuys holds a B.S. in Economics from the University of Wisconsin and earned an Executive Certificate from the Sloan School at the Massachusetts Institute of Technology. We believe Mr. Dresselhuys is qualified to serve on our board of directors because of his extensive experience and commitment to the renewable energy sector as well as his prior executive, leadership and advisory roles at various other companies within the energy industry.

Craig Evans. Mr. Evans is one of our co-founders and has served as our President since March 2021 and as Chief Executive Officer from January 2011 to March 2021. He has also served as a member of our board of directors since January 2012. He previously served as Director of Design and Product Development at ClearEdge Power, Inc.("ClearEdge"), a fuel cell producer, from September 2006 to March 2011. Prior to ClearEdge, Mr. Evans held numerous Engineering and Manufacturing positions at United Technologies from July 1999 to September 2011 Mr. Evans holds a B.S. in Aerospace Engineering and an M.S. in Mechanical Engineering from Clarkson University, an M.S. in Finance from The Lally School of Management at Rensselaer Polytechnic Institute and an M.B.A. from The Tepper School of Business at Carnegie Mellon University. As one of our co-founders, we believe Mr. Evan's is uniquely qualified to serve on our board of directors due to his deep knowledge of our Company and his significant technical experience and background.

Julia Song. Dr. Song is one of our co-founders and has served as our Chief Technology Officer since April 2012. She previously served in various management roles at ClearEdge from March 2005 to April 2012, most recently as Vice President, Research and Development. Dr. Song holds a B.S. in Chemistry from Peking University and a Ph.D. in Analytical Chemistry from the University of North Carolina at Chapel Hill.

Amir Moftakhar. Mr. Moftakhar has served as our Chief Financial Officer since February 2019. He has also served as Chief Underdog at Underdog Capital, a provider of chief financial officer and strategy services for growing companies since May 2018. From August 2009 to April 2018, he served in various management, financial, and strategic roles at Sempra Energy and San Diego Gas & Electric Company, a regulated utility company owned by Sempra Energy (NYSE: SRE), an energy services holding company. Mr. Moftakhar holds a B.S. in Managerial Economics from the University of California, Davis, an M.B.A. from the Graziadio School of Business at Pepperdine University, and an Executive Master of Leadership from the Price School of Public Policy at the University of Southern California.

Raffi Garabedian. Mr. Garabedian has served as a member of our board of directors since February 2021. Since March 2021, he has served as Chief Executive Officer at Electric Hydrogen Co., a company focused on industrial decarbonization Mr. Garabedian co-founded. From June 2008 to November 2020, Mr. Garabedian was with First Solar, Inc. (Nasdaq: FSLR), a manufacturer of solar panels and provider of utility-scale PV power plants and supporting services, most recently as Chief Technology Officer. He was the founding Chief Executive Officer of Touchdown Technologies, Inc., a semiconductor company, which was acquired by Verigy, Ltd. Mr. Garabedian is named on approximately 28 issued U.S. patents. He holds a B.S. in Electrical Engineering from Rensselaer Polytechnic University and an M.S. in Electrical Engineering from the University of California Davis. We believe Mr. Garabedian is qualified to serve on our board of directors because of his extensive experience in manufacturing technology, strategy, product development, and management.

Claudia Gast. Mrs. Gast was appointed as a member of our board of directors effective February 17, 2022. She is currently the CFO and a member of the board of directors of Global Technology Acquisition Corp. (Nasdaq: GTAC) and the co-founder of Greentrail Capital, an investment firm focused globally on publicly listed companies and pre-IPO opportunities with an emphasis on global technology and consumer companies. Prior to that, Mrs. Gast was part of the executive team of AM General (a KPS Capital Partners portfolio company). Previously, Mrs. Gast held various financial and strategic executive positions at GWR Safety Systems, a portfolio company of GHC Capital, Procter & Gamble and Volkswagen. Mrs. Gast has been a private investor in Technology, Consumer Goods and Industrials for more than 15 years and has served on numerous boards and as an advisor to growth companies and non-profit organizations. Mrs. Gast is a director member at the Latino Corporate Directors Association and most recently Mrs. Gast served as an Executive Sponsor at AM General for the Diversity & Inclusion Initiatives and as an Advisor to the President of the Women in Defense Organization. Mrs. Gast holds a Bachelor of Science in Business Administration and Master of Finance & Management degrees from ESADE Business School and an MBA from the University of Chicago’s Booth School of Business.

Rich Hossfeld. Mr. Hossfeld has served as a member of our board of directors since October 2019. He is currently the co-CEO of SB Energy Global LLC, and was previously Senior Vice President, Strategy and Investments at SB Energy, a utility-scale solar, storage and technology platform and a subsidiary of SoftBank Group Corp. From September 2013 to August 2018, he was with True North Venture Partners, a venture capital firm, most recently as a Partner. Mr. Hossfeld has also acted as vice president for several global renewable energy providers, including First Solar, and started his career as a corporate law associate at Cravath, Swaine & Moore LLP. He holds a B.A. in Economics and Government from Claremont McKenna College and a J.D. from Duke University School of Law. We believe Mr. Hossfeld is qualified to serve on our board of directors because of his experience in the renewable energy sector, as well as his prior executive, leadership and advisory roles at various other companies within the energy industry.

Michael R. Niggli. Mr. Niggli has served as Chairman of the Board since June 2015 and as a member of our board of directors since June 2015. From 2000 to December 2013, he was with San Diego Gas & Electric Company, a regulated utility company owned by Sempra Energy (NYSE: SRE), most recently as President and Chief Operating Officer. Mr. Niggli previously served as Chairman of the Board, Chief Executive Officer and President of Sierra Pacific Resources, and Chairman of the Board, Chief Executive Officer and President of Nevada Power

Company. He currently serves on the board of directors of Pacific Gas & Electric Co. (NYSE: PCG) and Avanea Energy Acquisition Corp. (Nasdaq: AVEA) as well as on the board of directors of several privately held companies. Mr. Niggli has authored several articles on issues pertinent to the electric, gas and telecommunications industries and founded the graduate program in power engineering at San Diego State University, where he lectured part-time for five years. Mr. Niggli holds a B.S. in Electrical Engineering from California State University, Long Beach, and an M.S. in Electrical Engineering from San Diego State University. Mr. Niggli participated in the Advanced Management Program at Harvard Business School. We believe Mr. Niggli is qualified to serve on our board of directors because of his significant operational, risk management and leadership experience in the utility and energy sector.

Kyle Teamey. Mr. Teamey has served as a member of our board of directors since August 2019. Since July 2018, he has served as a member of the investment team of Breakthrough Energy Ventures, a venture capital firm focused on sustainable energy and other technologies. From May 2015 to July 2018, Mr. Teamey served as a Principal at In-Q-Tel, a not-for-profit venture capital firm where he focused on investments in energy, materials, and advanced manufacturing. From October 2009 to March 2015, he served as Chief Executive Officer at Liquid Light, Inc., a company that developed low-energy catalytic electrochemistry to convert carbon dioxide to chemicals and was acquired by Avantium Technologies B.V. From February 2008 to October 2009, Mr. Teamey was an Entrepreneur in Residence with Redpoint Ventures developing new energy and materials companies. Mr. Teamey previously was with the Defense Advanced Research Projects Agency, or DARPA, and developed TiGR situational awareness software which was spun out as Ascend Intel and was acquired by General Dynamics Corporation. Mr. Teamey is a veteran of the U.S. Army, having served as an active-duty officer from June 1998 to December 2004, and is currently a Colonel in the U.S. Army Reserve. He currently serves on the board of directors of several privately held companies and is an inventor on 26 issued U.S. patents in the fields of electrochemistry and chemical engineering. Mr. Teamey holds a B.A. in Environmental Engineering from Dartmouth College, an M.A. in International Finance and Energy Policy from Johns Hopkins University School of Advanced International Studies, a M.S. in Materials Science from Columbia University, and a Masters of Strategic Studies from the U.S. Army War College. We believe Mr. Teamey is qualified to serve on our board of directors because of his extensive experience in the energy and technology sector, as well as his prior executive, leadership and advisory roles at various other companies within the energy industry.

Daryl Wilson. Mr. Wilson has served as a member of our board of directors since December 2019. Since September 2020, he has served as an Executive Director at Hydrogen Council, a global initiative for the transition to clean energy. From December 2006 to September 2019, Mr. Wilson served as Chief Executive Officer for Hydrogenics Corp., a provider of fuel cell and hydrogen production technologies acquired by Cummins Inc. He holds a B.A.Sc. in Chemical Engineering from the University of Toronto and an M.B.A. from McMaster University. We believe Mr. Wilson is qualified to serve on our board of directors because of his significant public company experience and knowledge of environmental technology.

Alexi Wellman. Ms. Wellman has served as a member of our board of directors since October 12, 2021. Since January 2022 she has served as Chief Executive Officer of Altaba Inc. (Nasdaq: AABAP), a closed-end management investment company f/k/a Yahoo Inc. From June 2017 to December 2021, Ms. Wellman served as Chief Financial and Accounting Officer of Altaba Inc. From October 2015 to June 2017, Ms. Wellman was the Vice President, Global Controller of Yahoo Inc. (Nasdaq: YHOO) and prior to that role, served as Vice President, Finance from November 2013 to October 2015. From October 2004 to December 2011, Ms. Wellman served as a Partner at KPMG LLP, an audit, tax and advisory firm. Ms. Wellman currently serves as a director of various private technology companies, as well as a director and chair of the audit and member of compensation committees of Werner Enterprises (NYSE: WERN) and director and member of audit committee of Bilander Acquisition Corp (Nasdaq: TWCB). She previously served as a director of Endurance International Group (Nasdaq: EIGI) from 2018 to 2021, TWC Tech Holdings II Corp. (Nasdaq: TWCT) from 2020 to 2021, Nebula Caravel Acquisition Corp. (Nasdaq: NEBC) from 2020 to 2021, and as a director of Yahoo Japan (Tokyo Stock Exchange: 4689) from 2016 to 2018. Ms. Wellman holds a B.S. in Accounting & Business Management from the University of Nebraska. We believe Ms. Wellman is qualified to serve on our Board due to her extensive accounting, corporate finance, and strategic planning experience, as well as her service on the boards of directors of several public and private companies.

Code of Business Conduct and Ethics

The Board has adopted a code of business conduct and ethics that applies to all of our directors, officers and employees, as well as our contractors, consultants and agents.

Board of Directors

Our business and affairs are managed under the direction of the Board. The Board consists of nine directors. The number of directors are fixed by the Board, subject to the terms of our amended and restated certificate of incorporation and amended and restated bylaws. Each of our directors will continue to serve as a director until the election and qualification of his or her successor, or until his or her earlier death, resignation or removal.

The standing committees of our board of directors consist of an audit committee, a compensation committee, and a nominating and corporate governance committee.

Audit Committee

Our audit committee is responsible for the following duties, among others:

- appointing and overseeing our independent auditor;
- approving audit and non-audit services;
- evaluating the independence and qualifications of our independent auditor;
- reviewing our internal controls and the integrity of our financial statements;
- reviewing presentation of financial information, earnings press releases and guidance;
- overseeing the design, implementation and performance of our internal audit function;
- reviewing the responsibilities, functions, qualifications, budget, performance, objectivity, and the scope and results of internal audits;
- setting hiring policies with regard to the hiring of employees or former employees of our independent auditor and overseeing compliance with such policies;
- reviewing, approving and monitoring related party transactions involving directors or executive officers;
- adopting and overseeing procedures to address complaints received by us regarding accounting, internal accounting controls or auditing matters;
- reviewing and discussing with management and our independent auditor (a) the overall adequacy and effectiveness of our legal, regulatory and ethical compliance programs, including our Code of Business Conduct and Ethics, compliance with anti-bribery and anti-corruption laws and regulations, and compliance with export control regulations and (b) reports regarding compliance with applicable laws, regulations and internal compliance programs; and
- reviewing and discussing with management, including our internal audit function, if applicable, and our independent auditor guidelines and policies to identify, monitor, and address enterprise risks.

Compensation Committee

Our compensation committee is responsible for the following duties, among other things:

- reviewing and approving the compensation for our executive officers, including our chief executive officer;
- reviewing, approving and administering, including the termination of, our employee benefit and equity incentive plans;

- advising the Board on management proposals to stockholders on executive compensation matters including advisory votes on executive compensation;
- establishing, and periodically reviewing, our employee compensation plans, policies and practices; and
- approving or making recommendations to our Board regarding the creation or revision of any clawback policy.

Nominating and Corporate Governance Committee

Our nominating and corporate governance committee is responsible for the following duties, among other things:

- reviewing and assessing and making recommendations to the Board regarding desired qualifications, expertise and characteristics sought of board members;
- identifying, evaluating, selecting or making recommendations to the Board regarding nominees for election to the Board;
- developing policies and procedures for considering stockholder nominees for election to the Board;
- reviewing our succession planning process for our chief executive officer and any other members of our executive management team;
- reviewing and making recommendations to the Board regarding the composition, organization and governance of the Board and its committees;
- reviewing and making recommendations to the Board regarding our corporate governance guidelines and corporate governance framework;
- overseeing director orientation for new directors and continuing education for our directors;
- overseeing the evaluation of the performance of the Board and its committees;
- reviewing and monitoring compliance with our code of business conduct and ethics, and reviewing conflicts of interest of our board members and officers other than related party transactions reviewed by our audit committee; and
- administering policies and procedures for communications with the non-management members of the Board.

Limitation of Liability and Indemnification of Officers and Directors

Our Certificate of Incorporation, which became effective upon consummation of the Merger, contains provisions that limit the liability of our directors for monetary damages to the fullest extent permitted by the DGCL. In addition, if the DGCL is amended to authorize corporate action further eliminating or limiting the personal liability of directors of corporations, then the personal liability of our directors will be eliminated or limited to the greatest extent permitted by the DGCL.

In addition, our bylaws, which became effective upon consummation of the Merger, provides that we will indemnify our directors and officers to the fullest extent permitted by the DGCL and we may indemnify our employees, agents and any other persons to the extent not prohibited by the DGCL or other applicable law. Our bylaws will also provide that we must advance expenses incurred by or on behalf of a director or officer in advance of the final disposition of any action or proceeding, subject to limited exceptions.

Further, we have entered into indemnification agreements with our directors and executive officers that are broader than the specific indemnification provisions contained in the DGCL and may continue to do so in the future. These indemnification agreements require us to indemnify our directors and executive officers against liabilities that may arise by reason of their status or service. These indemnification agreements also require us to advance all expenses reasonably and actually incurred by our directors and executive officers in investigating or defending any such action, suit or proceeding. We believe that these agreements are necessary to attract and retain qualified individuals to serve as directors and executive officers.

We also maintain insurance policies under which our directors and officers are insured, within the limits and subject to the limitations of those policies, against certain expenses in connection with the defense of, and certain liabilities which might be imposed as a result of, actions, suits, or proceedings to which they are parties by reason of being or having served as a director or officer of the Company. At present, we are not aware of any pending litigation or proceeding involving any person who is one of our directors or officers or is or was one of our directors or officers, or is or was one of our directors or officers serving at our request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, for which indemnification is sought, and we are not aware of any threatened litigation that may result in claims for indemnification.

EXECUTIVE COMPENSATION

To achieve ESS' goals, ESS has designed, and intends to modify as necessary, its compensation and benefits program to attract, retain, incentivize and reward deeply talented and qualified executives who share its philosophy and desire to work towards achieving these goals.

ESS believes its compensation program should promote the success of the Company and align executive incentives with the long-term interests of its shareholders. ESS' current compensation programs reflect its startup origins in that they consist primarily of salary and stock option awards. As ESS' needs evolve, ESS intends to continue to evaluate its philosophy and compensation programs as circumstances require.

This section provides an overview of ESS' executive compensation programs, including a narrative description of the material factors necessary to understand the information disclosed in the summary compensation table below.

The ESS Board and the ESS compensation committee, with input from its Chief Executive Officer, has historically determined the compensation for ESS' named executive officers. For the year ended December 31, 2021, ESS' named executive officers were:

- Eric Dresselhuys, Chief Executive Officer and director
- Craig Evans, President, Co-Founder and director
- Amir Moftakhar, Chief Financial Officer

Summary Compensation Table

The following table sets forth information concerning the compensation of the named executive officers for the years ended December 31, 2021 and December 31, 2020.

Name and Principal Position	Year	Salary ($)	Bonus ($)	Stock Awards[1]	Option Awards ($)[1]	Nonequity Incentive Compensation ($)[2]	All Other Compensation ($)[3]	Total ($)
Eric Dresselhuys[5]	2021	321,154	223,998	12,281,484	960,775	—	33,751	13,821,162
Chief Executive Officer								
Craig Evans	2021	384,760	275,833[4]	490,426	464,284	—	14,456	1,629,759
President, Co-Founder and Director	2020	175,000	—	—	91,250	92,000	10,724	368,974
Amir Moftakhar	2021	232,599	75,375	705,781	619,039	—	24,868	1,657,662
Chief Financial Officer	2020	210,000	—	—	152,500	58,500	7,700	428,700

(1) The amounts in this column represent the aggregate grant-date fair value of awards granted to each named executive officer, computed in accordance with the Financial Accounting Standards Board's ("FASB") Accounting Standards Codification ("ASC") Topic 718. See Note 15 to ESS' audited financial statements included elsewhere in this prospectus for a discussion of the assumptions made by ESS in determining the grant-date fair value of ESS' equity awards. Notwithstanding the foregoing, in December 2021, Messrs. Dresselhuys and Evans were granted performance-based restricted stock units covering 1,974,638 shares and 22,887 shares, respectively, subject to stock price, financial and/or operational milestones. Of these performance awards, with respective to Mr. Dresselhuys, a grant of 305,176 restricted stock units based on stock price targets was reported assuming full achievement. Among the aggregate performance awards granted in December 2021, Mr. Dresselhuys received restricted stock units covering an aggregate of 1,135,407 restricted stock units that are reported as $0 value assuming a less than 50% likelihood of achievement — the value of these restricted stock units would be $13,182,075 assuming full achievement. Among the aggregate performance awards granted in December 2021, Mr. Evans received restricted stock units covering an aggregate of 2,934 restricted stock units that are reported as $0 value assuming a less than 50% likelihood of achievement — the value of these restricted stock units would be $34,064 assuming full achievement.

(2) Except as indicated below, represents a bonus under our 2021 bonus plan based upon the achievement of the Company's objectives for the year ended December 31, 2021.

(3) The amounts in this column include matching 401(k) contributions for all named executive officers. In the case of Messrs. Dresselhuys and Moftakhar, the amounts in this column include $26,356 and $11,802 in commuting benefits, respectively. In the case of Mr. Evans , the amounts in the column include life insurance premiums.

(4) The amount includes a bonus in the amount of $5,833 awarded for the successful grant of patents.

(5) Mr. Dresselhuys was hired in fiscal year 2021 and therefore was not a named executive officer in fiscal year 2020.

Narrative Disclosure to Summary Compensation Table

For 2021, the compensation program for ESS' named executive officers consisted primarily of base salary, incentive compensation delivered in the form of bonuses, restricted stock unit awards and stock option awards, and 401(k) matching contributions.

Base Salary

Base salary is set at a level that is commensurate with the named executive officer's duties and authorities, contributions, prior experience and sustained performance.

Cash Bonus

Each of ESS' executive officers is eligible for an annual bonus under our Employee Incentive Compensation Plan. For 2021, each of ESS' named executive officers had a bonus target expressed as a percentage of his or her salary, 90% in the case of Mr. Dresselhuys, 90% in the case of Mr. Evans, and 30% in the case of Mr. Moftakhar, and the ESS Board determines actual bonuses based upon an assessment of achievement of corporate goals, which included specified technology, engineering, product development, operations and manufacturing, business development and sales, human capital, and finance goals. In early 2022, we determined achievement of our named executive officers and our each received a bonus payout at 75% of target. Our Executive Incentive Compensation Plan is more fully described below under "—Executive Incentive Compensation Plan."

Stock Awards and Stock Option Awards

In 2021, Stock awards and stock options have been granted to ESS' named executive officers under the 2014 Plan and the 2021 Plan.

2014 Equity Incentive Plan

The 2014 Plan allowed ESS to provide incentive stock options, within the meaning of Section 422 of the Code, nonstatutory stock options, stock appreciation rights, restricted stock awards and restricted stock units (each, an "award" and the recipient of such award, a "participant") to eligible employees, directors, and consultants of ESS and any parent or subsidiary of ESS. The 2014 Plan was terminated in 2021 and ESS will not grant any additional awards under the 2014 Plan thereafter. However, the 2014 Plan will continue to govern the terms and conditions of the outstanding awards previously granted under the 2014 Plan.

Plan Administration. The 2014 Plan is administered by the ESS Board or one or more of its committees. The administrator has all authority and discretion necessary or appropriate to administer the 2014 Plan and to control its operation, including the authority to construe and interpret the terms of the 2014 Plan and the awards granted under the 2014 Plan. The administrator's determinations, interpretations and constructions are final, binding and conclusive on all persons.

Eligibility. Employees and consultants of ESS or an affiliate of ESS, including individuals serving as a member of the board of directors of an affiliate of ESS who is compensated for such services, and directors of ESS were eligible to receive awards. Only employees of ESS or its parent or subsidiary companies were eligible to receive incentive stock options.

Stock Options. Stock options have been granted under the 2014 Plan. Subject to the provisions of the 2014 Plan, the administrator determined the term of an option, the number of shares subject to an option, and the time period in which an option may be exercised.

The term of an option is stated in the applicable award agreement, but the term of an option may not exceed 10 years from the grant date. The administrator determined the exercise price of options, which generally may not be less than 100% of the fair market value of our common stock on the grant date, unless expressly determined in writing by the administrator on the option's grant date. However, an incentive stock option granted to an individual who directly or by attribution owns more than 10% of the total combined voting power of all of our classes of stock or of any our parent or subsidiary could not have a term longer than five years from the grant date or an exercise price less than 110% of the fair market value of our common stock on the grant date.

The administrator determined how a participant may pay the exercise price of an option, and the permissible methods are generally set forth in the applicable award agreement. The administrator granted options that are exercisable prior to vesting, subject to the terms and conditions of an early exercise stock purchase agreement. Stock purchased prior to vesting generally are subject to a repurchase right in favor of ESS.

If a participant's service with ESS or its affiliate terminates, that participant may exercise the vested portion of his or her option for the period of time stated in the applicable award agreement. Vested options generally will remain exercisable for three months (or such longer or shorter period of time (but not less than thirty days) as set forth in the applicable award agreement) if a participant's service terminates for a reason other than death, disability, or cause. If a participant's service terminates due to death, vested options generally will remain exercisable for eighteen months from the date of termination (or such other longer or shorter period (but not less than six months) as set forth in the applicable award agreement). If a participant's service terminates for disability, vested options generally will remain exercisable for 12 months from the date of termination (or such other longer or shorter period (but not less than six months) as set forth in the applicable award agreement). If a participant's service terminates for cause, the entire option will generally terminate immediately. In no event will an option remain exercisable beyond its original term. If a participant does not exercise his or her option within the time specified in the award agreement, the option will terminate. Except as described above, the administrator has the discretion to determine the post-termination exercisability periods for an option.

Restricted Stock Units. Restricted stock units have been granted under the 2014 Plan. Restricted stock units are bookkeeping entries representing an amount equal to the fair market value of one share. The administrator will determine the terms and conditions of restricted stock units including the vesting criteria (which may include accomplishing specified performance criteria or continued service to us) and the form and timing of payment. The administrator will have the discretion to accelerate the time at which any restrictions will lapse or be removed and to settle earned restricted stock units in cash, shares, or a combination of both.

Non-Transferability of Awards. Unless determined otherwise by the administrator, options generally are not transferable except by will or by the laws of descent and distribution, and are exercisable during the lifetime of the participant only by the participant.

Certain Adjustments. If any change that is made in, or other events that occur with respect to, common stock subject to the 2014 Plan or subject to any award without the receipt of consideration by ESS through merger, consolidation, reorganization, reincorporation, stock dividend, dividend in property other than cash, large nonrecurring cash dividend, stock split, liquidating dividend, combination of shares, exchange of shares, change in corporate structure, or any similar equity restructuring transaction, the ESS Board will appropriately and proportionately adjust (i) the class(es) and maximum number of securities subject to the 2014 Plan, (ii) the class(es) and maximum number of securities that may be issued pursuant to the exercise of incentive stock options, and (iii) the class(es) and number of securities and price per share of stock subject to outstanding awards.

Dissolution or Liquidation. Unless otherwise determined by the administrator, in the event of a dissolution or liquidation of ESS, all outstanding awards will terminate immediately prior to the completion of such dissolution or liquidation, and the shares of common stock subject to ESS' repurchase rights or subject to a forfeiture condition may be repurchased or reacquired by ESS notwithstanding the fact that the holder of such award is providing continuous service.

Corporate Transaction. Unless otherwise agreed to by ESS or provided by the administrator, in the event of a "corporate transaction" (as defined in the 2014 Plan), the ESS Board will take one or more of the following actions with respect to awards: (i) arrange for the Surviving Corporation or acquiring corporation (or the surviving or acquiring corporation's parent company) to assume or continue the award or to substitute a similar stock award for the award; (ii) arrange for the assignment of any reacquisition or repurchase rights held by ESS in respect of common stock issued pursuant to the award to the Surviving Corporation or acquiring corporation (or the surviving or acquiring corporation's parent company); (iii) accelerate the vesting, in whole or in part, of the award (and, if applicable, the time at which the award may be exercised) to a date prior to the effective time of such corporate transaction as the ESS Board shall determine (or, if the ESS Board shall not determine such a date, to the date that is five days prior to the effective date of the corporate transaction), with such award terminating if not exercised (if applicable) at or prior to the effective time of the Corporate Transaction; (iv) arrange for the lapse of any reacquisition or repurchase rights held by ESS with respect to the award; (v) cancel or arrange for the cancellation of the award, to the extent not vested or not exercised prior to the effective time of the corporation transaction, in exchange for such cash consideration, if any, as the ESS Board, in its sole discretion, may consider appropriate; and (vi) make a payment, in such form as may be determined by the ESS Board equal to the excess, if any, of (A) the value of the property the holder of the award would have received upon the exercise of the award, over (B) any exercise price payable by such holder in connection with such exercise. The ESS Board need not take the same action with respect to all awards or with respect to all participants.

Amendment; Termination. The administrator may amend the 2014 Plan in any respect the ESS Board deems necessary or advisable. Except as provided in the 2014 Plan, rights under any award granted before an amendment of the 2014 Plan will not be impaired by any amendment of the 2014 Plan, unless the holder of such award consents in writing. The ESS Board may suspend or terminate the 2014 Plan at any time.

Treatment of Equity Incentive Awards in Connection with the Merger. In connection with the consummation of the Merger, the Company's stockholders approved the 2021 Plan, replacing the 2014 Plan. For more information about the 2021 Plan, see the section of this prospectus below titled "—ESS 2021 Equity Incentive Plan".

ESS 2021 Equity Incentive Plan

In 2021, the 2021 Plan became effective and was approved by shareholders. The 2021 Plan replaced the 2014 Plan, which expired as to future grants as of the effective date of the Merger.

Summary of the 2021 Plan

The following paragraphs provide a summary of the principal features of the 2021 Plan and its operation. However, this summary is not a complete description of all of the provisions of the 2021 Plan and is qualified in its entirety by the specific language of the 2021 Plan.

Purpose of the 2021 Plan

The purposes of the 2021 Plan are to attract and retain personnel for positions with ESS, any parent or subsidiary, and any entity that is in control of, is controlled by or is under common control with ESS (such entities are referred to herein as, the company group); to provide additional incentive to employees, directors, and consultants; and to promote the success of our business. These incentives will be provided through the grant of stock options, stock appreciation rights, restricted stock, restricted stock units, and performance awards as the administrator of the 2021 Plan may determine.

Eligibility

The 2021 Plan provides for the grant of incentive stock options, within the meaning of Section 422 of the Code, to ESS' employees and any parent and subsidiary corporations' employees, and for the grant of nonstatutory stock options, restricted stock, restricted stock units, stock appreciation rights, performance units and performance shares to our employees, directors and consultants.

We have, collectively, six non-employee directors, and approximately 150 full-time employees (including our employee directors).

Authorized Shares

Subject to the adjustment provisions contained in the 2021 Plan and the evergreen provision described below, the maximum number of shares of Common Stock that may be issued pursuant to awards under the 2021 Plan is (i) 12,210,000 shares of Common Stock, plus (ii) any shares of Common Stock subject to stock options, restricted stock units or other awards that were assumed in the Merger and terminate as a result of being unexercised or are forfeited to or repurchased by ESS, with the maximum number of shares to be added to the 2021 Plan pursuant to clause (ii) equal to 5,153,522 shares of Common Stock. The 2021 Plan also includes an evergreen provision that provides for an automatic annual increase to the number of shares of Common Stock available for issuance under the 2021 Plan on the first day of each fiscal year beginning with the 2021 fiscal year, equal to the least of:

- 15,260,000 shares of Common Stock;
- 5% of the total number of shares of all classes of Common Stock as of the last day of our immediately preceding fiscal year; or
- Such lesser amount determined by the administrator.

The 2021 Plan provides that the evergreen provision will terminate following the increase on the first day of the 2031 fiscal year.

Generally, if an award expires or becomes unexercisable without having been exercised in full, or, with respect to restricted stock, restricted stock units or performance awards, is forfeited to or reacquired by us due to the failure to vest, the unpurchased shares (or for awards other than options or stock appreciation rights, the forfeited or repurchased shares) that were subject to such awards will become available for future grant or sale under the 2021 Plan (unless it has terminated). With respect to stock appreciation rights, only shares actually issued will cease to be available. Shares that actually have been issued under the 2021 Plan under any award will not be returned to the 2021 Plan and will not become available for future distribution under the 2021 Plan; provided, however, that if shares issued pursuant to awards of restricted stock, restricted stock units, performance shares or performance units are repurchased by ESS or are forfeited to ESS, such shares will become available for future grant under the 2021 Plan. Shares used to pay the exercise price of an award or to satisfy the tax withholding obligations related to an award will become available for future grant or sale. To the extent an award is paid out in cash rather than shares, such cash payment will not reduce the number of shares available for issuance. If the ESS Board, or a committee appointed by the ESS Board, grants awards in substitution for equity compensation awards outstanding under a plan maintained by an entity acquired by or that becomes a part of any member of the company group, the grant of those substitute awards will not decrease the number of shares available for issuance under the 2021 Plan.

If any extraordinary dividend or other extraordinary distribution (whether in cash, shares, other securities, or other property), recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, reclassification, repurchase, or exchange of shares or other securities of ESS, issuance of warrants or other rights to acquire securities of ESS, other change in the corporate structure of ESS affecting the shares, or any similar equity restructuring transaction affecting the shares occurs, the administrator, to prevent diminution or enlargement of the benefits or potential benefits intended to be provided under the 2021 Plan, will adjust the number and class of shares that may be delivered under the 2021 Plan; the number, class, and price of shares covered by each outstanding award; and the numerical share limits contained in the 2021 Plan.

Plan Administration

The 2021 Plan will be administered by the compensation committee or by the ESS Board acting in place of the compensation committee and are referred to as the administrator. Different administrators may administer the 2021 Plan with respect to different groups of service providers. The ESS Board may retain the authority to concurrently administer the 2021 Plan and revoke the delegation of some or all authority previously delegated.

Subject to the terms of the 2021 Plan and applicable laws, the administrator generally will have the power in its sole discretion to make any determinations and perform any actions deemed necessary or advisable for administering the 2021 Plan. The administrator will have the power to administer the 2021 Plan, including but not limited to the power to construe and interpret the 2021 Plan and awards granted under the 2021 Plan, and determine the terms of awards, including but not limited to the exercise price (if any), the number of shares of Common Stock subject to each award, the time when awards may vest or be exercised (including the ability to accelerate the vesting and exercisability of awards), and the form of consideration payable upon exercise, if applicable. The administrator may select the service providers to whom awards may be granted and approve forms of awards agreements under the 2021 Plan. The administrator will also have the authority to amend awards (including but not limited to the discretionary authority to extend the post-termination exercisability period of awards and to extend the maximum term of an option) and to temporarily suspend the exercisability of an award if the administrator deems such suspension to be necessary or appropriate for administrative purposes, subject to the provisions of the 2021 Plan. Unless a participant is on an approved leave of absence, the administrator will have sole discretion to determine the date on which a participant stops actively providing services to ESS or the company group. The administrator's decisions, determinations, and interpretations are final and binding on all participants and any other holders of awards.

Stock Options

Options may be granted under the 2021 Plan. Subject to the provisions of the 2021 Plan, the administrator will determine the terms and conditions of options, including when such options vest and become exercisable (and the administrator will have the discretion to accelerate the time at which such options will vest or become exercisable). The per share exercise price of any option generally must be at least 100% of the fair market value of a share on the date of grant, and the term of an incentive stock option may not be more than 10 years. However, with respect to any incentive stock option granted to an individual who owns 10% of the voting power of all classes of stock of ESS or any of its parent or subsidiary corporations, the term of such option must not exceed 5 years, and the per share exercise price of such incentive stock option must be at least 110% of the fair market value of a share on the grant date. After a participant's service terminates, he or she generally may exercise the vested portion of his or her option for the period of time stated in his or her option agreement. Generally, the fair market value of a share is the closing sales price of a share on the relevant date as quoted on the NYSE. In no event may an option be exercised later than the expiration of its term, except in certain circumstances where the expiration occurs during a period where exercise is not permitted under applicable law, as described more fully in the 2021 Plan. Subject to the provisions of the 2021 Plan, the administrator will determine the other terms of options, including but not limited to the acceptable forms of consideration for exercising an option.

Stock Appreciation Rights

Stock appreciation rights may be granted under the 2021 Plan. Stock appreciation rights allow the recipient to receive the appreciation in the fair market value of Common Stock between the exercise date and the date of grant. Subject to the provisions of the 2021 Plan, the administrator will determine the terms and conditions of stock appreciation rights, including when such rights vest and become exercisable (and the administrator will have the discretion to accelerate the time at which such rights will vest or become exercisable) and whether to pay any increased appreciation in cash, shares, or a combination of both. The per share exercise price of a stock appreciation right must be at least 100% of the fair market value of a share on the date of grant with respect to United States taxpayers, and the term of a stock appreciation right will be 10 years. After a participant's service terminates, he or she generally may exercise the vested portion of his or her stock appreciation right for the period of time stated in his or her option agreement. However, in no event may a stock appreciation right be exercised later than the expiration of its terms, except in certain circumstances where the expiration occurs during a period where exercise is not permitted under applicable law, as described more fully in the 2021 Plan.

Restricted Stock

Restricted stock may be granted under the 2021 Plan. Restricted stock awards are grants of shares that vest in accordance with terms and conditions established by the administrator. The administrator will determine the number of shares of restricted stock granted to any employee, director or consultant. The administrator may impose whatever conditions to vesting it determines to be appropriate (for example, the administrator may set restrictions based on the achievement of specific performance goals or continued service to us or members of the company group), and the administrator will have the discretion to accelerate the time at which any restrictions will lapse or be removed. Recipients of restricted stock awards generally will have voting but will not have dividend rights with respect to such shares upon grant without regard to the restriction, unless the administrator provides otherwise. Shares of restricted stock as to which the restrictions have not lapsed are subject to our right of repurchase or forfeiture.

Restricted Stock Units

Restricted stock units may be granted under the 2021 Plan. Restricted stock units are bookkeeping entries representing an amount equal to the fair market value of one Share. The administrator will determine the terms and conditions of restricted stock units including the vesting criteria (which may include accomplishing specified performance criteria or continued service to us) and the form and timing of payment. The administrator will have the discretion to accelerate the time at which any restrictions will lapse or be removed and to settle earned restricted stock units in cash, shares, or a combination of both.

Performance Awards

Performance awards may be granted under the 2021 Plan. Performance awards are awards that will result in a payment to a participant only if objectives established by the administrator are achieved or the awards otherwise vest. The administrator will establish organizational or individual performance objectives in its discretion, which, depending on the extent to which they are met, will determine the value of the payout for the performance awards to be paid out to participants. The administrator will have the discretion to reduce or waive any performance objectives or other vesting provisions for performance awards. Performance awards will have a threshold, target, and maximum payout value established by the administrator on or before the grant date. The administrator will have the discretion to pay earned performance awards in the form of cash, shares, or in some combination of both.

Non-Employee Directors

The 2021 Plan provides that any non-employee director, in any fiscal year, may not be paid, issued or granted cash compensation and equity awards under the 2021 Plan with an aggregate value of more than $750,000, increased to $1,000,000 in connection with the non-employee director's initial service, with the value of each equity award based on its grant date fair value. For purposes of this limitation, the grant date fair value is determined in accordance with GAAP. Any cash compensation or equity awards granted under the 2021 Plan to a non-employee director for his or her services as an employee, or for his or her services as a consultant (other than as a non-employee director), will not count for purposes of the limitation. The maximum limit does not reflect the intended size of any potential compensation or equity awards to our non-employee directors.

Non-Transferability of Awards

Unless the administrator provides otherwise, the 2021 Plan generally does not allow for the transfer or disposal of awards and only the recipient of an award may exercise an award during his or her lifetime. Any unauthorized transfer will be void.

Dissolution or Liquidation

If there is a proposed liquidation or dissolution of ESS, the administrator will notify participants at such time before the effective date of such event as the administrator determines and all awards, to the extent that they have not been previously exercised, will terminate immediately before the consummation of such event.

Merger or Change in Control

The 2021 Plan provides that if there is a merger or a "change in control" (as defined under the 2021 Plan) of ESS, each outstanding award will be treated as the administrator determines (subject to the following paragraph) without a participant's consent, including that an award be continued by the successor corporation or that vesting of awards may accelerate automatically upon consummation of the transaction. The administrator will not be required to treat all awards, portions of awards or participants similarly and may modify awards, subject to the provisions of the 2021 Plan.

With respect to awards held by a non-employee director, in the event of a change in control, the non-employee director will fully vest in and have the right to exercise his or her options and/or stock appreciation rights, all restrictions on his or her restricted stock and restricted stock units will lapse, and, with respect to awards with performance-based vesting, all performance goals or other vesting criteria will be deemed achieved at 100% of target levels and all other terms and conditions met, unless specifically provided otherwise under the applicable award agreement or other written agreement with the participant.

Forfeiture and Clawback

All awards granted under the 2021 Plan will be subject to recoupment under any clawback policy that we are required to adopt under applicable law or listing standards. In addition, the administrator may provide in an award agreement that the recipient's rights, payments, and benefits with respect to such award shall be subject to reduction, cancellation, forfeiture, or recoupment upon the occurrence of specified events. If ESS is required to prepare an accounting restatement due to the material noncompliance of ESS with any applicable securities laws as a result of a participant's misconduct or if a participant is subject to forfeiture under applicable law, the participant must reimburse ESS in the amount of any payment in settlement of an award earned or accrued during the 12-month period following the first public issuance or filing with the SEC (whichever first occurred) of the financial document embodying such financial reporting requirement.

Amendment or Termination

The 2021 Plan became effective upon the Closing and will continue in effect until terminated by the administrator, however no incentive stock options may be granted after the ten-year anniversary of the adoption of the 2021 Plan by the ESS Board, and the evergreen feature of the 2021 Plan will terminate following the increase on the first day of the 2030 fiscal year. In addition, the ESS Board will have the authority to amend, suspend, or terminate the 2021 Plan, but such action generally may not materially impair the rights of any participant without his or her written consent.

Summary of U.S. Federal Income Tax Consequences

The following summary is intended only as a general guide to the U.S. federal income tax consequences of participation in the 2021 Plan. The summary is based on existing U.S. laws and regulations as of October 2020, and there can be no assurance that those laws and regulations will not change in the future. The summary does not purport to be complete and does not discuss the tax consequences upon a participant's death, or the provisions of the income tax laws of any municipality, state or foreign country in which the participant may reside. As a result, tax consequences for any particular participant may vary based on individual circumstances.

Incentive Stock Options

A participant recognizes no taxable income for regular income tax purposes as a result of the grant or exercise of an option that qualifies as incentive stock option under Section 422 of the Code. If a participant exercises the option and then later sells or otherwise disposes of the shares acquired through the exercise the option after both the two-year anniversary of the date the option was granted and the one-year anniversary of the exercise, the participant will recognize a capital gain or loss equal to the difference between the sale price of the shares and the exercise price, and we will not be entitled to any deduction for federal income tax purposes.

However, if the participant disposes of such shares either on or before the two-year anniversary of the date of grant or on or before the one-year anniversary of the date of exercise (a "disqualifying disposition"), any gain up to the excess of the fair market value of the shares on the date of exercise over the exercise price generally will be taxed as ordinary income, unless the shares are disposed of in a transaction in which the participant would not recognize a gain (such as a gift). Any gain in excess of that amount will be a capital gain. If a loss is recognized, there will be no ordinary income, and such loss will be a capital loss. Any ordinary income recognized by the participant upon the disqualifying disposition of the shares generally should be deductible by us for federal income tax purposes, except to the extent such deduction is limited by applicable provisions of the Code.

For purposes of the alternative minimum tax, the difference between the option exercise price and the fair market value of the shares on the exercise date is treated as an adjustment item in computing the participant's alternative minimum taxable income in the year of exercise. In addition, special alternative minimum tax rules may apply to certain subsequent disqualifying dispositions of the shares or provide certain basis adjustments or tax credits for purposes.

Nonstatutory Stock Options

A participant generally recognizes no taxable income as the result of the grant of such an option. However, upon exercising the option, the participant normally recognizes ordinary income equal to the amount that the fair market value of the shares on such date exceeds the exercise price. If the participant is an employee, such ordinary income generally is subject to withholding of income and employment taxes. Upon the sale of the shares acquired by the exercise of a nonstatutory stock option, any gain or loss (based on the difference between the sale price and the fair market value on the exercise date) will be taxed as capital gain or loss. No tax deduction is available to us with respect to the grant of a nonstatutory stock option or the sale of the shares acquired through the exercise of the nonstatutory stock option.

Stock Appreciation Rights

In general, no taxable income is reportable when a stock appreciation right is granted to a participant. Upon exercise, the participant generally will recognize ordinary income in an amount equal to the fair market value of any shares received. Any additional gain or loss recognized upon any later disposition of the shares would be capital gain or loss.

Restricted Stock Awards

A participant acquiring shares of restricted stock generally will recognize ordinary income equal to the fair market value of the shares on the vesting date. If the participant is an employee, such ordinary income generally is subject to withholding of income and employment taxes. The participant may elect, pursuant to Section 83(b) of the Code to accelerate the ordinary income tax event to the date of acquisition by filing an election with the IRS no later than thirty days after the date the shares are acquired. Upon the sale of shares acquired pursuant to a restricted stock award, any gain or loss, based on the difference between the sale price and the fair market value on the date the ordinary income tax event occurs, will be taxed as capital gain or loss.

Restricted Stock Unit Awards

There are no immediate tax consequences of receiving an award of restricted stock units. A participant who is awarded restricted stock units generally will be required to recognize ordinary income in an amount equal to the fair market value of shares issued to such participant at the end of the applicable vesting period or, if later, the settlement date elected by the administrator or a participant. Any additional gain or loss recognized upon any later disposition of any shares received would be capital gain or loss.

Performance Awards

A participant generally will recognize no income upon the grant of a performance award. Upon the settlement of such awards, participants normally will recognize ordinary income in the year of receipt in an amount equal to the cash received and the fair market value of any unrestricted shares received. If the participant is an employee, such ordinary income generally is subject to withholding of income and employment taxes. Upon the sale of any shares received, any gain or loss, based on the difference between the sale price and the fair market value on the date the ordinary income tax event occurs, will be taxed as capital gain or loss.

Section 409A

Section 409A of the Code provides certain requirements for non-qualified deferred compensation arrangements with respect to an individual’s deferral and distribution elections and permissible distribution events. Awards granted under the 2021 Plan with a deferral feature will be subject to the requirements of Section 409A. If an award is subject to and fails to satisfy the requirements of Section 409A, the recipient of that award may recognize ordinary income on the amounts deferred under the award, to the extent vested, which may be prior to when the compensation is actually or constructively received. Also, if an award that is subject to Section 409A fails to comply with Section 409A’s provisions, Section 409A imposes an additional 20% federal income tax on compensation recognized as ordinary income, as well as interest on such deferred compensation.

Tax Effect

ESS generally will be entitled to a tax deduction in connection with an award under the 2021 Plan in an amount equal to the ordinary income realized by a participant and at the time the participant recognizes such income (for example, the exercise of a nonstatutory stock option) except to the extent such deduction is limited by applicable provisions of the Code. Special rules limit the deductibility of compensation paid to our chief executive officer and certain "covered employees" as determined under Section 162(m) and applicable guidance. Under Section 162(m), the annual compensation paid to any of these specified individuals will be deductible only to the extent that it does not exceed $1,000,000.

Number of Awards Granted to Employees, Consultants and Directors

The number of awards that an employee, director, or consultant may receive under the 2021 Plan is in the discretion of the administrator and therefore cannot be determined in advance. We have not previously sponsored an equity incentive plan, and, therefore, the aggregate number of shares of Common Stock, which would have been received by or allocated to our named executive officers; executive officers, as a group; directors who are not executive officers, as a group; and all other current employees who are not executive officers, as a group is not determinable.

ESS 2021 Employee Stock Purchase Plan

In 2021, the Company's 2021 Employee Stock Purchase Plan (the "ESPP") became effective and was approved by stockholders.

Purpose of the ESPP

The purpose of the ESPP is to provide eligible employees with an opportunity to purchase shares of the Common Stock through accumulated contributions, which generally will be made through payroll deductions. The ESPP permits the administrator to grant purchase rights that qualify for preferential tax treatment under Section 423 of the Code. In addition, the ESPP authorizes the grant of purchase rights that do not qualify under Code Section 423 pursuant to rules, procedures or sub-plans adopted by the administrator that are designed to achieve desired tax or other objectives.

Shares Available for Issuance

Subject to adjustment upon certain changes in our capitalization as described in the ESPP, the maximum number of shares of Common Stock that will be available for issuance under the ESPP is 3,060,000 shares. The shares may be authorized, but unissued, or reacquired Common Stock. The number of shares of Common Stock available for issuance under the ESPP will be increased on the first day of each fiscal year beginning with the 2021 fiscal year equal to the least of (i) 3,060,000 shares of Common Stock, (ii) one percent (1%) of the outstanding shares of all classes of Common Stock on the last day of the immediately preceding fiscal year, or (iii) an amount determined by the administrator.

We currently are unable to determine how long this share reserve may last because the number of shares that will be issued in any year or offering period depends on a variety of factors that cannot be predicted with certainty, including, for example, the number of employees who elect to participate in the ESPP, the level of contributions made by participants and the future price of shares of Common Stock.

Administration

The ESPP is administered by the ESS Board or a committee appointed by the ESS Board that is constituted to comply with applicable laws (including the compensation committee). Currently, the compensation committee is the administrator of the ESPP. Subject to the terms of the ESPP, the administrator will have full and exclusive discretionary authority to construe, interpret and apply the terms of the ESPP, to delegate ministerial duties to any of our employees, to designate separate offerings under the ESPP, to designate subsidiaries and affiliates as participating in the Section 423 Component and the Non-Section 423 Component, to determine eligibility, to adjudicate all disputed claims filed under the ESPP and to establish such procedures that it deems necessary or advisable for the administration of the ESPP. The administrator is authorized to adopt rules and procedures in order to: determine eligibility to participate, determine the definition of compensation for the purposes of contributions to the ESPP, handle contributions to the ESPP, coordinate the making of contributions to the ESPP, establish bank or trust accounts to hold contributions to the ESPP, effect the payment of interest, effect the conversion of local currency, satisfy obligations to pay payroll tax, determine beneficiary designation requirements, implement and determine withholding procedures and determine procedures for the handling of stock certificates that vary with applicable local requirements. The administrator will also be authorized to determine that, to the extent permitted by applicable law, the terms of a purchase right granted under the ESPP or an offering to citizens or residents of a non-U.S. jurisdiction will be less favorable than the terms of options granted under the ESPP or the same offering to employees resident solely in the United States. Every finding, decision and determination made by the administrator will, to the full extent permitted by law, be final and binding upon all parties.

Eligibility

Generally, all of our employees are eligible to participate if they are customarily employed by us, or any participating subsidiary or affiliate, for at least 20 hours per week and more than five months in any calendar year. The administrator, in its discretion, may, prior to an enrollment date, for all options to be granted on such enrollment date in an offering, determine that an employee who (i) has not completed at least two years of service (or a lesser period of time determined by the administrator) since his or her last hire date, (ii) customarily works not more than 20 hours per week (or a lesser period of time determined by the administrator), (iii) customarily works not more than five months per calendar year (or a lesser period of time determined by the administrator), (iv) is a highly compensated employee within the meaning of Section 414(q) of the Code, or (v) is a highly compensated employee within the meaning of Section 414(q) of the Code with compensation above a certain level or is an officer or subject to disclosure requirements under Section 16(a) of the Exchange Act, is or is not eligible to participate in such offering period.

However, an employee may not be granted rights to purchase shares of Common Stock under the ESPP if such employee:

- immediately after the grant would own capital stock and/or hold outstanding options to purchase such stock possessing 5% or more of the total combined voting power or value of all classes of capital stock of ours or of any parent or subsidiary of ours; or
- holds rights to purchase shares of Common Stock under all employee stock purchase plans of ours or any parent or subsidiary of ours that accrue at a rate that exceeds $25,000 worth of shares of Common Stock for each calendar year in which such rights are outstanding at any time.

Offering Periods

The ESPP includes a component that allows us to make offerings intended to qualify under Section 423 of the Code and a component that allows us to make offerings not intended to qualify under Section 423 of the Code to designated companies, as described in the ESPP. Offering periods will begin and end on such dates as may be determined by the administrator in its discretion, in each case on a uniform and nondiscriminatory basis, and may contain one or more purchase periods. The administrator may change the duration of offering periods (including commencement dates) with respect to future offerings so long as such change is announced prior to the scheduled beginning of the first offering period affected. No offering period may last more than 27 months.

Contributions

The ESPP permits participants to purchase shares of Common Stock through contributions (in the form of payroll deductions or otherwise to the extent permitted by the administrator) of up to 15% of their eligible compensation, or such other limit established by the administrator from time to time in its discretion and on a uniform and nondiscretionary basis for all options to be granted on an enrollment date in an offering, which includes a measure to be determined by the Administrator. Unless otherwise determined by the administrator, during any offering period, a participant may not increase the rate of his or her contributions and may only decrease the rate of his or her contributions (including to 0%) one time.

Exercise of Purchase Right

Amounts contributed and accumulated by the participant will be used to purchase shares of Common Stock at the end of each purchase period. A participant may purchase up to a maximum number shares of Common Stock to be determined by the Administrator during a purchase period. The purchase price of the shares will be determined by the administrator from time to time, in its discretion and on a uniform and nondiscriminatory basis for all options to be granted on an enrollment date, provided that in no event may the purchase price be less than 85% of the lower of the fair market value of Common Stock on the first trading day of the offering period or on the exercise date, which is generally the last trading day of a purchase period. Participants may end their participation at any time during an offering period and will be paid their accrued contributions that have not yet been used to purchase shares of Common Stock. Participation ends automatically upon termination of employment with us.

Termination of Participation

Participation in the ESPP generally will terminate when a participating employee's employment with us or a designated company ceases for any reason, the employee withdraws from the ESPP or we terminate or amend the ESPP such that the employee no longer is eligible to participate. An employee may withdraw his or her participation in the ESPP at any time in accordance with procedures, and prior to any applicable deadline, specified by the administrator. Upon withdrawal from the ESPP, in general the employee will receive all amounts credited to his or her account without interest (unless otherwise required under applicable law) and his or her payroll withholdings or contributions under the ESPP will cease.

Non-Transferability

Neither contributions credited to a participant's account nor rights to purchase shares of Common Stock and any other rights and interests under the ESPP may be assigned, transferred, pledged or otherwise disposed of (other than by will, the laws of descent and distribution or beneficiary designation in the event of death). Any attempt at such prohibited disposition will be without effect, except that we may treat such act as an election to withdraw participation.

Certain Transactions

In the event that any dividend or other distribution (whether in the form of cash, Common Stock, other securities, or other property), recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, reclassification, repurchase, or exchange of shares of Common Stock or our other securities, or other change in our corporate structure affecting the Common Stock occurs (other than any ordinary dividends or other ordinary distributions), the administrator, in order to prevent diminution or enlargement of the benefits or potential benefits intended to be made available under the ESPP in such manner it may deem equitable, will adjust the number and class of Common Stock that may be delivered under the ESPP, the purchase price per share, the number of shares of Common Stock covered by each purchase right under the ESPP that has not yet been exercised, and the numerical limits of the ESPP.

In the event of our proposed dissolution or liquidation, any ongoing offering periods will be shortened and will terminate immediately before consummation of the proposed dissolution or liquidation following the purchase of shares of Common Stock under the shortened offering periods, unless provided otherwise by the administrator. Prior to the new exercise date, the administrator will notify participants regarding the new exercise date and the exercise to occur on such date.

In the event of a merger or "change in control" (as defined in the ESPP), each outstanding option under the ESPP will be assumed or substituted for by the successor corporation or its parent or subsidiary. In the event that options are not assumed or substituted for, the offering period will be shortened by setting a new exercise date on which the offering period will end, which will occur prior to the closing of the merger or change in control. Prior to the new exercise date, the administrator will notify participants regarding the new exercise date and the exercise to occur on such date.

Amendment; Termination

The administrator will have the authority to amend, suspend or terminate the ESPP. The ESPP automatically will terminate in 2041, unless we terminate it sooner. If the administrator determines that the ongoing operation of the ESPP may result in unfavorable financial accounting consequences, the administrator may modify, amend or terminate the ESPP to reduce or eliminate such accounting consequence. If the ESPP is terminated, the administrator in its discretion may terminate all outstanding offering periods either immediately or after consummation of the purchase of shares of Common Stock under the ESPP (which may be adjusted to occur sooner than originally scheduled), or in accordance with their terms. If options are terminated prior to their expiration, then all amounts credited to participants that have not been used to purchase shares of Common Stock will be returned, without interest (unless otherwise required under applicable law), as soon as administratively practicable.

Summary of U.S. Federal Income Tax Consequences

The following summary is intended only as a general guide to the material U.S. federal income tax consequences of participation in the ESPP. The summary is based on existing U.S. laws and regulations, and there can be no assurance that those laws and regulations will not change in the future. The summary does not purport to be complete and does not discuss the tax consequences upon a participant's death, or the provisions of the income tax laws of any municipality, state or non-U.S. jurisdiction to which the participant may be subject. As a result, tax consequences for any particular participant may vary based on individual circumstances.

The ESPP is intended to qualify as an employee stock purchase plan within the meaning of Section 423 of the Code. Under an employee stock purchase plan that so qualifies, no taxable income will be recognized by a participant, and no deductions will be allowable to ESS, upon either the grant or the exercise of the purchase rights. Taxable income will not be recognized until there is a sale or other disposition of the shares of Common Stock acquired under the ESPP or in the event of the participant's death while still owning the purchased shares of Common Stock.

If the participant sells or otherwise disposes of the purchased shares of Common Stock within two years after the start date of the offering period in which the shares of Common Stock were acquired or within one year after the actual purchase date of those shares of Common Stock, then the participant generally will recognize ordinary income in the year of sale or disposition equal to the amount by which the fair market value of the shares of Common Stock on the purchase date exceeded the purchase price paid for those shares of Common Stock, and we will be entitled to an income tax deduction equal in amount to such excess, for the taxable year in which such disposition occurs. The amount of this ordinary income will be added to the participant's basis in the shares of Common Stock, and any resulting gain or loss recognized upon the sale or disposition will be a capital gain or loss. If the shares of Common Stock have been held for more than one year since the date of purchase, the gain or loss will be long-term.

If the participant sells or disposes of the purchased shares of Common Stock more than two years after the start date of the offering period in which the shares of Common Stock were acquired and more than one year after the actual purchase date of those shares of Common Stock, then the participant generally will recognize ordinary income in the year of sale or disposition equal to the lesser of (a) the amount by which the fair market value of the shares of Common Stock on the sale or disposition date exceeded the purchase price paid for those shares of Common Stock, or (b) 15% of the fair market value of the shares of Common Stock on the start date of that offering period. Any additional gain upon the disposition will be taxed as a long-term capital gain. Alternatively, if the fair market value of the shares of Common Stock on the date of the sale or disposition is less than the purchase price, there will be no ordinary income and any loss recognized will be a long-term capital loss. We will not be entitled to an income tax deduction with respect to such disposition.

In addition, a participant's annual "net investment income," as defined in Section 1411 of the Code, may be subject to a 3.8% U.S. federal surtax. Net investment income may include capital gain and/or loss arising from the disposition of shares of Common Stock purchased under the ESPP. Whether a participant's net investment income will be subject to this surtax will depend on the participant's level of annual income and other factors.

If the participant still owns the purchased shares of Common Stock at the time of death, the lesser of (i) the amount by which the fair market value of the shares of Common Stock on the date of death exceeds the purchase price or (ii) 15% of the fair market value of the shares of Common Stock on the start date of the offering period in which those shares of Common Stock were acquired will constitute ordinary income in the year of death.

Plan Benefits

Participation in the ESPP is voluntary and dependent on each eligible employee's election to participate, the amount of his or her eligible compensation, and his or her determination as to the portion of his or her eligible compensation to contribute to the ESPP. Further, the number of shares of Common Stock that may be purchased under the ESPP is determined, in part, by the price of our shares of Common Stock on the first day of each offering period and applicable exercise date of each purchase period. Accordingly, the actual number of shares of Common Stock that would be purchased by any individual under the ESPP in the future is not determinable. We have not previously sponsored an employee stock purchase plan, and, therefore, the number of shares of Common Stock which would have been received by or allocated to our named executive officers, all current executive officers as a group, and all other current employees who may participate in the ESPP as a group are not determinable. Non-employee directors are not eligible to participate in the ESPP.

Executive Incentive Compensation Plan

We sponsor our Executive Incentive Compensation Plan, or Incentive Compensation Plan. Our Incentive Compensation Plan allows our compensation committee to provide cash incentive awards to employees selected by our compensation committee, including our named executive officers, based upon performance goals established by our compensation committee. Pursuant to the Incentive Compensation Plan, our compensation committee, in its sole discretion, establishes a target award for each participant and a bonus pool, with actual awards payable from such bonus pool, with respect to the applicable performance period.

Under our Incentive Compensation Plan, our compensation committee determines the performance goals applicable to any award, which goals may include, without limitation, annual recurring revenue, attainment of research and development milestones, bookings, business divestitures and acquisitions, cash flow, cash flow from operations, cash position, contract awards or backlog, committed annual recurring revenue, current remaining performance obligation, customer renewals, customer retention rates from an acquired company, subsidiary, business unit or division, customer success (including by any customer success metric such as NPS), earnings (which may include earnings before interest and taxes, earnings before taxes, and net taxes), earnings per share, expenses, gross margin, growth in stockholder value relative to the moving average of the S&P 500 Index or another index, internal rate of return, market share, net income, net new annual contract value, net profit, net retention, net sales, new product development, new product invention or innovation, number of customers, operating cash flow, operating expenses, operating income, operating margin, overhead or other expense reduction, product release timelines, productivity, profit, remaining performance obligation, retained earnings, return on assets, return on capital, return on invested capital, return on equity, return on investment, return on sales, revenue, revenue growth, sales results, sales growth, stock price, time to market, total stockholder return, working capital, workplace diversity metrics, and individual objectives such as peer reviews or other subjective or objective criteria. The performance goals may differ from participant to participant and from award to award.

Our compensation committee administers our Incentive Compensation Plan. The administrator of our Incentive Compensation Plan may, in its sole discretion and at any time, increase, reduce or eliminate a participant's actual award, and/or increase, reduce or eliminate the amount allocated to the bonus pool for a particular performance period. The actual award may be below, at or above a participant's target award, in the discretion of the administrator. The administrator may determine the amount of any increase, reduction or elimination on the basis of such factors as it deems relevant, and it is not required to establish any allocation or weighting with respect to the factors it considers.

Actual awards will be paid in cash (or its equivalent) in a single lump sum only after they are earned, which usually requires continued employment through the date the actual award is paid. The compensation committee reserves the right to settle an actual award with a grant of an equity award under the Company's then-current equity compensation plan, which equity award may have such terms and conditions, as the compensation committee determines. Payment of awards occurs as soon as administratively practicable after they are earned, but no later than the dates set forth in our Incentive Compensation Plan.

Our board of directors and our compensation committee have the authority to amend, alter, suspend or terminate our Incentive Compensation Plan, provided such action does not impair the existing rights of any participant with respect to any earned awards.

Outstanding Equity Awards at 2021 Year End

The following table presents information regarding outstanding equity awards held by ESS' named executive officers as of December 31, 2021. Market value of shares that have not vested is based on the ESS' closing trading price of $11.44 per share on December 31, 2021.

	Option Awards(1)					Stock Awards(2)	
Name	Grant Date	Number of Securities Underlying Unexercised Options Exercisable (#)	Number of Securities Underlying Unexercised Options Unexercisable (#)	Option Exercise Price ($)	Option Expiration Date	Number of shares or units of stock that have not vested (#)	Market value of shares of units of stock that have not vested ($)
Eric Dresselhuys	4/28/2021(3)	—	308,931	5.38	4/27/2031		
	10/08/2021(5)					130,059	1,487,875
	12/17/2021(6)					457,763	5,236,809
	12/17/2021(6)					305,175	3,491,202
	12/17/2021(6)					601,351	6,879,455
	12/17/2021(6)					88,031	1,007,074
	12/17/2021(6)					228,881	2,618,399
	12/17/2021(6)					305,175	3,491,202
	12/17/2021(6)					305,175	3,491,202
Craig Evans	7/24/2020(7)	30,650	141,745	0.33	7/24/2030		
	2/15/2021(8)	3,677	84,589	0.54	2/14/2031		
	10/08/2021(2)					58,984	674,777
	12/17/2021(6)					2,934	33,564
	12/17/2021(6)					7,629	87,276
	12/17/2021(6)					7,629	87,276
Amir Moftakhar	1/11/2020(9)	130,265	165,793	0.33	1/10/2030		
	12/18/2020(10)	53,633	130,254	0.33	12/17/2030		
	2/15/2021(11)	4,903	112,785	0.54	2/14/2031		
	10/08/2021(4)					101,026	1,155,737

(1) All stock options were granted pursuant to the 2014 Plan.
(2) Restricted stock units granted on or prior to October 8, 2021 were granted pursuant to the 2014 Plan, and those after October 8, 2021 were granted pursuant to the 2021 Plan.
(3) 1/4th of the total shares will vest on March 25, 2022, and 1/48th will vest each month thereafter, subject to the holder's continuous service through each vesting date.
(4) 100% of the award vested upon satisfaction of stock price milestones in 2021 and were outstanding as of the end of the fiscal year and settled on January 4, 2022.
(5) 1/4th of the total shares will vest on May 20, 2022, and 1/48th will vest each month thereafter, subject to the holder's continuous service through each vesting date.
(6) Vesting is subject to performance milestones, subject to the holder's continuous service through each vesting date.
(7) 1/48th of the total shares vested or will vest each month beginning on February 22, 2021, subject to the holder's continuous service through each vesting date.
(8) 50% of the award was eligible to vest based on certain financial milestones. Eligible shares vest as to 1/48th of the eligible shares each month beginning on November 8, 2021, subject to the holder's continuous service through each vesting date.

(9) 1/4th of the total shares vested on February 18, 2020, and 1/48th vested or will vest each month thereafter, subject to the holder's continuous service through each vesting date.
(10) 1/48th of the total shares vested or will vest each month beginning on November 23, 2020, subject to the holder's continuous service through each vesting date.
(11) 1/48th of the total shares vested or will vest each month beginning on November 8, 2021, subject to the holder's continuous service through each vesting date.

Benefits and Perquisites

ESS provides benefits to its named executive officers on the same basis as provided to all of its employees, including health, dental and vision insurance; life insurance; accidental death and dismemberment insurance; critical illness insurance; short-and long-term disability insurance; a health savings account; a wellness incentive; and a tax-qualified Section 401(k) plan. ESS matches 100% of the first 3% of employee-deferred amounts, and 50% of employee-deferred amounts between 3% and 5%. Messrs. Dresselhuys and Moftakhar received a commuting benefit as described under "—Summary Compensation Table."

Executive Officer Employment Agreements

Eric Dresselhuys

ESS entered into an employment agreement with Eric Dresselhuys, our Chief Executive Officer, on April 1, 2021. Mr. Dresselhuys's base salary is $300,000, and he is eligible for an annual cash incentive bonus of up to 90% of his base salary.

Mr. Dresselhuys is an at-will employee. ESS or Mr. Dresselhuys may terminate his employment at any time for any reason. Mr. Dresselhuys's employment agreement provides for an initial term from March 25, 2021 through March 25, 2025, with additional one-year terms thereafter, unless either ESS or Mr. Dresselhuys provides notice of the decision to not renew the term at least 60 days before the end of a term. Non-renewal by ESS will constitute a termination without "cause" (as defined in Mr. Dresselhuys's employment agreement). During the period commencing on May 23, 2021 and continuing for the 18 months following the date that his employment is terminated for any reason, Mr. Dresselhuys is prohibited from soliciting certain current and former ESS service provides and customers.

If we terminate Mr. Dresselhuys's employment without cause or Mr. Dresselhuys terminates his employment for "good reason" (as defined in Mr. Dresselhuys's employment agreement) other than in connection with a "change in control" (as defined in Mr. Dresselhuys's employment agreement), then Mr. Dresselhuys will be entitled to continuing payments of base salary and ESS-paid COBRA coverage for 12 months following such termination, a pro-rated bonus payment for the fiscal year in which such termination occurs based on actual achievement, any earned but unpaid bonus from the year prior to such termination, and acceleration of his unvested and outstanding time-based equity awards to the extent that such awards would have vested had his employment continued for an additional six months following such termination (except that, if the termination occurs between six months and 12 months after Mr. Dresselhuys's start date, the number of months of additional vesting will be equal to the number of months of Mr. Dresselhuys's service). If we terminate Mr. Dresselhuys's employment without cause or Mr. Dresselhuys terminates his employment for good reason in connection with a change in control, then Mr. Dresselhuys will be entitled to continuing payments of base salary and ESS-paid COBRA coverage for eighteen months following such termination, a pro-rated bonus payment for the fiscal year in which such termination occurs based on actual achievement, any earned but unpaid bonus from the year prior to such termination, and 100% acceleration of his unvested and outstanding equity awards, with performance-based awards accelerating at target achievement. Receipt of any such termination benefits are subject to Mr. Dresselhuys signing and not revoking a separation agreement and release of claims in a form acceptable to ESS, which must become effective no later than the sixtieth day following the termination, and his compliance with the restrictive covenants described above.

Craig Evans

ESS entered into an employment agreement with Craig Evans, our President, Co-Founder and director (and former Chief Executive Officer), on May 23, 2021. Mr. Evans's base salary is $275,000, and he is eligible for an annual cash incentive bonus of up to 90% of his base salary.

Mr. Evans is an at-will employee. ESS or Mr. Evans may terminate his employment at any time for any reason. Mr. Evans's employment agreement provides for an initial term through May 23, 2024, with additional one-year terms thereafter, unless either ESS or Mr. Evans provides notice of the decision to not renew the term at least 60 days before the end of a term. Non-renewal by ESS will constitute a termination without "cause" (as defined in Mr. Evans's employment agreement). During the period commencing on May 23, 2021, and continuing for the eighteen months following the date that his employment is terminated for any reason, Mr. Evans is prohibited from soliciting certain current and former ESS service providers and customers.

If we terminate Mr. Evans's employment without cause or Mr. Evans terminates his employment for "good reason" (as defined in Mr. Evans's employment agreement) other than in connection with a "change in control" (as defined in Mr. Evans's employment agreement), then Mr. Evans will be entitled to continuing payments of base salary and ESS-paid COBRA coverage for 12 months following such termination, a pro-rated bonus payment for the fiscal year in which such termination occurs based on actual achievement, any earned but unpaid bonus from the year prior to such termination, and acceleration of his unvested and outstanding time-based equity awards to the extent that such awards would have vested had his employment continued for an additional six months following such termination. If we terminate Mr. Evans's employment without cause or Mr. Evans terminates his employment for good reason in connection with a change in control, then Mr. Evans will be entitled to continuing payments of base salary and ESS-paid COBRA coverage for eighteen months following such termination, a pro-rated bonus payment for the fiscal year in which such termination occurs based on actual achievement, any earned but unpaid bonus from the year prior to such termination, and 100% acceleration of his unvested and outstanding equity awards, with performance-based awards accelerating at target achievement. Receipt of any such termination benefits are subject to Mr. Evans signing and not revoking a separation agreement and release of claims in a form acceptable to ESS, which must become effective no later than the 60th day following the termination, and his compliance with the restrictive covenants described above.

Amir Moftakhar

ESS entered into an employment letter with Amir Moftakhar, our Chief Financial Officer, on July 31, 2019. Mr. Moftakhar's base salary is $210,000, and he is eligible for an annual cash incentive bonus of up to 30% of his base salary.

Mr. Moftakhar's employment agreement provides for no specific term and Mr. Moftakhar is an at-will employee. ESS or Mr. Moftakhar may terminate his employment at any time for any reason.

Director Compensation

The table below summarizes the compensation of each person serving as an ESS non-employee director for the year ended December 31, 2021. Alexi Wellman joined the ESS Board in October 2021. Messrs. Dresselhuys and Evans did not receive any additional compensation for their service as directors in 2021. The compensation of Messrs. Dresselhuys and Evans as a named executive officer is set forth above under *"Executive Compensation—Summary Compensation Table."*

Name	Fees Earned or Paid in Cash	Stock Awards ($)	All Other Compensation ($)	Total ($)
Michael R. Niggli	18,192	209,954	—	228,146
Raffi Garabedian	14,781	173,731	—	188,512
Rich Hossfeld	13,644	—	—	13,644
Shirley Speakman(1)	—	—	—	—
Kyle Teamey	13,075	—	30,971(2)	44,046
Daryl Wilson	13,644	323,905	—	337,549
Alexi Wellman	15,534	151,765	—	167,299

(1) Ms. Speakman resigned from the ESS Board effective February 17, 2022.
(2) Amount represents fees paid to BEV.

The following table presents information regarding outstanding equity awards held by ESS' non-employee directors as of December 31, 2021.

Name	Number of Securities Underlying Unexercised Options (#)	Number of shares or units of stock that have not vested (#)
Michael R. Niggli	177,785	30,053
Raffi Garabedian	147,110	24,868
Daryl Wilson	274,271	46,364
Alexi Wellman	—	13,072

Outside Director Compensation Policy

In 2021, our board of directors adopted an outside director compensation policy (the "Director Compensation Policy"). Under the Director Compensation Policy, each non-employee director will be eligible to receive compensation for his or her service consisting of the following cash and equity components. Our board of directors has the discretion to revise non-employee director compensation as it deems necessary or appropriate. The foregoing description of the Outside Director Compensation Policy is qualified in its entirety by the full text of the Outside Director Compensation Policy, which is attached hereto as Exhibit 10.12 and incorporated herein by reference.

Cash Compensation

All non-employee directors are entitled to receive the following cash compensation for their services:

Position	Annual Cash Retainer ($)
Lead Independent Director	25,000
Chair of Audit Committee	20,000
Member of Audit Committee	10,000
Chair of Compensation Committee	15,000
Member of Compensation Committee	7,500
Chair of Nominating and Governance Committee	10,000
Member of Nominating and Governance Committee	5,000

Equity Compensation

Under our Director Compensation Policy, each individual who first becomes a non-employee director automatically will be granted an award of restricted stock units covering a number of our shares having a value equal to $200,000, rounded down to the nearest whole share. Each award will vest in equal 1/3 installments on each anniversary following the grant date, subject to the non-employee director continuing to be a service provider through the applicable vesting date.

Additionally, on the date of each of our annual meetings, each non-employee director automatically will be granted an award of restricted stock units covering a number of our shares having a value of $150,000, rounded down to the nearest whole Share. Each award will vest on the earlier of (i) the one-year anniversary of the date the award is granted or (ii) the day prior to the date of the annual meeting next following the date the award is granted, in each case, subject to the Outside Director continuing to be a service provider through the applicable vesting date.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

STWO Related Party Transactions

Founder Shares

On July 27, 2020, the Sponsor paid $25,000, or approximately $0.003 per share, to cover certain expenses on our behalf in consideration of 7,187,500 STWO Class B Ordinary Shares, par value $0.0001. In September 2020, the Sponsor transferred 50,000 STWO Class B Ordinary Shares to each of our independent directors.

The Sponsor agreed to forfeit up to 937,500 founder shares to the extent that the over-allotment option was not exercised in full by the underwriters of our initial public offering, so that the founder shares would represent 20.0% of our issued and outstanding ordinary shares (excluding the private placement shares) after our initial public offering. The underwriters' over-allotment option expired and the 937,500 founder shares were no longer subject to forfeiture.

Sponsor Letter Agreement

In connection with the Business Combination, ESS, Legacy ESS and the STWO Initial Shareholders entered into the Sponsor Letter Agreement pursuant to which the STWO Initial Shareholders (as defined therein) have agreed, among other things, to (i) vote in favor of approval of the Merger Agreement and the transactions contemplated thereby (including the Domestication and the Merger), (ii) waive any adjustment to the conversion ratio set forth in the Existing Governing Documents (as defined therein) of STWO, (iii) be bound by certain other covenants and agreements related to the Business Combination, (iv) terminate certain lock-up provisions of that certain letter agreement, dated September 16, 2020, on the terms and conditions in the Sponsor Letter Agreement and (v) be bound by certain transfer restrictions during the lock-up period described therein with respect to his, her or its shares in STWO prior to the Closing Date, or the earlier termination of the Merger Agreement.

Registration Rights Agreement

In connection with the Business Combination, ESS, the Sponsor and other holders of Common Stock entered into a Registration Rights Agreement (the "Registration Rights Agreement"), that superseded the registration and shareholder rights agreement between STWO and its initial shareholders, pursuant to which, among other things, the Sponsor and such holders were granted certain customary registration rights, demand rights and piggyback rights with respect to their respective shares of Common Stock.

Legacy ESS Related Party Transactions

In addition to the compensation arrangements, including employment and termination of employment, discussed in the section titled "*Executive Compensation*," the following is a description of each transaction since January 1, 2019, and each currently proposed transaction, in which:

- Legacy ESS has been or is to be a participant;
- the amount involved exceeded or exceeds $120,000; and
- any of Legacy ESS' directors, executive officers, or beneficial holders of more than 5% of any class of Legacy ESS capital stock, or any immediate family member of, or person sharing the household with, any of these individuals or entities, had or will have a direct or indirect material interest.

Equity Financings

Legacy ESS Series C-1 Preferred Stock Financing

In multiple closings in August 2019 and October 2019, Legacy ESS sold an aggregate of 16,275,688 shares of Legacy ESS Series C-1 Preferred Stock at a purchase price of $1.84248 per share, for an aggregate purchase price of approximately $30.0 million (inclusive of shares issued upon conversion of the 2018 Convertible Notes). The following table summarizes purchases of Legacy ESS Series C-1 Preferred Stock by related parties:

Stockholder	Shares of ESS Series C-1 Preferred Stock	Total Purchase Price Commitment
BASF Venture Capital GmbH*	1,388,538	$ 2,506,685
Breakthrough Energy Ventures, LLC	5,427,467	$ 9,999,999
Cycle Capital Fund III, L.P.*	2,455,742	$ 4,479,725
Entities affiliated with Michael Niggli*	578,170	$ 1,053,328
Pangaea Ventures Fund III, LP*	334,167	$ 602,559
Presidio-IPM j.s.a*	1,790,446	$ 3,284,545
SB Energy Global Holdings One Ltd. (1)	814,120	$ 1,500,000

* Includes shares issued upon conversion of the 2018 Convertible Notes.

(1) Rich Hossfeld is a member of the Legacy ESS board of directors and an affiliate of SB Energy Global Holdings One Ltd.

Legacy ESS Series C-2 Preferred Stock Financing

In March 2021, Legacy ESS sold an aggregate of 3,900,988 shares of Legacy ESS Series C-2 Preferred Stock at a purchase price of $2.94797 per share and issued warrants to purchase 585,145 shares of Legacy ESS Series C-2 Preferred Stock, for an aggregate purchase price of approximately $11.5 million. The following table summarizes purchases of Legacy ESS Series C-2 Preferred Stock by related parties:

Stockholder	Shares of ESS Series C-2 Preferred Stock	Warrant Shares	Total Purchase Price Commitment
Breakthrough Energy Ventures, LLC	2,544,124	381,618	$ 7,500,001
Cycle Capital Fund III, L.P.	254,412	38,161	$ 749,999
Pangaea Ventures Fund III, LP	169,608	25,441	$ 499,999
Presidio-IPM j.s.a.	339,216	50,882	$ 999,999

In addition, Legacy ESS has agreed to issue and sell up to 5,427,464 additional shares of Legacy ESS Series C-2 Preferred Stock at a purchase price of $2.94797 per share and warrants to purchase 14,365,207 shares of Legacy ESS Series C-2 Preferred Stock to BEV and SBE for an aggregate purchase price of up to $16.0 million, subject to certain conditions.

Commercial Agreements

SBE Framework Agreement

In April 2021, Legacy ESS entered into a non-binding framework agreement, dated as of March 31, 2021, (the "Framework Agreement") with an affiliate of SBE, which established a framework for the ongoing relationship between ESS and SBE with respect to identifying opportunities to deploy energy storage products to be supplied by ESS. Rich Hossfeld, a member of ESS' board of directors, is affiliated with SBE. The Framework Agreement included terms providing for the deployment of 2 GWhs of energy storage starting in 2022 through 2026. At current forecasted prices and volumes, the Framework Agreement totals more than $300 million in revenue opportunities for ESS. As ESS and SBE finalize projects and deliveries into a rolling forecast, ESS will reserve production capacity to deliver these projects. To date, no orders have been placed under the Framework Agreement. SBE is under no obligation to place any firm orders with us and any future orders may be subject to future pricing or other commercial or technical negotiations, which we may not be able to satisfy, resulting in a diminished potential value of this relationship to us. For additional details, see "*Risk Factors—Risks Related to Our Technology, Products and Manufacturing—Our relationship with SBE, an affiliate of Softbank Group Corp., is subject to various risks which could adversely affect our business and future prospects. There are no assurances that we will be able to commercialize iron flow batteries from our joint development relationship with SBE. In addition, SBE has no obligation to order any energy storage products from us under the framework agreement, including at any price point*."

Sales Agreement

In December 2020, we also entered into a sales agreement for the purchase and installation of one Energy Warehouse with a related party. As of December 31, 2021, we had recorded accounts receivable of $66 thousand and deferred revenue of $171 thousand for sales of Energy Warehouse products to related parties based on the December 2020 sales agreement.

Consulting and Employment Agreements

During the year ended December 31, 2020, we hired consultants through one of the ESS Board members to review its technology. We paid $31 thousand to the consultants.

ESS has entered into employment agreements and offer letter agreements with its executive officers. See the section entitled "*Executive Compensation—Executive Officer Employment Agreements*."

Indemnification Agreements

ESS entered into separate indemnification agreements with its directors and executive officers, in addition to the indemnification provided for in the Certificate of Incorporation and our amended and restated bylaws (the "Bylaws"). These agreements, among other things, require ESS to indemnify ESS' directors and executive officers for certain expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by a director or executive officer in any action or proceeding arising out of their services as one of ESS' directors or executive officers or as a director or executive officer of any other company or enterprise to which the person provides services at ESS' request. For more information regarding these indemnification arrangements, see "*Management—Limitation of Liability and Indemnification of Officers and Directors*." ESS believes that these charter provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers.

The limitation of liability and indemnification provisions in the Certificate of Incorporation and the Bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against directors and officers, even though an action, if successful, might benefit ESS and its stockholders. A stockholder's investment may decline in value to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions.

Related Person Transactions Policy

Upon the Closing, the ESS Board adopted a written Related Person Transactions Policy that sets forth ESS' policies and procedures regarding the identification, review, consideration and oversight of "related person transactions." For purposes of ESS' policy only, a "related person transaction" is a transaction, arrangement or relationship (or any series of similar transactions, arrangements or relationships) in which ESS or any of its subsidiaries are participants involving an amount that exceeds $120,000, in which any "related person" has a material interest.

Transactions involving compensation for services provided to ESS as an employee, consultant or director will not be considered related person transactions under this policy. A related person is any executive officer, director, nominee to become a director or a holder of more than 5% of any class of ESS' voting securities (including Common Stock), including any of their immediate family members and affiliates, including entities owned or controlled by such persons.

Under the policy, the related person in question or, in the case of transactions with a holder of more than 5% of any class of ESS' voting securities, an officer with knowledge of a proposed transaction, must present information regarding the proposed related person transaction to ESS' audit committee (or, where review by ESS' audit committee would be inappropriate, to another independent body of the ESS Board) for review. To identify related person transactions in advance, ESS will rely on information supplied by ESS' executive officers, directors and certain significant stockholders. In considering related person transactions, ESS' audit committee will take into account the relevant available facts and circumstances, which may include, but are not limited to:

- the risks, costs, and benefits to ESS;

- the impact on a director’s independence in the event the related person is a director, immediate family member of a director or an entity with which a director is affiliated;
- the terms of the transaction;
- the availability of other sources for comparable services or products; and
- the terms available to or from, as the case may be, unrelated third parties.

ESS’ audit committee will approve only those transactions that it determines are fair to us and in ESS’ best interests. All of the transactions described above were entered into prior to the adoption of such policy.

PRINCIPAL AND SELLING STOCKHOLDERS

The following table sets forth certain information with respect to the beneficial ownership of our Common Stock as of February 28, 2022 for:

- each of our executive officers;
- each of our directors;
- all of our executive officers and directors as a group;
- each person known by us to be the beneficial owner of more than 5% of our outstanding shares; and
- the Selling Stockholders, consisting of the entities and individuals shown as having securities listed in the column "Shares Being Offered".

We have determined beneficial ownership in accordance with the rules of the SEC, and thus it represents sole or shared voting or investment power with respect to our securities. Unless otherwise indicated below, to our knowledge, the persons and entities named in the table have sole voting and sole investment power with respect to all shares that they beneficially owned, subject to community property laws where applicable. The information does not necessarily indicate beneficial ownership for any other purpose, including for purposes of Sections 13(d) and 13(g) of the Securities Act.

We have based our calculation of the percentage of beneficial ownership prior to this offering on 152,556,734 shares outstanding as of February 28, 2022. We have based on our calculation on the percentage of beneficial ownership after this offering on the resale of 130,044,756 shares originally offered by the Selling Stockholders (including 125,952,180 shares originally offered by the Selling Stockholders pursuant to the Registration Statement on Form S-1 (File No. 333-260693)).

The information set forth below is based on information provided by or on behalf of the Selling Stockholders prior to the date hereof. Information concerning the Selling Stockholders may change from time to time. We cannot advise you as to whether the Selling Stockholders will in fact sell any or all of the Common Stock being offered hereunder. In addition, the Selling Stockholders may sell, transfer or otherwise dispose of, at any time and from time to time, the Common Stock in transactions exempt from the registration requirements of the Securities Act after the date of this prospectus. In addition, since the date on which the Selling Stockholders provided this information to us, such Selling Stockholders may have sold, transferred or otherwise disposed of all or a portion of the offered shares. For purposes of this table, we have assumed that the Selling Stockholders will sell all of the shares of Common Stock covered by this prospectus upon the completion of the offering.

In computing the number of shares beneficially owned by a person and the percentage ownership of that person, we deemed outstanding Common Stock subject to options held by that person that are currently exercisable or exercisable within 60 days of February 28, 2022. We did not deem these shares outstanding, however, for the purpose of computing the percentage ownership of any other person.

Unless otherwise indicated, the address of each beneficial owner listed in the table below is c/o ESS Tech, Inc., 26440 SW Parkway Ave., Bldg. 83, Wilsonville, Oregon 97070.

Name of Beneficial Owner	Shares Beneficially Owned Prior to the Offering		Shares Being Offered	Shares Beneficially Owned After the Offering	
	Shares	%		Shares	%
Executive Officers and Directors:					
Eric Dresselhuys (1)	106,232	*	106,232	—	—
Craig Evans (2)	5,443,138	3.6	5,391860	51,278	*
Amir Moftakhar (3)	657,269	*	416,624	240,645	1.1
Julia Song (4)	2,403,358	1.6	2,278,104	125,254	*
Raffi Garabedian (5)	67,775	*	24,868	42,907	*
Claudia Gast	—	—	—	—	—
Rich Hossfeld	—	—	—	—	—
Michael R. Niggli (6)	1,223,004	*	1,078,554	144,450	*
Kyle Teamey	—	—	—	—	—
Alexi Wellman	—	—	—	—	—
Daryl Wilson (7)	200,641	*	46,364	154,277	*
All executive officers and directors as a group (11 persons) (8)	10,101,417	6.6	9,342,606	758,811	3.4
5% or Greater Stockholders:					
BASF Venture Capital GmbH (9)	9,214,562	6.0	9,214,862	—	—
Breakthrough Energy Ventures, LLC (10)	18,559,329	12.2	18,559,329	—	—
Cycle Capital Fund III, L.P. (11)	11,292,025	7.4	11,292,025	—	—
Entities affiliated with Pangaea Ventures III LLC (12)	13,000,782	8.5	13,000,782	—	—
SB Energy Global Holdings One Ltd. (13)	35,954,722	23.6	35,954,722	—	—
Entities affiliated with Fidelity (14)	11,440,288	7.5	11,440,288	—	—
Selling Stockholders:					
Spring Creek Capital LLC(15)	5,000,000	3.3	5,000,000	—	—
Entities affiliated with Presidio(16)	5,614,457	3.7	5,614,457	—	—
Evergy Ventures, Inc.(17)	3,117,818	2.0	3,117,818	—	—
All other Selling Stockholders (18)	5,977,759	3.9	5,723,899	253,860	1.1

* Represents less than one percent.
(1) Consists of 106,232 restricted stock units.
(2) Consists of (i) 5,332,876 shares, (ii) 53,255 restricted stock units and (iii) options to purchase 57,007 shares exercisable within 60 days of February 28, 2022.
(3) Consists of (i) 315,598 shares, (ii) 80,368 restricted stock units and (iii) options to purchase 261,303 shares exercisable within 60 days of February 28, 2022.
(4) Consists of (i) 2,221,478 shares, (ii) 37,222 restricted stock units and (iii) options to purchase 144,658 shares exercisable within 60 days of February 28, 2022.
(5) Consists of (i) 24,868 restricted stock units and (ii) options to purchase 42,907 shares exercisable within 60 days of February 28, 2022.
(6) Consists of (i) 480,182 shares held by Mr. Niggli, (ii) 227,407 shares held by the Michael R. Niggli Family Trust to which Mr. Niggli is the trustee, (iii) 85,228 shares held by the Chloe D Niggli 2021 Gift Trust to which Mr. Niggli is the trustee, (iv) 85,228 shares held by the Ian M Niggli 2021 Gift Trust to which Mr. Niggli is the trustee, (v) 85,228 shares held by the Lorelei A Niggli 2021 Gift Trust to which Mr. Niggli is the trustee, (vi) 85,228 shares held by the Michael R Jr Niggli 2021 Gift Trust to which Mr. Niggli is the trustee, (vii) 30,053 restricted stock units held by Mr. Niggli and (viii) options to purchase 144,450 shares exercisable within 60 days of February 28, 2022 held by Mr. Niggli.
(7) Consists of (i) 46,364 restricted stock units and (ii) options to purchase 154,277 shares exercisable within 60 days of February 28, 2022.
(8) Consists of (i) 8,918,453 shares, (ii) 378,362 restricted stock units and (iii) 804,602 shares exercisable within 60 days of February 28, 2022.
(9) Based on the Schedule 13G/A filed by BASF Ventures Capital GmbH with the SEC on February 11, 2022. The address for BASF Ventures Capital GmbH is BE 01, Benckiserplatz 1, Ludwigshagen/Rhine, Germany 67059.
(10) Breakthrough Energy Ventures, LLC is managed by Breakthrough Energy Investments, LLC, its manager, which may be deemed to have beneficial ownership over the shares and exercises voting and investment control through its investment committee. The address for each of Breakthrough Energy Ventures, LLC and Breakthrough Energy Investments, LLC is 250 Summer Street, 4th Floor, Boston, Massachusetts 02210.

(11) Cycle Capital Management II Inc. is the general manager of Cycle Capital III, L.P., which is the general partner of Cycle Capital Fund III. Andrée-Lise Methot and Claude Vachet, as managing partners of Cycle Capital III, L.P., may be deemed to share beneficial ownership over the shares held by Cycle Capital Fund III. The address for each of the Cycle Capital entities, Andrée-Lise Methot and Claude Vachet is 100 Sherbrooke West, Suite 1610, Montreal, Québec, Canada H3A 3G4.

(12) Based on the Schedule 13G filed by Pangaea Ventures Fund III, LP on January 28, 2022. Consists of (i) 12,546,771 shares held by Pangaea Ventures Fund III, LP, (ii) 166,230 shares held by Pangaea Partners LLC, (iii) 220,892 shares held by Monoc Capital Ltd. ("Monoc"), and (iv) 66,889 shares held by Vicap LLC ("Vicap"). Pangaea Venture Funds III, LP is managed by its general partner, Pangaea Ventures III LLC ("Pangaea GP"). Pangaea GP is managed and controlled by Vicap, PSee Ventures LLC and Monoc, which are owned and controlled by Chris Erickson, Purnesh Seegopaul and Andrew Haughian, respectively. Chris Erickson and Andrew Haughian share voting and dispositive control over the shares held by Pangaea Partners LLC. The address for each of these entities and individuals is c/o Pangaea Ventures III LLC, 5080 North 40th Street, Unit 105, Phoenix, Arizona 85018.

(13) The address for SB Energy Global Holdings One Ltd. is 69 Grosvenor Street, London, W1K 3JP, United Kingdom,. The address of SoftBank Group Corp. is 1-9-1, Higashi-Shimbashi Minato-ku, Tokyo 105-7303 Japan.

(14) Based on the Schedule 13G filed by FMR LLC and Abigail Johnson with the SEC on February 9, 2022. These shares are held by accounts managed by direct or indirect subsidiaries of FMR LLC. Abigail P. Johnson is a Director, the Chairman, the Chief Executive Officer and the President of FMR LLC. Members of the Johnson family, including Abigail P. Johnson, are the predominant owners, directly or through trusts, of Series B voting common shares of FMR LLC, representing 49% of the voting power of FMR LLC. The Johnson family group and all other Series B shareholders have entered into a shareholders' voting agreement under which all Series B voting common shares will be voted in accordance with the majority vote of Series B voting common shares. Accordingly, through their ownership of voting common shares and the execution of the shareholders' voting agreement, members of the Johnson family may be deemed, under the Investment Company Act, to form a controlling group with respect to FMR LLC. Neither FMR LLC nor Abigail P. Johnson has the sole power to vote or direct the voting of the shares owned directly by the various investment companies registered under the Investment Company Act ("Fidelity Funds") advised by Fidelity Management & Research Company ("FMR Co"), a wholly owned subsidiary of FMR LLC, which power resides with the Fidelity Funds' Boards of Trustees. Fidelity Management & Research Company carries out the voting of the shares under written guidelines established by the Fidelity Funds' Boards of Trustees. The address for each of these entities is c/o FMR LLC, 245 Summer Street, Boston, MA 02210.

(15) Consists of shares held directly by Spring Creek Capital LLC. The address for this entity is 4111 E 37th St N, Wichita, Kansas 67220.

(16) Consists of (i) 4,612,031 shares held by Presidio Partners Investment Management LLC, and (ii) 1,002,426 shares held by Presidio-IPM j.s.a. The address for each of these entities is 2181 Greenwich Street, San Francisco, CA 94123.

(17) Consists of shares held directly by Evergy Ventures, Inc. The address for Evergy Ventures, Inc. is 1200 Main St., Suite 2000 Kansas City, MO 64105.

(18) Each of the other Selling Stockholders beneficially owns less than 1.0% of our Common Stock.

DESCRIPTION OF ESS' SECURITIES

General

The following summary of the material terms of our securities is not intended to be a complete summary of the rights and preferences of such securities. This summary does not purport to be complete and is qualified in its entirety by the provisions of the Certificate of Incorporation and Bylaws, copies of which have been filed as exhibits to the registration statement of which this prospectus is a part.

Our authorized capital stock consists of 2,200,000,000 shares of capital stock, of which:

- 2,000,000,000 shares are designated as Common Stock, par value $0.0001 per share; and
- 200,000,000 shares are designated as preferred stock, par value $0.0001 per share.

The ESS Board is authorized, without stockholder approval, except as required by the listing standards of the NYSE, to issue additional shares of capital stock.

As of December 31, 2021, there were 151,839,058 shares of our Common Stock outstanding, held by stockholders of record, and no shares of our Preferred Stock outstanding.

Common Stock

The holders of our Common Stock are entitled to one vote per share on all matters submitted to a vote of the stockholders and do not have cumulative voting rights. Accordingly, subject to the rights of holders of any Preferred Stock outstanding at the time, where a quorum is present at a meeting of stockholders, directors are elected by plurality vote. Subject to preferences that may be applicable to any Preferred Stock outstanding at the time, the holders of outstanding shares of our Common Stock are entitled to receive ratably any dividends declared by the Board out of assets legally available. Upon the liquidation, dissolution or winding up, holders of our Common Stock are entitled to share ratably in all assets remaining after payment of liabilities and the liquidation preference of any then outstanding shares of ESS Preferred Stock. Holders of our Common Stock have no preemptive or conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to our Common Stock.

Preferred Stock

The Board is authorized, subject to limitations prescribed by the Delaware General Corporation Law ("DGCL"), to issue Preferred Stock in one or more series, to establish from time to time the number of shares to be included in each series, and to fix the designation, powers, preferences, and rights of the shares of each series and any of its qualifications, limitations, or restrictions, in each case without further vote or action by the stockholders. The Board is empowered to increase, but not above the total number of authorized shares of Preferred Stock, or decrease the number of shares of any series of ESS Preferred Stock, but not below the number of shares of that series then outstanding, without any further vote or action by the stockholders. The Board is able to authorize the issuance of Preferred Stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of our Common Stock. The issuance of Preferred Stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring, or preventing a change in control of ESS and might adversely affect the market price of our Common Stock and the voting and other rights of the holders of our Common Stock. There are currently no plans to issue any shares of Preferred Stock.

Warrants

As of the December 31, 2021, 11,461,247 Warrants were outstanding, consisting of 7,377,913 Public Warrants, 3,500,000 Private Placement Warrants and 583,334 Earnout Warrants, each exercisable for one share of Common Stock, at a price of $11.50 per share.

Public Warrants

Each whole warrant entitles the registered holder to purchase one share of Common Stock at a price of $11.50 per share, subject to adjustment as discussed below. Pursuant to the Warrant Agreement, a warrant holder may exercise its warrants only for a whole number of shares of Common Stock. This means only a whole warrant may be exercised at a given time by a warrant holder. No fractional warrants will be issued upon separation of the units and only whole warrants trade. The warrants expire five years after the completion of the Business Combination, at 5:00 p.m., New York City time, or earlier upon redemption or liquidation.

Redemption of Warrants when the price per share of our Common Stock equals or exceeds $18.00. Once the Public Warrants become exercisable, we may redeem the outstanding warrants (excluding the Private Placement Warrants):

- in whole and not in part;
- at a price of $0.01 per Public Warrant;
- upon a minimum of 30 days' prior written notice of redemption to each warrant holder; and
- if, and only if, the closing price of our Common Stock equals or exceeds $18.00 per share (as adjusted for adjustments to the number of shares issuable upon exercise or the exercise price of a warrant as described under the heading "—Anti-dilution Adjustments") for any 20 trading days within a 30-trading day period ending three trading days before we send the notice of redemption to the warrant holders.

We will not redeem the warrants as described above unless a registration statement under the Securities Act covering the issuance of our Common Stock issuable upon exercise of the warrants is then effective and a current prospectus relating to those shares of our Common Stock is available throughout the 30-day redemption period. If and when the warrants become redeemable, 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.

We have established the last of the redemption criteria discussed above to prevent a redemption call unless there is at the time of the call a significant premium to the warrant exercise price. If the foregoing conditions are satisfied and we issue a notice of redemption of the warrants, each warrant holder will be entitled to exercise his, her or its warrant prior to the scheduled redemption date. However, the price of our Common Stock may fall below the $18.00 redemption trigger price (as adjusted for adjustments to the number of shares issuable upon exercise or the exercise price of a warrant as described under the heading "*—Anti-dilution Adjustments*") as well as the $11.50 (for whole shares) warrant exercise price after the redemption notice is issued.

Redemption of warrants when the price per share of our Common Stock equals or exceeds $10.00. Once the warrants become exercisable, we may redeem the outstanding warrants:

- in whole and not in part;
- at $0.10 per warrant upon a minimum of 30 days' prior written notice of redemption provided that holders will be able to exercise their warrants on a cashless basis prior to redemption and receive that number of shares determined by reference to the table below, based on the redemption date and the "fair market value" of our Common Stock (as defined below) except as otherwise described below;
- if, and only if, the closing price of our Common Stock equals or exceeds $10.00 per public share (as adjusted for adjustments to the number of shares issuable upon exercise or the exercise price of a warrant as described under the heading "—Anti-Dilution Adjustments") for any 20 trading days within the 30-trading day period ending three trading days before we send the notice of redemption to the warrant holders; and
- if the closing price of our Common Stock for any 20 trading days within a 30-trading day period ending on the third trading day prior to the date on which we send the notice of redemption to the warrant holders is less than $18.00 per share (as adjusted for adjustments to the number of shares issuable upon exercise or the exercise price of a warrant as described under the heading "—Anti-dilution Adjustments"), the Private

Placement Warrants must also be concurrently called for redemption on the same terms as the outstanding Public Warrants, as described above.

In accordance with the Warrant Agreement, in the event that we elect to redeem the outstanding warrants as set forth under the headings "*—Redemption of Warrants when the price per share of our Common Stock equals or exceeds $18.00*" and "*—Redemption of Warrants when the price per share of our Common Stock equals or exceeds $10.00*," we will fix a date for the redemption (the "Redemption Date"). Notice of redemption will be mailed by first class mail, postage prepaid, by us to all shareholders, including beneficial owners, not less than 30 days prior to the Redemption Date (the "30-day Redemption Period") to the registered holders of the warrants to be redeemed at their last addresses as they appear on the registration books. Any notice mailed in the manner provide above will be conclusively presumed to have been duly given whether or not the registered holder of the warrants received such notice. We are not contractually obligated to notify investors when its warrants become eligible for redemption, and does not intend to so notify investors upon eligibility of the warrants for redemption.

Beginning on the date the notice of redemption is given until the warrants are redeemed or exercised, holders may elect to exercise their warrants on a cashless basis. The numbers in the table below represent the number of shares of our Common Stock that a warrant holder will receive upon such cashless exercise in connection with a redemption by us pursuant to this redemption feature, based on the "fair market value" of our Common Stock on the corresponding redemption date (assuming holders elect to exercise their warrants and such warrants are not redeemed for $0.10 per warrant), determined for these purposes based on volume weighted average price of our Common Stock during the 10 trading days immediately following the date on which the notice of redemption is sent to the holders of warrants, and the number of months that the corresponding redemption date precedes the expiration date of the warrants, each as set forth in the table below. We will provide warrant holders with the final fair market value no later than one business day after the 10-trading day period described above ends.

The share prices set forth in the column headings of the table below will be adjusted as of any date on which the number of shares issuable upon exercise of a warrant or the exercise price of a warrant is adjusted as set forth under the heading "*—Anti-dilution Adjustments*" below. If the number of shares issuable upon exercise of a warrant is adjusted, the adjusted share prices in the column headings will equal the share prices immediately prior to such adjustment, multiplied by a fraction, the numerator of which is the number of shares deliverable upon exercise of a warrant immediately prior to such adjustment and the denominator of which is the number of shares deliverable upon exercise of a warrant as so adjusted. The number of shares in the table below shall be adjusted in the same manner and at the same time as the number of shares issuable upon exercise of a warrant. If the exercise price of a warrant is adjusted, (a) in the case of an adjustment pursuant to the fifth paragraph under the heading "*—Anti-dilution Adjustments*" below, the adjusted share prices in the column headings will equal the unadjusted share price multiplied by a fraction, the numerator of which is the higher of the Market Value and the Newly Issued Price as set forth under the heading "*—Anti-dilution Adjustments*" and the denominator of which is $10.00 and (b) in the case of an adjustment pursuant to the second paragraph under the heading "*—Anti-dilution Adjustments*" below, the adjusted share prices in the column headings will equal the unadjusted share price less the decrease in the exercise price of a warrant pursuant to such exercise price adjustment.

Redemption Date	Fair Market Value of Common Stock								
(period to expiration of warrants)	$10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00
60 months	0.261	0.281	0.297	0.311	0.324	0.337	0.348	0.358	0.361
57 months	0.257	0.277	0.294	0.310	0.324	0.337	0.348	0.358	0.361
54 months	0.252	0.272	0.291	0.307	0.322	0.335	0.347	0.357	0.361
51 months	0.246	0.268	0.287	0.304	0.320	0.333	0.346	0.357	0.361
48 months	0.241	0.263	0.283	0.301	0.317	0.332	0.344	0.356	0.361
45 months	0.235	0.258	0.279	0.298	0.315	0.330	0.343	0.356	0.361
42 months	0.228	0.252	0.274	0.294	0.312	0.328	0.342	0.355	0.361
39 months	0.221	0.246	0.269	0.290	0.309	0.325	0.340	0.354	0.361
36 months	0.213	0.239	0.263	0.285	0.305	0.323	0.339	0.353	0.361
33 months	0.205	0.232	0.257	0.280	0.301	0.320	0.337	0.352	0.361
30 months	0.196	0.224	0.250	0.274	0.297	0.316	0.335	0.351	0.361
27 months	0.185	0.214	0.242	0.268	0.291	0.313	0.332	0.350	0.361
24 months	0.173	0.204	0.233	0.260	0.285	0.308	0.329	0.348	0.361
21 months	0.161	0.193	0.223	0.252	0.279	0.304	0.326	0.347	0.361
18 months	0.146	0.179	0.211	0.242	0.271	0.298	0.322	0.345	0.361
15 months	0.130	0.164	0.197	0.230	0.262	0.291	0.317	0.342	0.361
12 months	0.111	0.146	0.181	0.216	0.250	0.282	0.312	0.339	0.361
9 months	0.090	0.125	0.162	0.199	0.237	0.272	0.305	0.336	0.361
6 months	0.065	0.099	0.137	0.178	0.219	0.259	0.296	0.331	0.361
3 months	0.034	0.065	0.104	0.150	0.197	0.243	0.286	0.326	0.361
0 months	—	—	0.042	0.115	0.179	0.233	0.281	0.323	0.361

The exact fair market value and redemption date may not be set forth in the table above, in which case, if the fair market value is between two values in the table or the redemption date is between two redemption dates in the table, the number of shares of Common Stock to be issued for each warrant exercised will be determined by a straight-line interpolation between the number of shares set forth for the higher and lower fair market values and the earlier and later redemption dates, as applicable, based on a 365 or 366-day year, as applicable. For example, if the volume weighted average price of our Common Stock during the 10 trading days immediately following the date on which the notice of redemption is sent to the holders of the warrants is $11.00 per share, and at such time there are 57 months until the expiration of the warrants, holders may choose to, in connection with this redemption feature, exercise their warrants for 0.277 shares of Common Stock for each whole warrant. For an example where the exact fair market value and redemption date are not as set forth in the table above, if the volume weighted average price of our Common Stock during the 10 trading days immediately following the date on which the notice of redemption is sent to the holders of the warrants is $13.50 per share, and at such time there are 38 months until the expiration of the warrants, holders may choose to, in connection with this redemption feature, exercise their warrants for 0.298 shares of Common Stock for each whole warrant. In no event will the warrants be exercisable on a cashless basis in connection with this redemption feature for more than 0.361 shares of Common Stock per warrant (subject to adjustment). Finally, as reflected in the table above, if the warrants are out of the money and about to expire, they cannot be exercised on a cashless basis in connection with a redemption by us pursuant to this redemption feature, since they will not be exercisable for any shares of Common Stock.

This redemption feature differs from the typical warrant redemption features used in some other blank check offerings, which only provide for a redemption of warrants for cash (other than the Private Placement Warrants) when the trading price of our Common Stock exceeds $18.00 per share for a specified period of time. This redemption feature is structured to allow for all of the outstanding warrants to be redeemed when our Common Stock is trading at or above $10.00 per public share, which may be at a time when the trading price of our Common Stock is below the exercise price of the warrants. We have established this redemption feature to provide it with the flexibility to redeem the warrants without the warrants having to reach the $18.00 per share threshold set forth above under "—*Redemption of warrants when the price per share of our Common Stock equals or exceeds $18.00*." Holders choosing to exercise their warrants in connection with a redemption pursuant to this feature will, in effect, receive a number of shares for their warrants based on an option pricing model with a fixed volatility input as of the date of this prospectus. This redemption right provides us with an additional mechanism by which to redeem all of the outstanding warrants, and therefore have certainty as to its capital structure as the warrants would no longer be outstanding and would have been exercised or redeemed. We will be required to pay the applicable redemption price to warrant holders if we choose to exercise this redemption right and it will allow us to quickly proceed with a redemption of the warrants if we determine it is in its best interest to do so. As such, we would redeem the warrants in this manner when we believe it is in its best interest to update its capital structure to remove the warrants and pay the redemption price to the warrant holders.

As stated above, we can redeem the warrants when our Common Stock is trading at a price starting at $10.00, which is below the exercise price of $11.50, because it will provide certainty with respect to our capital structure and cash position while providing warrant holders with the opportunity to exercise their warrants on a cashless basis for the applicable number of shares. If we choose to redeem the warrants when our Common Stock is trading at a price below the exercise price of the warrants, this could result in the warrant holders receiving fewer shares of Common Stock than they would have received if they had chosen to wait to exercise their warrants for our Common Stock if and when such shares were trading at a price higher than the exercise price of $11.50.

No fractional shares of Common Stock will be issued upon exercise. If, upon exercise, a holder would be entitled to receive a fractional interest in a share, we will round down to the nearest whole number of the number of shares of Common Stock to be issued to the holder.

Redemption procedures. A holder of a warrant may notify us in writing in the event it elects to be subject to a requirement that such holder will not have the right to exercise such warrant, to the extent that after giving effect to such exercise, such person (together with such person's affiliates), to the warrant agent's actual knowledge, would beneficially own in excess of 9.8% (or such other amount as a holder may specify) of our Common Stock issued and outstanding immediately after giving effect to such exercise.

Anti-dilution Adjustments. If the number of outstanding shares of Common Stock is increased by a capitalization or share dividend payable in shares of Common Stock, or by a split-up of ordinary shares or other similar event, then, on the effective date of such capitalization or share dividend, split-up or similar event, the number of shares of Common Stock issuable on exercise of each warrant will be increased in proportion to such increase in the outstanding ordinary shares. A rights offering made to all or substantially all holders of ordinary shares entitling holders to purchase shares of Common Stock at a price less than the "historical fair market value" (as defined below) will be deemed a share dividend of a number of shares of Common Stock equal to the product of (i) the number of shares of Common Stock actually sold in such rights offering (or issuable under any other equity securities sold in such rights offering that are convertible into or exercisable for shares of Common Stock) and (ii) one minus the quotient of (x) the price per share of Common Stock paid in such rights offering and (y) the historical fair market value. For these purposes, (i) if the rights offering is for securities convertible into or exercisable for shares of Common Stock, in determining the price payable for shares of Common Stock there will be taken into account any consideration received for such rights, as well as any additional amount payable upon exercise or conversion and (ii) "historical fair market value" means the volume weighted average price of our Common Stock as reported during the 10 trading day period ending on the trading day prior to the first date on which the shares of Common Stock trade on the applicable exchange or in the applicable market, regular way, without the right to receive such rights.

In addition, if we, at any time while the warrants are outstanding and unexpired, pays a dividend or make a distribution in cash, securities or other assets to all or substantially all of the holders of shares of Common Stock on account of such shares (or other securities into which the warrants are convertible), other than (a) as described above, or (b) any cash dividends or cash distributions which, when combined on a per share basis with all other cash dividends and cash distributions paid on the shares of Common Stock during the 365-day period ending on the date of declaration of such dividend or distribution does not exceed $0.50 (as adjusted to appropriately reflect any other adjustments and excluding cash dividends or cash distributions that resulted in an adjustment to the exercise price or to the number of the shares of Common Stock issuable on exercise of each warrant) but only with respect to the amount of the aggregate cash dividends or cash distributions equal to or less than $0.50 per share.

If the number of outstanding shares of Common Stock is decreased by a consolidation, combination, reverse share split or reclassification of shares of Common Stock or other similar event, then, on the effective date of such consolidation, combination, reverse share split, reclassification or similar event, the number of shares of Common Stock issuable on exercise of each warrant will be decreased in proportion to such decrease in outstanding shares of Common Stock.

Whenever the number of shares of Common Stock purchasable upon the exercise of the warrants is adjusted, as described above, the warrant exercise price will be adjusted by multiplying the warrant exercise price immediately prior to such adjustment by a fraction (x) the numerator of which will be the number of shares of Common Stock purchasable upon the exercise of the warrants immediately prior to such adjustment and (y) the denominator of which will be the number of shares of Common Stock so purchasable immediately thereafter.

In case of any reclassification or reorganization of the outstanding shares of Common Stock (other than those described above or that solely affects the par value of such shares of Common Stock), or in the case of any merger or consolidation of us with or into another corporation (other than a consolidation or merger in which we are the continuing corporation and that does not result in any reclassification or reorganization of outstanding shares of Common Stock), or in the case of any sale or conveyance to another corporation or entity of our assets or other property as an entirety or substantially as an entirety in connection with which we are dissolved, the holders of the warrants will thereafter have the right to purchase and receive, upon the basis and upon the terms and conditions specified in the warrants and in lieu of the shares of Common Stock immediately theretofore purchasable and receivable upon the exercise of the rights represented thereby, the kind and amount of shares of Common Stock or other securities or property (including cash) receivable upon such reclassification, reorganization, merger or consolidation, or upon a dissolution following any such sale or transfer, that the holder of the warrants would have received if such holder had exercised their warrants immediately prior to such event. However, if such holders were entitled to exercise a right of election as to the kind or amount of securities, cash or other assets receivable upon such consolidation or merger, then the kind and amount of securities, cash or other assets for which each warrant will become exercisable will be deemed to be the weighted average of the kind and amount received per share by such holders in such consolidation or merger that affirmatively make such election, and if a tender, exchange or redemption offer has been made to and accepted by such holders under circumstances in which, upon completion of such tender or exchange offer, the maker thereof, together with members of any group (within the meaning of Rule 13d-5(b)(1) under the Exchange Act) of which such maker is a part, and together with any affiliate or associate of such maker (within the meaning of Rule 12b-2 under the Exchange Act) and any members of any such group of which any such affiliate or associate is a part, own beneficially (within the meaning of Rule 13d-3 under the Exchange Act) more than 50% of the issued and outstanding shares of Common Stock, the holder of a warrant will be entitled to receive the highest amount of cash, securities or other property to which such holder would actually have been entitled as a shareholder if such warrant holder had exercised the warrant prior to the expiration of such tender or exchange offer, accepted such offer and all of the shares of Common Stock held by such holder had been purchased pursuant to such tender or exchange offer, subject to adjustment (from and after the consummation of such tender or exchange offer) as nearly equivalent as possible to the adjustments provided for in the warrant agreement. If less than 70% of the consideration receivable by the holders of shares of Common Stock in such a transaction is payable in the form of shares in the successor entity that is listed for trading on a national securities exchange or is quoted in an established over-the-counter market, or is to be so listed for trading or quoted immediately following such event, and if the registered holder of the warrant properly exercises the warrant within thirty days following public disclosure of such transaction, the warrant exercise price will be reduced as specified in the warrant agreement based on the Black-Scholes value (as defined in the warrant agreement) of the warrant. The purpose of such exercise price reduction is to provide additional value to holders of the warrants when an extraordinary transaction occurs during the exercise period of the warrants pursuant to which the holders of the warrants otherwise do not receive the full potential value of the warrants. The purpose of such exercise price reduction is to provide additional value to holders of the warrants when an extraordinary transaction occurs during the exercise period of the warrants pursuant to which the holders of the warrants otherwise do not receive the full potential value of the warrants.

The warrant holders do not have the rights or privileges of holders of ordinary shares and any voting rights until they exercise their warrants and receive shares of Common Stock. After the issuance of shares of Common Stock upon exercise of the warrants, each holder will be entitled to one vote for each share held of record on all matters to be voted on by shareholders.

No fractional warrants will be issued upon separation of the units and only whole warrants will trade. If, upon exercise of the warrants, a holder would be entitled to receive a fractional interest in a share, we will, upon exercise, round down to the nearest whole number the number of shares of Common Stock to be issued to the warrant holder.

We have agreed that, subject to applicable law, any action, proceeding or claim against it arising out of or relating in any way to the Warrant Agreement will be brought and enforced in the courts of the State of New York or the United States District Court for the Southern District of New York, and we irrevocably submits to such jurisdiction, which jurisdiction will be the exclusive forum for any such action, proceeding or claim. This provision applies to claims under the Securities Act but does not apply to claims under the Exchange Act or any claim for which the federal district courts of the United States of America are the sole and exclusive forum.

Private Placement Warrants

Except as described below, the Private Placement Warrants have terms and provisions that are identical to those of the Public Warrants. 3,500,000 of the Private Placement Warrants vested at Closing pursuant to the terms of the Sponsor Letter Agreement. The remaining 583,334 of the Private Placement Warrants vested on November 9, 2021, upon the occurrence of the Earnout Milestone Events pursuant to the Sponsor Letter Agreement. The Private Placement Warrants will not be redeemable by us (except as described under "*—Public Warrants—Redemption of warrants when the price per share of our Common Stock equals or exceeds $10.00*") so long as they are held by the Sponsor or its permitted transferees (except as otherwise set forth herein). The Sponsor, or its permitted transferees, has the option to exercise the Private Placement Warrants on a cashless basis. If the Private Placement Warrants are held by holders other than the Sponsor or its permitted transferees, the Private Placement Warrants will be redeemable by us in all redemption scenarios and exercisable by the holders on the same basis as the Public Warrants. Any amendment to the terms of the Private Placement Warrants or any provision of the Warrant Agreement with respect to the Private Placement Warrants will require a vote of holders of at least 50% of the number of the then outstanding Private Placement Warrants.

Except as described above under "*—Public Warrants—Redemption of warrants when the price per share of our Common Stock equals or exceeds $10.00*," if holders of the Private Placement Warrants elect to exercise them on a cashless basis, they would pay the exercise price by surrendering his, her or its warrants for that number of shares of Common Stock equal to the quotient obtained by dividing (x) the product of the number of shares of Common Stock underlying the warrants, multiplied by the excess of the "Sponsor fair market value" (as defined below) over the exercise price of the warrants by (y) the Sponsor fair market value. For these purposes, the "Sponsor fair market value" shall mean the average reported closing price of the shares of Common Stock for the 10 trading days ending on the third trading day prior to the date on which the notice of warrant exercise is sent to the warrant agent.

Registration Rights

Under the Registration Rights Agreement, the holders of 73,022,199 shares of Common Stock or their permitted transferees have the right to require us to register the offer and sale of their shares, or to include their shares in any registration statement we file, in each case as described below.

Resale Registration Statement

On November 2, 2021, we filed a registration statement on Form S-1 (File No. 333-260693) for an offering of our Common Stock to be made on a delayed or continuous (the "Resale Registration Statement"). The holders of at least $30.0 million of shares having registration rights then outstanding can request that we effect an underwritten public offering pursuant to such Resale Registration Statement. We are only obligated to effect no more than four such registrations within any 12-month period. These registration rights are subject to specified conditions and limitations, including the right of the underwriters to limit the number of shares included in any such registration under certain circumstances.

The Resale Registration Statement was declared effective by the SEC on November 10, 2021. Subsequently, we issued a Current Report on Form 8-K on November 22, 2021 notifying investors that they should not rely on certain previously issued financial statements. On December 9, 2021, we filed the Post-Effective Amendment No. 1 to the Resale Registration Statement with the SEC to include restated financial statements and to update certain other information.

Piggyback Registration Rights

If we propose to register the offer and sale of our Common Stock under the Securities Act, all holders of these shares then outstanding can request that ESS include their shares in such registration, subject to certain marketing and other limitations, including the right of the underwriters to limit the number of shares included in any such registration statement under certain circumstances. As a result, whenever we propose to file a registration statement under the Securities Act, other than with respect to a registration (i) relating to any employee stock option or other benefit plan, (ii) on Form S-4 (or similar form that relates to a transaction subject to Rule 145 under the Securities Act or any successor rule thereto), (iii) relating to an offering of debt that is convertible into equity securities of ESS, or (iv) for a dividend reinvestment plan.

Termination

The registration rights terminate upon the date as of which all of the registrable securities have been sold pursuant to a registration statement or are permitted to be sold under Rule 144 or any similar provision under the Securities Act.

Registration Rights for PIPE Shares

In connection with the Business Combination, STWO entered into the Subscription Agreements, pursuant to which STWO agreed to issue and sell to the PIPE Investors, and the PIPE Investors agreed to buy from STWO, 25,000,000 shares of Common Stock at a purchase price of $10.00 per share for an aggregate commitment of $250,000,000. The PIPE Financing was consummated concurrently with the closing of the Merger. The Resale Registration Statement also registered the PIPE Shares for resale.

Limitation of Liability and Indemnification

See "*Management—Limitation of Liability and Indemnification of Officers and Directors*."

Description of Certain Terms in the Charter Documents and Delaware Law

The Certificate of Incorporation and Bylaws contain provisions that could have the effect of delaying, deferring or discouraging another party from acquiring control of ESS. These provisions and certain provisions of Delaware law, which are summarized below, could discourage takeovers, coercive or otherwise. These provisions are also designed, in part, to encourage persons seeking to acquire control of ESS to negotiate first with the ESS Board. STWO believes that the benefits of increased protection of the potential ability to negotiate with an unfriendly or unsolicited acquirer outweigh the disadvantages of discouraging a proposal to acquire the Company.

Issuance of Undesignated Preferred Stock. As discussed above under "*—ESS Preferred Stock*," the ESS Board has the ability to designate and issue ESS Preferred Stock with voting or other rights or preferences that could deter hostile takeovers or delay changes in control or management.

Limits on Ability of Stockholders to Act by Written Consent or Call a Special Meeting. The Certificate of Incorporation provides that the stockholders may not act by written consent. This limit on the ability of stockholders to act by written consent may lengthen the amount of time required to take stockholder actions. As a result, the holders of a majority of ESS capital stock are not be able to amend the Bylaws or remove directors without holding a meeting of stockholders called in accordance with the Bylaws.

In addition, the Bylaws provide that special meetings of the stockholders may be called only by the chairperson of the ESS Board, the chief executive officer, the president, or a majority of the ESS Board (measured based on the total authorized directorships, including any vacancies or unfilled seats). A stockholder may not call a special meeting, which may delay the ability of the stockholders to force consideration of a proposal or for holders controlling a majority of ESS capital stock to take any action, including the removal of directors.

Requirements for Advance Notification of Stockholder Nominations and Proposals. The Bylaws establish advance notice procedures with respect to stockholder proposals and the nomination of candidates for election as directors, other than nominations made by or at the direction of the ESS Board or a committee of the ESS Board. These advance notice procedures may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed and may also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect its own slate of directors or otherwise attempt to obtain control of ESS.

Board Classification. The Certificate of Incorporation provides that the ESS Board is divided into three classes, one class of which is elected each year by the stockholders. The directors in each class will serve for a three-year term. The classified ESS Board may tend to discourage a third party from making a tender offer or otherwise attempting to obtain control of STWO because it generally makes it more difficult for stockholders to replace a majority of the directors.

Election and Removal of Directors. The Certificate of Incorporation contains provisions that establish specific procedures for appointing and removing members of the ESS Board. Under the Certificate of Incorporation and Bylaws, vacancies and newly created directorships on the ESS Board may be filled only by a majority of the directors then serving on the ESS Board. Under the Certificate of Incorporation, directors may be removed only for cause by the affirmative vote of the holders of at least a majority of the voting power of the issued and outstanding capital stock of the company entitled to vote in the election of directors.

No Cumulative Voting. The DGCL provides that stockholders are not entitled to the right to cumulate votes in the election of directors unless a corporation's certificate of incorporation provides otherwise. The Certificate of Incorporation and Bylaws do not expressly provide for cumulative voting. Without cumulative voting, a minority stockholder may not be able to gain as many seats on the board of directors as the stockholder would be able to gain if cumulative voting were permitted. The absence of cumulative voting makes it more difficult for a minority stockholder to gain a seat on the board of directors to, among other things, influence the board of directors' decision regarding a takeover.

Amendment of Charter Provision. Any amendment of the above provisions in the Certificate of Incorporation or Bylaws would require approval by holders of at least $66^{2}/_{3}$% of the then outstanding capital stock entitled to vote, voting together as a single class.

Delaware Anti-Takeover Statute. ESS is subject to the provisions of Section 203 of the DGCL regulating corporate takeovers. In general, Section 203 prohibits a publicly held Delaware corporation from engaging, under certain circumstances, in a business combination with an interested stockholder for a period of three years following the date the person became an interested stockholder unless:

- prior to the date of the transaction, the board of directors approved either the Business Combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, but not the outstanding voting stock owned by the interested stockholder, (1) shares owned by persons who are directors and also officers and (2) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- at or subsequent to the date of the transaction, the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

Generally, a business combination includes a merger, asset or stock sale or other transaction resulting in a financial benefit to the interested stockholder. An interested stockholder is generally defined under Section 203 to be a person who, together with affiliates and associates, owns or, within three years prior to the determination of interested stockholder status, did own 15% or more of a corporation's outstanding voting stock. ESS expects the existence of this provision to have an anti-takeover effect with respect to transactions the ESS Board does not approve in advance. We also anticipate that Section 203 may discourage attempts that might result in a premium over the market price for the shares of Common Stock held by stockholders.

The provisions of Delaware law and the provisions of the Certificate of Incorporation and Bylaws could have the effect of discouraging others from attempting hostile takeovers and as a consequence, they might also inhibit temporary fluctuations in the market price of our Common Stock that often result from actual or rumored hostile takeover attempts. These provisions might also have the effect of preventing changes in management. It is also possible that these provisions could make it more difficult to accomplish transactions that stockholders might otherwise deem to be in their best interests.

Choice of Forum. The Bylaws provides that the Court of Chancery of the State of Delaware will be the exclusive forum for: (i) any derivative action or proceeding brought on ESS' behalf; (ii) actions asserting a breach of fiduciary duty; (iii) any action arising under the DGCL, the Certificate of Incorporation or Bylaws; and (iv) any action asserting a claim against ESS that is governed by the internal-affairs doctrine. The Bylaws further provide that the federal district courts of the United States will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act.

Transfer Agent and Warrant Agent

The transfer agent and warrant agent for the Common Stock and Warrants is Computershare Inc. The transfer agent's address is 150 Royall Street, Canton, MA 02021 and its telephone number is (206) 406-5789.

RESTRICTIONS ON RESALE OF SECURITIES

Future sales of substantial amounts of our Common Stock in the public market, or the perception that such sales may occur, could adversely affect the prevailing market price of our Common Stock. No prediction can be made as to the effect, if any, that future sales of shares, or the availability of shares for future sales, will have on the market price of our Common Stock prevailing from time to time.

Rule 144

A person who has beneficially owned restricted shares of Common Stock for at least six months would be entitled to sell their securities provided that (i) such person is not deemed to have been one of our affiliates at the time of, or at any time during the three months preceding, a sale and (ii) we are subject to the Exchange Act periodic reporting requirements for at least three months before the sale. Persons who have beneficially owned restricted shares of Common Stock for at least six months but who are our affiliates at the time of, or any time during the three months preceding, a sale, would be subject to additional restrictions, by which such person would be entitled to sell within any three-month period a number of securities that does not exceed the greater of:

- 1% of the then outstanding equity shares of the same class; and
- the average weekly trading volume of Common Stock or Public Warrants, as applicable, during the four calendar weeks preceding the date on which notice of the sale is filed with the SEC.

Sales by affiliates of ESS under Rule 144 are also subject to certain requirements relating to manner of sale, notice and the availability of current public information about ESS.

Restrictions on the Use of Rule 144 by Shell Companies or Former Shell Companies

Rule 144 is not available for the resale of securities initially issued by shell companies (other than business combination related shell companies) or issuers that have been at any time previously a shell company. However, Rule 144 also includes an important exception to this prohibition if the following conditions are met:

- the issuer of the securities that was formerly a shell company has ceased to be a shell company;
- the issuer of the securities is subject to the reporting requirements of Section 13 or 15(d) of the Exchange Act;
- the issuer of the securities has filed all Exchange Act reports and material required to be filed, as applicable, during the preceding 12 months (or such shorter period that the issuer was required to file such reports and materials), other than Form 8-K reports; and
- at least one year has elapsed from the time that the issuer filed current Form 10 type information with the SEC reflecting its status as an entity that is not a shell company.

While we were formed as a shell company, since the completion of the Merger we are no longer a shell company, and so, once the conditions set forth in the exceptions listed above are satisfied, Rule 144 will become available for the resale of the above noted restricted securities.

Lock-Up Restrictions

Pursuant to our amended and restated bylaws, the Lock-Up Shares will be locked up until March 7, 2022.

MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS FOR NON-U.S. HOLDERS OF OUR COMMON STOCK

The following is a summary of material U.S. federal income tax considerations of the ownership and disposition of our Common Stock acquired in this offering by a "non-U.S. holder" (as defined below) but does not purport to be a complete analysis of all the potential tax considerations relating thereto. This summary is based on the provisions of the Code, Treasury Regulations promulgated thereunder and administrative rulings and judicial decisions, all as of the date hereof. These authorities may be changed, possibly retroactively, so as to result in U.S. federal income tax considerations different from those set forth below. We have not sought, and do not intend to seek, any ruling from the Internal Revenue Service, or the IRS, with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS or a court will agree with such statements and conclusions.

This summary also does not address the tax considerations arising under the laws of any U.S. state or local or non-U.S. jurisdiction or under U.S. federal gift and estate tax rules, or the effect, if any, of the Medicare contribution tax on net investment income. In addition, this discussion does not address tax considerations applicable to an investor's particular circumstances or to investors that may be subject to special tax rules, including, without limitation:

- banks, insurance companies, regulated investment companies, real estate investment trusts or other financial institutions;
- persons subject to the alternative minimum tax;
- tax-exempt organizations;
- pension plans and tax-qualified retirement plans;
- controlled foreign corporations, passive foreign investment companies and corporations that accumulate earnings to avoid U.S. federal income tax;
- entities or arrangements classified as partnerships for U.S. federal income tax purposes or other pass through entities (or investors in such entities or arrangements);
- brokers or dealers in securities or currencies;
- traders in securities that elect to use a mark-to-market method of tax accounting for their securities holdings;
- persons who own, or are deemed to own, more than five percent of our capital stock (except to the extent specifically set forth below);
- U.S. expatriates and certain former citizens or long-term residents of the United States;
- persons who hold our Common Stock as a position in a hedging transaction, "straddle," "conversion transaction," or other risk reduction transaction;
- persons who hold or receive our Common Stock pursuant to the exercise of any option or otherwise as compensation;
- persons who do not hold our Common Stock as a capital asset within the meaning of Section 1221 of the Code (generally, property held for investment);
- persons deemed to sell our Common Stock under the constructive sale provisions of the Code; or
- persons subject to special tax accounting rules as a result of any item of gross income with respect to our Common Stock being taken into account in an "applicable financial statement" as defined in Section 451(b) of the Code.

In addition, if a partnership (or other entity or arrangement classified as a partnership for U.S. federal income tax purposes) holds our Common Stock, the tax treatment of a partner in the partnership generally will depend on the status of the partner and upon the activities of the partnership. A partner in a partnership that will hold our Common Stock should consult his, her or its own tax advisor regarding the tax considerations of the purchase, ownership and disposition of our Common Stock through a partnership.

You are urged to consult your tax advisor with respect to the application of the U.S. federal income tax laws to your particular situation, as well as any tax considerations of the purchase, ownership and disposition of our Common Stock arising under the U.S. federal gift or estate tax rules or under the laws of any U.S. state or local, non-U.S. or other taxing jurisdiction or under any applicable tax treaty.

Non-U.S. Holder Defined

For purposes of this discussion, you are a "non-U.S. holder" if you are a beneficial owner of our Common Stock that, for U.S. federal income tax purposes, is neither a partnership nor:

- an individual who is a citizen or resident of the United States;
- a corporation or other entity taxable as a corporation created or organized in the United States , any state thereof or the District of Columbia;
- an estate whose income is subject to U.S. federal income tax regardless of its source; or
- a trust (x) whose administration is subject to the primary supervision of a U.S. court and that has one or more U.S. persons who have the authority to control all substantial decisions of the trust or (y) that has made a valid election under applicable Treasury Regulations to be treated as a U.S. person.

Dividends

As described in the section titled "*Dividend Policy*," we have never declared or paid cash dividends on our Common Stock, and we do not anticipate paying any dividends on our Common Stock following the completion of this offering. However, if we do make distributions on our Common Stock, those payments will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. To the extent those distributions exceed both our current and our accumulated earnings and profits, the excess will constitute a return of capital and will first reduce your basis in our Common Stock, but not below zero, and then will be treated as gain from the sale of stock as described below under "*—Gain on Disposition of Common Stock*."

Subject to the discussions below regarding effectively connected income, backup withholding and Foreign Account Tax Compliance Act ("FATCA") withholding, any dividend paid to you generally will be subject to U.S. federal withholding tax either at a rate of 30% of the gross amount of the dividend or such lower rate as may be specified by an applicable income tax treaty between the United States and your country of residence. In order to receive a reduced treaty rate, you must provide us or the applicable paying agent with an IRS Form W-8BEN or W-8BEN-E or other appropriate version of IRS Form W-8 certifying qualification for the reduced rate. Under applicable Treasury Regulations, we may withhold up to 30% of the gross amount of the entire distribution even if the amount constituting a dividend, as described above, is less than the gross amount. You may obtain a refund of any excess amounts withheld by filing an appropriate claim for refund with the IRS. If you hold our Common Stock through a financial institution or other agent acting on your behalf, you will be required to provide appropriate documentation to the agent, which then will be required to provide certification to us or our paying agent, either directly or through other intermediaries. You should consult your tax advisor regarding your entitlement to benefits under an applicable tax treaty.

Dividends received by you that are treated as effectively connected with your conduct of a U.S. trade or business (and, if required by an applicable income tax treaty, that are attributable to a permanent establishment or fixed base maintained by you in the United States) are generally exempt from the 30% U.S. federal withholding tax, subject to the discussions below regarding backup withholding and FATCA withholding. In order to obtain this exemption, you must provide us with a properly executed IRS Form W-8ECI or other applicable IRS Form W-8 properly certifying such exemption. Such effectively connected dividends, although not subject to U.S. federal withholding tax, generally are taxed at the U.S. federal income tax rates applicable to U.S. persons, subject to an applicable income tax treaty providing otherwise. In addition, if you are a corporate non-U.S. holder, dividends you receive that are effectively connected with your conduct of a U.S. trade or business may also be subject to a branch profits tax at a rate of 30% or such lower rate as may be specified by an applicable income tax treaty between the United States and your country of residence. You should consult your tax advisor regarding the tax consequences of the ownership and disposition of our Common Stock, including the application of any applicable tax treaties that may provide for different rules.

Gain on Disposition of Common Stock

Subject to the discussions below regarding backup withholding and FATCA withholding, you generally will not be required to pay U.S. federal income tax on any gain realized upon the sale or other disposition of our Common Stock unless:

- the gain is effectively connected with your conduct of a U.S. trade or business (and, if an applicable income tax treaty so provides, the gain is attributable to a permanent establishment or fixed base maintained by you in the United States);
- you are an individual who is present in the United States for a period or periods aggregating 183 days or more during the calendar year in which the sale or disposition occurs (but not treated as a resident of the United States under specific rules) and certain other conditions are met; or
- our Common Stock constitutes a United States real property interest by reason of our status as a “United States real property holding corporation” (“USRPHC”) for U.S. federal income tax purposes at any time within the shorter of the five-year period preceding your disposition of, or your holding period for, our Common Stock.

We believe that we are not currently and will not become a USRPHC for U.S. federal income tax purposes, and the remainder of this discussion so assumes. However, because the determination of whether we are a USRPHC depends on the fair market value of our U.S. real property interests relative to the fair market value of our U.S. and worldwide real property interests plus our other assets used or held for use in a trade or business, there can be no assurance that we will not become a USRPHC in the future. Even if we become a USRPHC, however, as long as our Common Stock is regularly traded on an established securities market, your Common Stock will be treated as U.S. real property interests only if you actually (directly or indirectly) or constructively hold more than five percent of our regularly traded Common Stock at any time during the shorter of the five-year period preceding your disposition of, or your holding period for, our Common Stock.

If you are a non-U.S. holder described in the first bullet above, you generally will be required to pay tax on the gain derived from the sale (net of certain deductions and credits) at U.S. federal income tax rates applicable to U.S. persons, and a corporate non-U.S. holder described in the first bullet above also may be subject to the branch profits tax at a 30% rate, or such lower rate as may be specified by an applicable income tax treaty. If you are an individual non-U.S. holder described in the second bullet above, you will be subject to tax at 30% (or such lower rate specified by an applicable income tax treaty) on the gain derived from the sale, which gain may be offset by U.S. source capital losses for the year, provided you have timely filed U.S. federal income tax returns with respect to such losses. You should consult your tax advisor regarding any applicable income tax or other treaties that may provide for different rules.

Backup Withholding and Information Reporting

Generally, we must report annually to the IRS the amount of dividends paid to you, your name and address and the amount of tax withheld, if any. A similar report will be sent to you. Pursuant to applicable income tax treaties or other agreements, the IRS may make these reports available to tax authorities in your country of residence.

Payments of dividends on or of proceeds from the disposition of our Common Stock made to you may be subject to backup withholding at the applicable statutory rate unless you establish an exemption, for example, by properly certifying your non-U.S. status on a properly completed IRS Form W-8BEN or W-8BEN-E or another appropriate version of IRS Form W-8. Notwithstanding the foregoing, backup withholding and information reporting may apply if either we or our paying agent has actual knowledge, or reason to know, that you are a U.S. person.

Backup withholding is not an additional tax; rather, the U.S. federal income tax liability of persons subject to backup withholding will be reduced by the amount of tax withheld. If withholding results in an overpayment of taxes, a refund or credit may generally be obtained from the IRS, provided that the required information is furnished to the IRS in a timely manner.

Additional Withholding Requirements under the Foreign Account Tax Compliance Act

FATCA, including Sections 1471 through 1474 of the Code and the Treasury Regulations and other official IRS guidance issued thereunder, generally imposes a U.S. federal withholding tax of 30% on dividends on, and the gross proceeds from a sale or other disposition of, our Common Stock, paid to a “foreign financial institution” or a “non-financial foreign entity” (each as specially defined under these rules), whether acting as a beneficial owner or an intermediary, unless such foreign entity complies with certain information reporting requirements regarding its U.S. account holders and its U.S. owners and certain withholding obligations regarding certain payments to its account holders and certain other persons. An intergovernmental agreement between the United States and the foreign entity’s country of residence may modify these requirements.

The U.S. Treasury Department has issued proposed Treasury Regulations, which may be relied upon pending finalization, that would eliminate FATCA withholding on gross proceeds from the sale or other disposition of our Common Stock (but not on payments of dividends). You should consult with your own tax advisors regarding the application of FATCA withholding to your investment in, and ownership and disposition of, our Common Stock.

The preceding discussion of U.S. federal income tax considerations is for general information only. It is not tax advice to investors in their particular circumstances. You should consult your own tax advisor regarding the particular U.S. federal, state and local and non-U.S. tax considerations of purchasing, owning and disposing of our Common Stock, including the consequences of any proposed change in applicable laws.

PLAN OF DISTRIBUTION

We are registering up to 4,092,576 shares of our Common Stock, and have previously registered up to 125,952,180 shares of our Common Stock on Registration Statement on Form S-1 (File No. 333-260693), for resale by the Selling Stockholders. As used herein, references to "Selling Stockholders" includes donees, pledgees, transferees, distributees or other successors-in-interest selling shares of Common Stock or interests in the securities received after the date of this prospectus from a Selling Stockholder as a gift, pledge, partnership distribution or other transfer.

We will not receive any of the proceeds of the sale of the securities offered by this prospectus. The aggregate proceeds to the Selling Stockholders from the sale of the securities will be the purchase price of the securities less any discounts and commissions. We will not pay any brokers' or underwriters' discounts and commissions in connection with the registration and sale of the securities covered by this prospectus. The Selling Stockholders reserve the right to accept and, together with their respective agents, to reject, any proposed purchases of securities to be made directly or through agents.

The securities offered by this prospectus may be sold from time to time to purchasers:

- directly by the Selling Stockholders;
- through underwriters, broker-dealers or agents, who may receive compensation in the form of discounts, commissions or agent's commissions from the Selling Stockholders or the purchasers of the securities; or
- through a combination of any of these methods of sale.

Any underwriters, broker-dealers or agents who participate in the sale or distribution of the securities may be deemed to be "underwriters" within the meaning of the Securities Act. As a result, any discounts, commissions or concessions received by any such broker-dealer or agents who are deemed to be underwriters will be deemed to be underwriting discounts and commissions under the Securities Act. Underwriters are subject to the prospectus delivery requirements of the Securities Act and may be subject to certain statutory liabilities under the Securities Act and the Exchange Act. We will make copies of this prospectus available to the Selling Stockholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. To our knowledge, there are currently no plans, arrangements or understandings between the Selling Stockholders and any underwriter, broker-dealer or agent regarding the sale of the securities by the Selling Stockholders.

The securities may be sold in one or more transactions at:

- fixed prices;
- prevailing market prices at the time of sale;
- prices related to such prevailing market prices;
- varying prices determined at the time of sale; or
- negotiated prices.

These sales may be effected in one or more transactions:

- through one or more underwritten offerings on a firm commitment or best efforts basis;
- settlement of short sales entered into after the date of this prospectus;
- agreements with broker-dealers to sell a specified number of the securities at a stipulated price per share;
- in "at the market" offerings, as defined in Rule 415 under the Securities Act, at negotiated prices, at prices prevailing at the time of sale or at prices related to such prevailing market prices, including sales made

directly on a national securities exchange or sales made through a market maker other than on an exchange or other similar offerings through sales agents;

- in privately negotiated transactions;
- in options or other hedging transactions, whether through an options exchange or otherwise;
- in distributions to members, limited partners or stockholders of Selling Stockholders;
- any other method permitted by applicable law;
- on any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale, including the NYSE;
- in the over-the-counter market;
- in transactions otherwise than on such exchanges or services or in the over-the-counter market;
- any other method permitted by applicable law; or
- through any combination of the foregoing.

These transactions may include block transactions or crosses. Crosses are transactions in which the same broker acts as an agent on both sides of the trade.

In connection with distributions of the securities or otherwise, the Selling Stockholders may enter into hedging transactions with broker-dealers or other financial institutions. In connection with such transactions, broker-dealers or other financial institutions may engage in short sales of the securities in the course of hedging transactions, broker-dealers or other financial institutions may engage in short sales of the securities in the course of hedging the positions they assume with Selling Stockholders. The Selling Stockholders may also sell the securities short and redeliver the securities to close out such short positions. The Selling Stockholders may also enter into option or other transactions with broker-dealers or other financial institutions which require the delivery to such broker-dealer or other financial institution of the securities offered by this prospectus, which securities such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction). The Selling Stockholders may also pledge the securities to a broker-dealer or other financial institution, and, upon a default, such broker-dealer or other financial institution, may effect sales of the pledged securities pursuant to this prospectus (as supplemented or amended to reflect such transaction).

A Selling Stockholder may enter into derivative transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement indicates, in connection with those derivatives, the third parties may sell the securities covered by this prospectus and the applicable prospectus supplement, including in short sale transactions. If so, the third party may use securities pledged by any Selling Stockholder or borrowed from any Selling Stockholder or others to settle those sales or to close out any related open borrowings of stock, and may use securities received from any Selling Stockholder in settlement of those derivatives to close out any related open borrowings of stock. The third party in such sale transactions will be an underwriter and will be identified in the applicable prospectus supplement (or a post-effective amendment). In addition, any Selling Stockholder may otherwise loan or pledge the securities to a financial institution or other third party that in turn may sell the securities short using this prospectus. Such financial institution or other third party may transfer its economic short position to investors in our securities or in connection with a concurrent offering of other securities.

At the time a particular offering of the securities is made, a prospectus supplement, if required, will be distributed, which will set forth the name of the Selling Stockholders, the aggregate amount of securities being offered and the terms of the offering, including, to the extent required, (1) the name or names of any underwriters, broker-dealers or agents, (2) any discounts, commissions and other terms constituting compensation from the Selling Stockholders and (3) any discounts, commissions or concessions allowed or reallowed to be paid to broker-dealers, provided that, except as otherwise set forth in a prospectus supplement, any underwritten offering pursuant to this prospectus may be underwritten by one, several or all of the following financial institutions: Goldman Sachs & Co. LLC, J.P. Morgan Securities LLC, Nomura Securities International, Inc., and WR Securities, LLC. We may suspend the sale of securities by the Selling Stockholders pursuant to this prospectus for certain periods of time for certain reasons, including if the prospectus is required to be supplemented or amended to include additional material information, and we may file a post-effective amendment to the registration statement of which this prospectus is a part to include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

The Selling Stockholders also may transfer the securities in other circumstances, in which case the transferees, pledgees or other successors-in-interest will be the selling beneficial owners for purposes of this prospectus. Upon being notified by a Selling Stockholder that a donee, pledgee, transferee, other successor-in-interest intends to sell our securities, we will, to the extent required, promptly file a supplement to this prospectus to name specifically such person as a Selling Stockholder.

The Selling Stockholders will act independently of us in making decisions with respect to the timing, manner, and size of each resale or other transfer. There can be no assurance that the Selling Stockholders will sell any or all of the securities under this prospectus. Further, we cannot assure you that the Selling Stockholders will not transfer, distribute, devise or gift the securities by other means not described in this prospectus. In addition, any securities covered by this prospectus that qualify for sale under Rule 144 of the Securities Act may be sold under Rule 144 rather than under this prospectus. The securities may be sold in some states only through registered or licensed brokers or dealers. In addition, in some states the securities may not be sold unless they have been registered or qualified for sale or an exemption from registration or qualification is available and complied with.

The Selling Stockholders may, from time to time, pledge or grant a security interest in some shares of the securities owned by them and, if a Selling Stockholder defaults in the performance of its secured obligations, the pledgees or secured parties may offer and sell such shares of the securities, from time to time, under this prospectus, or under an amendment or supplement to this prospectus amending the list of the Selling Stockholders to include the pledgee, transferee or other successors in interest as the Selling Stockholders under this prospectus. The Selling Stockholders also may transfer shares of the securities in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

A Selling Stockholder that is an entity may elect to make an in-kind distribution of the securities to its members, partners or shareholders pursuant to the registration statement of which this prospectus is a part by delivering a prospectus. To the extent that such members, partners or shareholders are not affiliates of ours, such members, partners or stockholders would thereby receive freely tradable shares of the securities pursuant to the distribution through a registration statement.

The Selling Stockholders may, from time to time, pledge or grant a security interest in some shares of the securities owned by them and, if a Selling Stockholder defaults in the performance of its secured obligations, the pledgees or secured parties may offer and sell such shares of the securities, from time to time, under this prospectus, or under an amendment or supplement to this prospectus amending the list of the Selling Stockholders to include the pledgee, transferee or other successors in interest as the Selling Stockholders under this prospectus. The Selling Stockholders also may transfer shares of the securities in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

A Selling Stockholder that is an entity may elect to make an in-kind distribution of the securities to its members, partners or shareholders pursuant to this prospectus is a part by delivering a prospectus. To the extent that such members, partners or shareholders are not affiliates of ours, such members, partners or stockholders would thereby receive freely tradable shares of the securities pursuant to the distribution through this prospectus.

For additional information regarding expenses of registration, see the section titled "*Use of Proceeds*" appearing elsewhere in this prospectus.

Lock-Up Restrictions

Pursuant to our amended and restated bylaws, the Lock-Up Shares will be locked up until March 7, 2022.

LEGAL MATTERS

Wilson Sonsini Goodrich & Rosati, P.C., Palo Alto, California, which has acted as our counsel in connection with this offering, will pass upon the validity of the shares of our Common Stock being offered by this prospectus.

EXPERTS

The financial statements of ESS Tech, Inc. at December 31, 2021 and 2020, and for each of the two years in the period ended December 31, 2021, appearing in this prospectus and registration statement, have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon appearing elsewhere herein, and are included in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act that registers the shares of our Common Stock to be offered by this prospectus. This prospectus constitutes only a part of the registration statement. Some items are contained in exhibits to the registration statement as permitted by the rules and regulations of the SEC. For further information with respect to us and our securities, we refer you to the registration statement, including the exhibits filed as a part of the registration statement. Statements contained in this prospectus concerning the contents of any contract or document referred to are not necessarily complete. If a contract or document has been filed as an exhibit to the registration statement, please see the copy of the contract or document that has been filed. Each statement in this prospectus relating to a contract or document filed as an exhibit is qualified in all respects by the filed exhibit.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC maintains an Internet website at www.sec.gov that contains reports, proxy and information statements and other information about issuers, like us, that file electronically with the SEC. We also maintain a website at www.essinc.com. We make available, free of charge, on our investor relations website at www.investors.essinc.com, our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to these reports as soon as reasonably practicable after electronically filing or furnishing those reports to the SEC. Information contained on our website is not a part of or incorporated by reference into this prospectus and the inclusion of our website and investor relations website addresses in this prospectus is an inactive textual reference only.

FINANCIAL STATEMENTS

INDEX TO FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of ESS Tech, Inc

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of ESS Tech, Inc. (the Company) as of December 31, 2021 and 2020, the related consolidated statements of operations and comprehensive loss, stockholders' equity (deficit), and cash flows for each of the two years in the period ended December 31, 2021, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2021, in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company’s auditor since 2020.

Portland, Oregon

March 3, 2022

ESS Tech, Inc.
Consolidated Balance Sheets
As of December 31, 2021 and 2020
(in thousands, except share and per share data)

	2021	2020
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 238,940	$ 4,901
Restricted cash	1,217	1,167
Prepaid expenses and other current assets	5,361	793
Total current assets	245,518	6,861
Property and equipment, net	4,501	1,836
Restricted cash	75	326
Other non-current assets	105	—
TOTAL ASSETS	$ 250,199	$ 9,023
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)		
CURRENT LIABILITIES:		
Accounts payable	$ 1,572	$ 522
Accrued and other current liabilities	6,487	2,194
Deferred revenue	3,663	—
Notes payable	1,900	5,678
Total current liabilities	13,622	8,394
Notes payable	1,869	19
Derivative liabilities	—	22,911
Warrant liabilities	—	3,329
Earnout warrant liabilities	1,476	—
Public warrant liabilities	18,666	—
Private warrant liabilities	8,855	—
Other non-current liabilities	552	2,258
TOTAL LIABILITIES	45,040	36,911
COMMITMENTS AND CONTINGENCIES (NOTE 11)		
STOCKHOLDERS' EQUITY (DEFICIT):		
Preferred stock, $0.0001 par value, 200,000,000 shares authorized, none issued and outstanding as of December 31, 2021 and 2020	—	—
Common stock ($0.0001 par value; 2,000,000,000 shares authorized, 151,839,058 and 58,919,345 shares issued and outstanding as of December 31, 2021 and 2020, respectively)	16	6
Common stock warrants	—	153
Additional paid-in capital	745,753	35,446
Accumulated deficit	(540,610)	(63,493)
Total stockholders' equity (deficit)	205,159	(27,888)
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)	$ 250,199	$ 9,023

See accompanying notes to consolidated financial statements

ESS Tech, Inc.
Consolidated Statements of Operations and Comprehensive Loss
Years Ended December 31, 2021 and 2020
(in thousands, except share and per share data)

	2021	2020
Operating expenses		
Research and development	$ 30,275	$ 12,896
Sales and marketing	3,041	1,158
General and administrative	27,286	3,338
Total operating expenses	60,602	17,392
Loss from operations	(60,602)	(17,392)
Other income (expenses)		
Interest expense, net	(1,886)	(132)
Loss on revaluation of warrant liabilities	(37,584)	(1,296)
Loss on revaluation of derivative liabilities	(223,165)	(11,532)
Loss on revaluation of earnout liabilities	(154,806)	—
Other income (expense), net	926	(67)
Total other income (expenses)	(416,515)	(13,027)
Net loss and comprehensive loss to common stockholders	$ (477,117)	$ (30,419)
Net loss per share - basic and diluted	$ (5.73)	$ (0.52)
Weighted average shares used in per share calculation - basic and diluted	83,256,431	58,880,742

See accompanying notes to consolidated financial statements

ESS Tech, Inc.
Consolidated Statements of Stockholders' Equity (Deficit)
Years Ended December 31, 2021 and 2020
(in thousands, except share and per share data)

	Redeemable Convertible Preferred Stock		Common Stock		Common Stock Warrants	Additional Paid-In Capital	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount				
Balance as of December 31, 2019	32,865,949	$ 34,372	7,060,668	$ 1	$ 153	$ 762	$ (33,074)	$ (32,158)
Retroactive application of recapitalization	(32,865,949)	(34,372)	51,749,678	5	—	34,367	—	34,372
Balance as of December 31, 2019 after effect of reverse recapitalization (Note 3)	—	—	58,810,346	6	153	35,129	(33,074)	2,214
Issuance of Legacy ESS common stock upon exercise of stock options	—	—	108,999	—	—	7	—	7
Stock-based compensation	—	—	—	—	—	310	—	310
Net loss	—	—	—	—	—	—	(30,419)	(30,419)
Balance as of December 31, 2020	—	—	58,919,345	6	153	35,446	(63,493)	(27,888)
Issuance of Legacy ESS Redeemable Convertible Preferred Stock	—	—	5,746,003	1	—	29,515	—	29,516
Issuance of Legacy ESS common stock upon exercise of stock options	—	—	2,482,958	—	—	664	—	664
Issuance of Legacy ESS common stock upon exercise of warrants	—	—	3,398,214	—	(153)	26,338	—	26,185
Issuance of Legacy ESS Series C-2 Redeemable Convertible Preferred Stock upon exercise of C-2 Purchase Right and warrant	—	—	29,153,806	3	—	238,480	—	238,483
Net Business Combination and PIPE Financing	—	—	35,495,281	4	—	128,913	—	128,917
Issuance of common stock upon achievement of earnout	—	—	15,674,965	2	—	263,338	—	263,340
Issuance of common stock upon exercise of options	—	—	13,112	—	—	7	—	7
Issuance of common stock upon exercise of warrants	—	—	955,374	—	—	15,130	—	15,130
Stock-based compensation expense	—	—	—	—	—	7,922	—	7,922
Net loss	—	—	—	—	—	—	(477,117)	(477,117)
Balance as of December 31, 2021	—	$ —	151,839,058	$ 16	$ —	$ 745,753	$ (540,610)	$ 205,159

See accompanying notes to consolidated financial statements

ESS Tech, Inc.
Consolidated Statements of Cash Flows
For the Years Ended December 31, 2021 and 2020
(in thousands)

	2021	2020
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$ (477,117)	$ (30,419)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	572	436
Non-cash interest expense	80	91
Stock-based compensation expense	7,922	310
Loss on extinguishment of debt	—	62
Change in fair value of warrant liabilities	37,584	1,296
Change in fair value of derivative liabilities	223,165	11,532
Change in earnout liabilities	154,806	—
PPP loan forgiveness	(948)	—
Changes in operating assets and liabilities:		
Prepaid expenses and other assets	(4,673)	(135)
Accounts payable	886	(221)
Deferred revenue, current	3,663	—
Accrued and other liabilities	2,211	403
Net cash used in operating activities	(51,849)	(16,645)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchases of property and equipment	(2,767)	(502)
Net cash used in investing activities	(2,767)	(502)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Borrowings on notes payable	20,000	4,936
Principal payments on notes payable	(21,067)	(221)
Proceeds from stock options exercised	671	7
Net cash contributions from Business Combination and PIPE Financing	258,730	—
Payments made towards offering costs	(7,895)	—
Proceeds from warrants exercised	10,995	—
Proceeds from exercise of Legacy ESS Series C-2 redeemable convertible preferred stock purchase rights and C-2 warrants upon Business Combination	15,559	—
Proceeds from sale of Legacy ESS Series C-2 redeemable convertible preferred stock, net of issuance costs	11,461	—
Net cash provided by financing activities	288,454	4,722
NET CHANGE IN CASH, CASH EQUIVALENTS AND RESTRICTED CASH	233,838	(12,425)
CASH, CASH EQUIVALENTS AND RESTRICTED CASH, BEGINNING OF YEAR	6,394	18,819
CASH, CASH EQUIVALENTS AND RESTRICTED CASH, END OF YEAR	$ 240,232	$ 6,394

See accompanying notes to consolidated financial statements

ESS Tech, Inc.
Statements of Cash Flows (continued)
For the Years Ended December 31, 2021 and 2020
(in thousands)

	2021	2020
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:		
Cash paid during the year for:		
Interest	$ 1,799	$ 111
Non-cash investing and financing transactions:		
Property and equipment purchases financed with term loan	$ —	$ 52
Purchase of property and equipment included in accounts payable and accrued and other current liabilities	$ 526	$ 55
Extinguishment of derivative liabilities upon sale of Legacy ESS Series C-2 redeemable convertible preferred stock, net of amount allocated to warrants	$ 18,055	$ —
Extinguishment of warrant liabilities upon exercise of Legacy ESS Series B, Series C-1 and Series C-2 redeemable convertible preferred stock warrants	$ 26,178	$ —
Assumption of accrued expenses upon Business Combination	$ 75	$ —
Assumption of private and public warrant liabilities upon Business Combination	$ 11,833	$ —
Assumption of earnout warrant liabilities upon Business Combination	$ 502	$ —
Assumption of earnout liability upon Business Combination	$ 109,507	$ —
Extinguishment of earnout liability upon achievement of earnout and issuance of shares	$ 263,338	$ —
Extinguishment of derivative liability upon exercise of Legacy ESS Series C-2 purchase right and related Series C-2 warrant liability upon Business Combination	$ 222,924	$ —
Extinguishment of public warrant liability upon exercise of warrants	$ 4,143	$ —
Cash and cash equivalents	$ 238,940	$ 4,901
Restricted cash, current	1,217	1,167
Restricted cash, non-current	75	326
Total cash, cash equivalents and restricted cash shown in the statements of cash flows	$ 240,232	$ 6,394

See accompanying notes to consolidated financial statements

ESS TECH, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2021 AND 2020

1. DESCRIPTION OF BUSINESS, BASIS OF PRESENTATION AND RISKS AND UNCERTAINTIES

Description of Business—On October 8, 2021 (the “Closing Date”), ACON S2 Acquisition Corp. (“STWO”), a publicly traded special purpose acquisition company, consummated a merger pursuant to the Agreement and Plan of Merger, dated May 6, 2021 (the “Merger Agreement”), by and among STWO, SCharge Merger Sub, Inc., a Delaware corporation and wholly owned direct subsidiary of STWO (“Merger Sub”), and ESS Tech, Inc., a Delaware corporation (“Legacy ESS”) following the approval at a special meeting of the stockholders of STWO held on October 5, 2021.

Pursuant to the terms of the Merger Agreement, STWO deregistered by way of continuation under the Cayman Islands Companies Act (2021 Revision) and registered as a corporation in the State of Delaware under Part XII of the Delaware General Corporation Law (the “Domestication”), and a business combination between STWO and Legacy ESS was effected through the merger of Merger Sub with and into Legacy ESS, with Legacy ESS surviving as a wholly owned subsidiary of STWO (together with the other transactions described in the Merger Agreement, the “Business Combination”). On the Closing Date, STWO changed its name from “ACON S2 Acquisition Corp” to “ESS Tech, Inc.” (the “Company” or “ESS”), and its common shares of stock and warrants for shares of ESS common stock commenced trading on the New York Stock Exchange under the new ticker symbols “GWH” and “GWH.W”, respectively.

ESS is a long-duration energy storage company specializing in iron flow battery technology. ESS develops long-duration iron flow batteries for commercial and utility-scale energy storage applications requiring four or more hours of flexible energy capacity. The Company’s products are designed for a 25-year operating life without performance degradation, and with minimal annual operations and maintenance requirements. The Company is in the research and development phase. Its products are still being developed and do not yet meet standard specifications to be sold (“Commercially Available”).

Basis of Presentation—The accompanying consolidated financial statements include the accounts of the Company and its wholly owned subsidiary and have been prepared in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”).

Pursuant to the Merger Agreement, the merger between Merger Sub and Legacy ESS was accounted for as a reverse recapitalization in accordance with U.S. GAAP (the “Reverse Recapitalization”). Under this method of accounting, STWO was treated as the “acquired” company and Legacy ESS was treated as the acquirer for financial reporting purposes. Accordingly, for accounting purposes, the Reverse Recapitalization was treated as the equivalent of Legacy ESS issuing stock for the net assets of STWO, accompanied by a recapitalization. The net assets of STWO were stated at historical cost, with no goodwill or other intangible assets recorded. Legacy ESS was determined to be the accounting acquirer based on the following predominant factors:

- Legacy ESS’s existing stockholders had the greatest voting interest in the Company;
- Legacy ESS’s directors represented all of the new board of directors of the Company;
- Legacy ESS’s senior management continued as the senior management of the Company; and,
- Legacy ESS had the larger employee base.

The assets, liabilities and results of operations prior to the Reverse Recapitalization are those of Legacy ESS. The shares and corresponding capital amounts and losses per share, prior to the Reverse Recapitalization, have been retroactively restated based on shares reflecting the exchange ratio of approximately 1.47 (the “Per Share Consideration”) established in the Business Combination.

Risks and Uncertainties—The Company is subject to a number of risks associated with companies of similar size in its industry, including, but not limited to, the need for successful development of products, the need for additional capital and financing to fund operations, competition from substitute products and services from larger companies, legal protection of proprietary technology, patent litigation, dependence on key individuals, and risks associated with changes in information technology.

COVID-19 presents material uncertainty and risk with respect to the Company, its performance, and its financial results and could adversely affect the Company's financial position and results.

Segment Information—The Company has determined that its Chief Executive Officer ("CEO") is its chief operating decision maker ("CODM"). The CEO reviews financial information for purposes of assessing performance and making decisions on how to allocate resources. The Company has determined that it operates in a single reportable segment.

Substantially all of the Company's operations and long-lived assets were attributable to operations in the United States as of December 31, 2021 and 2020.

Use of Estimates—The preparation of the consolidated financial statements in conformity with U.S. GAAP requires management to make estimates, judgments and assumptions that affect the reported amounts of assets and liabilities and disclosure of commitments and contingencies as of the date of the financial statements and the reported amounts of expenses during the reporting periods. Such estimates relate to, among others, the useful lives and assessment of recoverability of property and equipment, deferred tax assets valuation, determination of the fair value of the Company's Bridge Loan, warrant liabilities, Series C-2 Convertible Preferred Stock Issuance Right, earnout liabilities, earnout warrant liabilities, public warrants, private warrants, as well as other accruals. These estimates are based on historical trends, market pricing, current events and other relevant assumptions and data points. Actual results could differ from those estimates and such differences may be material to the financial statements.

Concentration of Credit Risk—Financial instruments that potentially subject the Company to concentration of credit risk consist of cash and cash equivalents and restricted cash. The Company's cash and cash equivalents include cash in bank accounts and money market accounts. The Company's restricted cash includes a certificate of deposit and performance and payment bond. Deposits held with banks may exceed the amount of insurance provided on such deposits.

2. SIGNIFICANT ACCOUNTING POLICIES

Net Loss Per Share— The Company follows the two-class method when computing net income (loss) per common share when shares are issued that meet the definition of participating securities. Under this method, net earnings are reduced by the amount of dividends declared in the current period for common shareholders and participating security holders. The remaining earnings or "undistributed earnings" are allocated between common stock and participating securities to the extent that each security may share in earnings as if all the earnings for the period had been distributed. Once calculated, the earnings per common share is computed by dividing the net income (loss) attributable to common shareholders by the weighted average number of common shares outstanding during each year presented. Diluted income (loss) attributable to common shareholders per common share has been computed by dividing the net income (loss) attributable to common shareholders by the weighted average number of common shares outstanding plus the dilutive effect of outstanding options, warrants, restricted stock units ("RSU"), and earnout shares pending satisfaction of a regulatory holding period during the respective periods computed using the treasury method. In cases where the Company has a net loss, no dilutive effect is shown as options, warrants, RSU, and earnout shares pending satisfaction of a regulatory holding period become anti-dilutive.

Cash and Cash Equivalents—The Company considers all highly liquid investments with an original maturity of three months or less when purchased to be cash equivalents. Cash equivalents are recorded at carrying value, which approximates fair value. Cash and cash equivalents include cash in bank accounts and money market funds.

Restricted Cash—Restricted cash is required as collateral for certain of the Company's lease agreements and contractual supply and service arrangements. Restricted cash includes a certificate of deposit for the Company's lease agreements and a performance and payment bond for the Company's supply and service arrangements. The certificate of deposit and bond are recorded at carrying value, which approximates fair value. Restricted cash amounts are reported in the balance sheets as current or non-current depending on when the cash will be contractually released.

Property and Equipment—Property and equipment are stated at cost, net of depreciation. Depreciation is provided using the straight-line method over the estimated useful lives of the assets, which range from three to seven years. Leasehold improvements are amortized over the lesser of the estimated useful lives of the assets or the remaining lease term. Expenditures for maintenance and repairs are expensed in the Statements of Operations as incurred. Expenditures which materially increase values, change capacities, or extend useful lives are capitalized. When assets are retired or disposed of, the cost and accumulated depreciation are removed from the accounts, and any resulting gains or losses are recognized in other expense, net.

The Company evaluates the recoverability of property and equipment for possible impairment whenever events or circumstances indicate that the carrying amount of such assets may not be recoverable. The Company assesses the alternative use of an asset, the condition of the asset and the current market demand to determine if an asset is impaired. No impairment loss was recognized during the years ended December 31, 2021 and 2020.

Revenue Recognition—The Company did not recognize any revenue in fiscal years 2021 and 2020. The Company will recognize revenue in compliance with the requirements of, and the guidance provided by Accounting Standards Codification ("ASC") 606 - *Revenue from Contracts with Customers (Topic 606)*.

Sales and Marketing—Sales and marketing costs consist of compensation costs and employee benefits of marketing and sales personnel and related support teams, stock-based compensation, depreciation as well as travel, trade show sponsorships and events, conferences, and internet advertising costs. Advertising costs are expensed as incurred. The Company incurred advertising costs of $45 thousand and $8 thousand for the years ended December 31, 2021 and 2020, respectively.

Research and Development—The Company is in the research and development phase. The Company's product offering relies heavily on new technology currently undergoing development and does not yet meet standard specifications to be sold commercially. Research and development costs are expensed as incurred and consist primarily of product development material costs, consumables, maintenance spare parts, raw materials, components, scrap, freight costs, compensation costs and employee benefits, stock-based compensation, depreciation charges, consulting services, and other direct expenses, net of government grants.

The Company receives funding from federal agencies for research and development activities related to its products. Under certain circumstances, up to the entire amount of funding may need to be repaid to the grantor in the form of a success fee in future periods if the Company monetizes the results of the activities funded by the grantor.

The portion of such funding that the Company may be required to repay in certain circumstances is recorded in accrued and other liabilities and was $452 thousand and $186 thousand as of December 31, 2021 and 2020, respectively.

General and Administrative—General and administrative costs include executive and administrative compensation costs and employee benefits, stock-based compensation, depreciation charges, professional services fees, insurance costs, bad debt, other allocated costs, such as facility-related expenses, supplies, and other fixed costs.

Stock-Based Compensation—The Company accounts for stock-based compensation in accordance with ASC 718, *Compensation – Stock Compensation ("ASC 718")*.

The Company measures compensation expense for all stock-based awards for stock options granted to employees and non-employees based on the estimated fair values on the date of the grant. The fair value of each stock option granted is estimated using the Black-Scholes Merton option-pricing model using the single-option award approach. The following assumptions are used in the Black-Scholes Merton option-pricing model:

Risk-Free Interest Rate—The risk-free interest rate is based on the implied yield available on the date of grant on U.S. Treasury zero-coupon issued with a term that is equal to the option's expected term at the grant date.

Expected Volatility—The Company estimates the volatility for option grants by evaluating the average historical volatility of a peer group of companies for the period immediately preceding the option grant for a term that is approximately equal to the option's expected term.

Expected Term— The expected term for employees represents the period over which options granted are expected to be outstanding using the simplified method, as the Company's historical share option exercise experience does not provide a reasonable basis upon which to estimate the expected term. The simplified method deems the term to be the average of the time-to-vesting and contractual life of the stock-based awards.

Dividend Yield—The Company has not declared or paid dividends to date and does not anticipate declaring dividends. A such, the dividend yield has been estimated to be zero.

In accordance with ASU 2016-09, Improvements to Employee Share-Based Payment Accounting, the Company may account for forfeitures as they occur or use estimated forfeitures. The Company elected to use actual forfeitures. The share-based compensation expense is recognized using a straight-line basis over the requisite service periods of the awards. The requisite service period is generally the vesting period of such options, and the stock-based compensation expense is presented as a component of operating expenses within the statements of operations.

The Company recognizes all excess tax benefits and deficiencies for share-based awards as an income tax expense or benefit in the statements of operations. Excess tax benefits are classified with other income tax in the Consolidated Statement of Cash Flows as an operating activity.

Income Taxes—The Company accounts for income taxes under the asset and liability method. Under this method, deferred taxes are determined based on the temporary differences between the financial statement and tax bases of assets and liabilities using tax rates expected to be in effect during the years in which the bases differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in the Consolidated Statement of Operations in the period that includes the enactment date. The Company provides for a valuation allowance when it is more likely than not that some portion of, or all of the Company's deferred tax assets will not be realized. In making such determination, the Company considers all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies, and results of recent operations. As of December 31, 2021 and 2020, the Company has recorded a full valuation allowance against its deferred tax assets.

ASC 740, *Accounting for Income Taxes*, requires that the tax benefit of net operating losses, temporary differences and credit carryforwards be recorded as an asset to the extent that management assesses that realization is "more likely than not." Realization of the future tax benefits is dependent on the Company's ability to generate sufficient taxable income within the carryforward period. Because of the Company's history of operating losses, management believes that recognition of the deferred tax assets arising from the above-mentioned future tax benefits is currently not likely and, accordingly, has provided a full valuation allowance for these tax benefits for fiscal years 2021 and 2020.

The Company recognizes accrued interest and penalties related to unrecognized tax benefits as income tax expense. No amounts were accrued for the payment of interest and penalties as of December 31, 2021 and 2020 as the Company is currently not aware of any issues under review that could result in significant payments, accruals, or material deviation from its position.

Fair Value—The Company follows ASC 820, *Fair Value Measurements ("ASC 820")*, which establishes a common definition of fair value to be applied when U.S. GAAP requires the use of fair value, establishes a framework for measuring fair value, and requires certain disclosure about such fair value measurements.

ASC 820 establishes a hierarchy for inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that observable inputs be used when available. Observable inputs are inputs that market participants would use in pricing the asset or liability based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about what market participants would use in pricing the asset or liability based on the best information available in the circumstances. The hierarchy is broken down into three levels based on the reliability of inputs as follows:

Level 1: Observable inputs such as quoted prices in active markets for identical assets or liabilities to which the Company has access at a measurement date.

Level 2: Observable inputs other than Level 1 quoted prices that are observable for the asset or liability, either directly or indirectly; these include quoted prices for similar assets or liabilities in an active market, quoted prices for identical assets and liabilities in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3: Unobservable inputs for which little or no market data exists and for which the Company must develop its own assumptions regarding the assumptions that market participants would use in pricing the asset or liability, including assumptions regarding risk.

Because of the uncertainties inherent in the valuation of assets or liabilities for which there are no observable inputs, those estimated fair values may differ significantly from the values that may have been used had a ready market for the assets or liabilities existed.

Recent Accounting Pronouncements

Pursuant to the Jumpstart Our Business Startups Act ("JOBS Act"), an emerging growth company is provided the option to adopt new or revised accounting standards that may be issued by the FASB or the SEC either (i) within the same periods as those otherwise applicable to non-emerging growth companies or (ii) within the same time periods as private companies. The Company has elected to use the extended transition period for complying with any new or revised financial accounting standards. As a result, the Company's financial statements may not be comparable to the financial statements of issuers who are required to comply with the effective date for new or revised accounting standards that are applicable to public companies. The Company also intends to continue to take advantage of some of the reduced regulatory and reporting requirements of emerging growth companies pursuant to the JOBS Act so long as the Company qualifies as an emerging growth company.

In February 2016, the FASB issued No. ASU 2016-02, *Leases* (ASC 842) which superseded previous guidance related to accounting for leases. This new guidance requires lessees to recognize most leases on their balance sheets as right-of-use ("ROU") assets with corresponding lease liabilities and eliminates certain real estate-specific provisions. Accounting for lessors is substantially unchanged from current accounting principles. Lessees will be required to classify leases as either finance leases or operation leases. Initial balance sheet measurement is similar for both types of leases; however, expense recognition and amortization of right-of-use assets will differ.

The new standard provides optional practical expedients in transition including a package of practical expedients that will allow the Company to carry forward its historical classification of existing leases. In addition, the new standard also provides practical expedients for an entity's ongoing accounting. The Company elected the short-term lease recognition exemption for all leases that qualify, which means leases with initial terms of 12 months or less will not be recorded on the balance sheet. The new standard is effective for fiscal years beginning after December 15, 2021.

The Company adopted ASC 842 effective January 1, 2022. The most significant effect of the adoption resulted in the recognition of an ROU asset and liability of approximately $5,000 thousand. The adoption of this standard did not have a material impact on the Company's results of operations, cash flows or liquidity measures.

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* ("ASU 2016-13"), which requires the measurement and recognition of expected credit losses for financial assets held at amortized cost. ASU 2016-13 replaces the existing incurred loss impairment model with a forward-looking expected credit loss model, which will result in earlier recognition of credit losses. ASU 2016-13 is effective for emerging-growth companies for fiscal years beginning after December 15, 2022, and interim periods within those fiscal years. The Company is currently evaluating the impact that the standard will have on its financial statements and related disclosures.

In December 2019, the FASB issued ASU No. 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes* ("ASU 2019-12"), which simplifies the accounting for income taxes. ASU 2019-12 is effective for emerging-growth companies for fiscal years beginning after December 15, 2021, and interim periods within fiscal years beginning after December 15, 2022. The Company is currently evaluating the impact that the standard will have on its financial statements and related disclosures.

In August 2020, the FASB issued ASU 2020-06**,** Debt**—***Debt with Conversion and Other Options (Subtopic470-20)* and Derivatives and Hedging**—***Contracts in Entity's Own Equity (Subtopic 815-40)***—**Accounting for Convertible Instruments and Contracts in an Entity's Own Equity ("ASU 2020-06"). ASU 2020-06 reduces the number of accounting models for convertible debt instruments and redeemable convertible preferred stock. For convertible instruments with conversion features that are not required to be accounted for as derivatives under Topic 815, *Derivatives and Hedging*, or that do not result in substantial premiums accounted for as paid-in capital, the embedded conversion features no longer are separated from the host contract. ASU 2020-06 also removes certain conditions that should be considered in the derivatives scope exception evaluation under Subtopic 815-40, *Derivatives and Hedging—Contracts in Entity's Own Equity*, and clarify the scope and certain requirements under Subtopic 815-40. In addition, ASU 2020-06 improves the guidance related to the disclosures and earnings-per-share (EPS) for convertible instruments and contracts in an entity's own equity. ASU 2020-06 is effective for public companies for fiscal years beginning after December 15, 2021, including interim periods within those fiscal years. For all other companies, the amendments are effective for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years. Early adoption is permitted, but no earlier than fiscal years beginning after December 15, 2020, including interim periods within those fiscal years. As of December 31, 2021, the Company did not hold any instruments within the scope of ASU 2020-06.

3. BUSINESS COMBINATION

As discussed in Note 1, on October 8, 2021, the Company consummated the Business Combination pursuant to the Merger Agreement, with Legacy ESS surviving the Business Combination as a wholly owned subsidiary of the Company. Upon the Business Combination closing, each share of Legacy ESS's common stock, par value $0.0001 per share ("Legacy ESS Common Stock") and Preferred Stock, par value $0.0001 per share ("Legacy ESS Preferred Stock"), were converted into the right to receive shares of the Company's common stock at the Per Share Consideration as calculated pursuant to the Merger Agreement. The aggregate consideration paid to Legacy ESS stockholders in connection with the Business Combination (excluding any potential Earnout Shares (see below for definition)), was 99,700,326 shares of the Company's common stock (including 125,958 shares of common stock issued following the Closing as a result of a transaction expense adjustment as disclosed in the Company's Form 8-K filed with the SEC on November 15, 2021).

Upon the closing of the Business Combination, the Company's certificate of incorporation was amended and restated to, among other things, increase the total number of authorized shares of capital stock to 2,200,000,000, of which 2,000,000,000 shares are Common Stock, $0.0001 par value per share, and 200,000,000 shares are Preferred Stock, $0.0001 value per share.

In connection with the Business Combination, on the Closing Date, STWO issued and sold an aggregate of 25,000,000 shares of the Company's common stock for a selling price of $10.00 per share and an aggregate selling price of $250,000 thousand pursuant to subscription agreements, dated as of May 6, 2021, with certain accredited investors, in a Private Investment in Public Equity ("PIPE Financing").

Each issued and outstanding warrant of Legacy ESS was exercised in full in exchange for the issuance of shares of the Company's common stock immediately prior to the Closing.

Each issued and outstanding vested and unvested Legacy ESS option was converted into options of the Company exercisable for shares of the Company's common stock with the same terms except for the number of shares exercisable and the exercise price, each of which was adjusted using the Per Share Consideration.

Legacy ESS allocated to Legacy ESS employees 824,998 RSUs (the "Incentive RSU Pool") of which 757,448 were vested upon meeting certain Earnout Milestone Events on November 9, 2021. A total of 67,550 RSUs were cancelled or not awarded as the holders did not meet the continued service requirement through the vesting date.

Pursuant to the Merger Agreement, the Company was permitted to issue to eligible Legacy ESS securityholders, on a pro rata basis, up to 16,500,000 shares of additional common stock (the "Earnout Shares") less any RSUs issued pursuant to the Incentive RSU Pool, issuable in two equal tranches upon the occurrence of the respective Earnout Milestone Events. The Earnout Milestone Events were achieved on November 9, 2021 and Legacy ESS issued 15,674,965 shares to securityholders. 6,707,318 of the Earnout Shares were delivered subsequent to December 31, 2021 upon satisfaction of a regulatory holding period and were excluded from the calculation of diluted weighted-average common shares outstanding for the period, see Note 5.

The Business Combination is accounted for as a reverse recapitalization in accordance with U.S. GAAP. Under this method of accounting, STWO was treated as the "acquired" company and Legacy ESS was treated as the acquirer for financial reporting purposes. Accordingly, for accounting purposes, the Business Combination was treated as the equivalent of Legacy ESS issuing stock for the net assets of STWO, accompanied by a recapitalization. The net assets of STWO were stated at historical cost, with no goodwill or other intangible assets recorded.

The following table reconciles the elements of the Business Combination to the Consolidated Statement of Cash Flows and the Consolidated Statement of Stockholders' Equity for the year ended December 31, 2021 (in thousands):

Cash contributions from Business Combination and PIPE Financing, net of redemptions	$	258,730
Less: transaction costs paid by ESS		(7,895)
Net cash contributions from Business Combination and PIPE Financing		250,835
Less: non-cash fair value of Public and Private Common Stock Warrants		(11,833)
Less: non-cash fair value of Earnout Shares and Warrants		(110,010)
Less: liabilities assumed from STWO		(75)
Net Business Combination and PIPE Financing	$	128,917

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

Class A Common Stock, outstanding prior to Business Combination	25,000,000
Class B Common Stock outstanding prior to Business Combination	6,250,000
Less: redemption of STWO shares	(20,754,719)
Common Stock of STWO	10,495,281
ESS Common Stock issued upon exercise of C-2 Right and Warrant	29,153,806
Shares issued in PIPE Financing	25,000,000
Business Combination and PIPE Financing shares - Common Stock	64,649,087
Legacy ESS Convertible Preferred Stock converted to ESS Common Stock	57,104,322
Legacy ESS Common Stock converted to ESS Common Stock	13,442,198
Total shares of Common Stock immediately after Business Combination	135,195,607

4. DEFERRED REVENUE

As of December 31, 2021, the Company has entered into contracts with customers for which sales have not been recognized as the Company has not yet met revenue recognition criteria. As per customer arrangements, the Company invoices customers in advance of recognizing the sale of units and records advance deposits as deferred revenue, as reported in current liabilities.

The following table summarizes the balances of the Company's deferred revenue as of December 31, 2021 and 2020 for contracts that are expected to be completed and revenue recognized in the subsequent twelve month period (in thousands):

	2021	2020
Deferred revenue - units shipped in August 2021	$ 383	$ —
Deferred revenue - units shipped in September 2021	171	—
Other deferred revenue	3,109	—
Total deferred revenue	$ 3,663	$ —

As of December 31, 2020, the Company had recorded customer deposits of $2,258 thousand which were classified as other non-current liabilities. The balance has been reclassified to current liabilities as of December 31, 2021 based on expected contract fulfillment in 2022.

5. LOSS PER SHARE

The following table presents the calculation of basic and diluted net loss per share attributable to common shareholders for the years ended December 31, 2021 and 2020 (in thousands, except per share data):

	2021	2020
Net Loss attributable to common stockholders	$ (477,117)	$ (30,419)
Weighted-average shares outstanding – Basic and Diluted	83,256,431	58,880,742
Net loss per share – Basic and Diluted	$ (5.73)	$ (0.52)

Due to the net losses for the years ended December 31, 2021 and 2020, basic and diluted net loss per common share were the same, as the effect of potentially dilutive securities would have been anti-dilutive.

The following outstanding balances of common share equivalent securities have been excluded from the calculation of diluted weighted-average common shares outstanding because the effect is anti-dilutive for the periods presented:

	2021	2020
Stock options	3,796,530	5,732,422
Restricted stock units	3,392,153	—
Warrants	11,461,247	450,153
Earnout shares pending satisfaction of regulatory holding period	6,707,318	—
	25,357,248	6,182,575

6. PREPAID EXPENSES AND OTHER CURRENT ASSETS

Prepaid expenses and other current assets consist of the following as of December 31, 2021 and 2020 (in thousands):

	2021	2020
Insurance	$ 3,482	$ 107
Vendor advances	1,103	473
Accounts receivable	517	—
Other	259	213
Total prepaid expenses and other current assets	$ 5,361	$ 793

7. PROPERTY AND EQUIPMENT, NET

Property and equipment, net consist of the following as of December 31, 2021 and 2020 (in thousands):

	2021	2020
Machinery and equipment	$ 2,868	$ 2,217
Furniture and fixtures	90	90
Leasehold improvements	746	677
Construction in process	2,517	—
Total property and equipment	6,221	2,984
Less accumulated depreciation	(1,720)	(1,148)
Total property and equipment, net	$ 4,501	$ 1,836

Depreciation expense was $572 thousand and $436 thousand for the years ended December 31, 2021 and 2020, respectively.

8. ACCRUED AND OTHER CURRENT LIABILITIES

Accrued and other current liabilities consist of the following as of December 31, 2021 and 2020 (in thousands):

	2021	2020
Payroll and related benefits	$ 1,876	$ 777
Materials and related purchases	2,108	464
Deferred rent	142	462
Professional and consulting fees	1,820	248
Other	541	243
Total accrued and other current liabilities	$ 6,487	$ 2,194

9. LEASES

The Company leases office and manufacturing space in Wilsonville, Oregon under operating leases that expire in 2025.

Future minimum lease payments under non-cancelable operating lease agreements for the years ending December 31, are as follows (in thousands):

2022	$ 1,625
2023	1,670
2024	1,720

2025	983
Total	$ 5,998

Rent expense related to operating leases aggregated $1,491 thousand and $837 thousand in 2021 and 2020, respectively.

Each of these leases provides the Company an option to renew the lease for an additional 60 months, exercisable upon notice to renew ranging from 60 days to 12 months prior to the end of the initial lease term. As of the date of issuance of these financial statements, the Company has not provided such notice.

10. BORROWINGS

Long term debt consists of the following as of December 31, 2021 and 2020 (in thousands):

	2021	2020
Notes payable	$ 3,769	$ 4,761
PPP loan	—	936
Total notes payable	3,769	5,697
Less current portion of notes payable	1,900	5,678
Long-term notes payable, net of current portion	$ 1,869	$ 19

Payroll Protection Program Loan

On April 19, 2020, the Company entered into an unsecured promissory note under the Payroll Protection Program ("the PPP Loan"), with a bank under the PPP administered by the United States Small Business Administration ("SBA") and authorized by the Keeping American Workers Employed and Paid Act, which is part of the CARES Act, enacted on March 27, 2020. The principal amount of the PPP Loan was $936 thousand. The PPP Loan bore interest of 1.0% per annum and was disbursed to the Company on April 20, 2020. In July 2021, the Company applied for and received forgiveness on the $936 thousand PPP Loan plus $12 thousand in accrued interest. The gain on extinguishment of debt of $948 thousand is recorded within other income (expense), net in the Company's Consolidated Statements of Operations and Comprehensive Loss for year ended December 31, 2021.

Bridge Loan

In July 2021, the Company entered into a six-month $20,000 thousand bridge loan (the "Bridge Loan"), maturing on the earlier of January 12, 2022 or consummation of the Business Combination, which ultimately closed on October 8, 2021, see Note 3. The Bridge Loan bore interest of 9%, of which 2.25% was payable monthly and 6.75% paid-in-kind ("PIK") interest was due upon maturity. At maturity, a final payment of $1,250 thousand was due in addition to all outstanding principal and accrued interest. The Bridge Loan was paid off pursuant to the terms of the Business Combination.

The Company elected the fair value option to account for the Bridge Loan, which contained embedded derivatives. The Company recorded the Bridge Loan at fair value of $20,000 thousand at issuance. Interest expense of $1,578 thousand was recognized related to the paid in-kind interest and final payment on the Bridge Loan for the year ended December 31, 2021.

Notes Payable

In 2018, the Company entered into a $1,000 thousand note payable with a bank that was secured by all property of the Company, except for its intellectual property. The note payable's original maturity date was July 1, 2021.

In March 2020, the Company amended the note payable and borrowed an additional $4,000 thousand. The additional $4,000 thousand borrowing changed the present value of cash flows by more than 10% and, as such, was treated as a debt extinguishment. The Company recognized a $62 thousand loss on extinguishment of debt for the year ended December 31, 2020. The Company's notes payable to the bank were recorded at fair value as part of the extinguishment. The $4,000 thousand note payable's original maturity date was January 1, 2023.

In April 2020, the Company entered into a Deferral Agreement ("Deferral Agreement") to extend the maturity date of the original $1,000 thousand note payable to January 1, 2023 and extend the maturity date of the additional $4,000 thousand note payable to January 1, 2024. The Company accounted for the Deferral Agreement as a debt modification based on an analysis of cash flows before and after the debt modification.

The notes payable bear interest at 0.50% below the bank's prime rate (2.75% on December 31, 2021). The Company makes monthly interest and principal payments on the note payable based on the schedule defined in the agreement.

In conjunction with the notes payable, Legacy ESS issued warrants to purchase 100,161 shares of Series B redeemable convertible preferred stock and 103,107 shares of Series C redeemable convertible preferred stock in July 2018 and March 2020, respectively. The Series B redeemable convertible preferred stock warrants and Series C redeemable convertible preferred stock warrants have exercise prices of $0.96 and $1.25 per share, respectively and expire 10 years after issuance. The fair value of Series B redeemable convertible preferred stock warrants and Series C redeemable convertible preferred stock warrants were $55 thousand and $44 thousand, respectively, at the time of issuance. The fair value of the Series B redeemable convertible preferred stock warrants was initially recorded as a reduction of the value of the notes payable and were amortized over the term of the loan as interest expense using the effective interest rate method. Unamortized Series B redeemable convertible preferred stock warrants were treated as a component of loss on extinguishment of debt. The Series C redeemable convertible preferred stock warrants were issued in conjunction with the additional $4,000 thousand borrowing and were a component of the loss on extinguishment of debt. All outstanding shares of Legacy ESS's redeemable convertible preferred stock were converted to shares of common stock immediately prior to the completion of the Business Combination. See Note 12. Interest expense of $0 and $4 thousand were recognized related to the amortization of warrants issued in conjunction with the notes payable for the years ended December 31, 2021 and December 31, 2020, respectively.

The audit opinion as of and for the year ended December 31, 2020 financial statements contained a going concern explanatory paragraph. Under the notes payable loan agreement, a going concern opinion with respect to the Company's audited financial statements is a material adverse change resulting in an event of default. In accordance with a subjective acceleration clause, the Lender had an option to elect to accelerate $4,583 thousand of the Company's existing indebtedness as of December 31, 2020 to be immediately due and payable. As of December 31, 2020, the event of default would have also accelerated the $943 thousand in principal and interest due on the PPP Loan because of the cross-default provisions. The Company had classified the notes payable and PPP loan as current liabilities as of December 31, 2020 due to the considerations discussed above and the assessment that the material adverse change clause under the notes payable and PPP Loan agreements was not within the Company's control. As of December 31, 2021, the Company has concluded that the Business Combination alleviated the risk related to going concern, as well as that related to the subjective acceleration clause.

Annual maturities on notes payable outstanding at December 31, 2021 are as follows (in thousands):

2022	$	1,900
2023		1,600
2024		333
Total maturities		3,833
Less: unamortized debt premium		(64)
Total notes payable	$	3,769

11. COMMITMENTS AND CONTINGENCIES

The Company, from time to time, is a party to various claims, legal actions, and complaints arising in the ordinary course of business. The Company is not aware of any legal proceedings or other claims, legal actions, or complaints through the date of issuance of these financial statements.

As of December 31, 2021, and 2020, the Company had a standby letter of credit with First Republic Bank totaling $725 thousand as security for an operating lease of office and manufacturing space in Wilsonville, Oregon. As of December 31, 2021 the letter of credit was secured by a restricted certificate of deposit account totaling $125 thousand. There were no draws against the letter of credit during the years ended December 31, 2021 and 2020.

The Company purchases materials from several suppliers and has entered into agreements with various contract manufacturers, which include cancelable and noncancelable purchase commitments.

As of December 31, 2021 and 2020, total unfulfilled noncancelable purchase commitments were $10,160 thousand and $3,410 thousand, respectively. In addition, total unfulfilled cancellable purchase commitments amounted to $10,446 thousand and $787 thousand as of December 31, 2021, and 2020, respectively. These purchase commitments were not recorded in the financial statements.

12. LEGACY ESS REDEEMABLE CONVERTIBLE PREFERRED STOCK

All Legacy ESS redeemable convertible preferred stock classified as redeemable was converted into Legacy ESS common stock, which was subsequently exchanged for the Company's common stock as a result of the Business Combination using the Per Share Consideration of approximately 1.47. All preferred stock amounts have been retroactively adjusted to reflect the Business Combination.

Immediately prior to the completion of the Business Combination on October 8, 2021, all outstanding shares of Legacy ESS's redeemable convertible preferred stock converted into an aggregate 57,104,332 shares of common stock.

Legacy ESS Rights to Purchase Series C-2 Convertible Preferred Stock

Legacy ESS's Series C redeemable convertible preferred stock financing agreement initially provided additional committed funding of up to $79,999 thousand, through the purchase of up to 39,971,716 shares of Series C-2 redeemable convertible preferred stock based on the completion of certain operational milestones at a predetermined price of $2.00 per share, to certain Series C-1 Investors.

Legacy ESS determined that its obligation to issue, and Legacy ESS's investors' obligation to purchase shares of Series C-2 redeemable convertible preferred stock at a fixed price represents a freestanding derivative financial instrument (the "Series C-2 Redeemable Convertible Preferred Stock Issuance Right"). The Series C-2 Redeemable Convertible Preferred Stock Issuance Right was initially recorded at fair value and was adjusted to fair value at each reporting date, with the change in fair value recorded as a revaluation of derivative liabilities as a component of other income and expense in the Consolidated Statement of Operations. The Series C-2 Redeemable Convertible Preferred Stock Issuance Right was initially scheduled to expire in August 2021 and was classified as a noncurrent derivative liability as of December 31, 2020.

The Series C-2 Redeemable Convertible Preferred Stock Issuance Right was initially valued at a fair value of $11,379 thousand.

Sale of Legacy ESS Series C-2 Redeemable Convertible Preferred Stock

In March 2021, Legacy ESS issued 5,746,003 shares of Series C-2 redeemable convertible preferred stock for $2.00 per share, totaling $11,500 thousand. Legacy ESS incurred $39 thousand in costs associated with the issuance. In connection with the sale of the Series C-2 redeemable convertible preferred stock, Legacy ESS issued warrants to purchase 861,896 shares of Series C-2 redeemable convertible preferred stock and extinguished a portion of the C-2 Purchase Right for 5,746,003 shares. The warrants were exercisable at a price of $0.0001 per share. The extinguishment of a portion of the Series C-2 Redeemable Convertible Preferred Stock Issuance Right reduced

Legacy ESS's derivative liabilities and increased the amount attributable to the issuance by $23,152 thousand. Total transaction value of $34,613 thousand was allocated to the Series C-2 redeemable convertible preferred stock and warrants in the amounts of $29,516 thousand and $5,096 thousand, respectively.

Amendment to Legacy ESS Series C-2 Redeemable Convertible Preferred Stock Purchase Right and Related Warrants

On May 7, 2021, Legacy ESS amended its Series C-2 Preferred Stock Purchase Agreement and Amendment to Series C Preferred Stock Purchase Agreement. Under the terms of the amended agreement, the number of shares of C-2 Convertible Redeemable Preferred Stock required to be issued by Legacy ESS and purchased by investors under the C-2 Redeemable Convertible Preferred Stock Purchase Right were adjusted, and Legacy ESS issued Series C-2 warrants. The Series C-2 warrants were exercisable at a price of $.00007 per share upon a successful Business Combination with STWO. The investors were permitted to purchase shares subject to the C-2 Redeemable Convertible Preferred Stock Purchase Right at any time and must purchase the shares upon the Company's achievement of specific milestones. The number of shares subject to and potential proceeds from the C-2 Redeemable Convertible Preferred Stock Purchase Agreement and related C-2 Warrants were as follows:

	As of May 7, 2021 Upon Completion of SPAC merger	
	Quantity	**Price**
Series C-2 Redeemable Convertible Preferred Stock Purchase Right	7,994,442	$ 2.00
Series C-2 Warrant exercisable upon SPAC merger	21,159,364	$ 0.00007
Total Proceeds Upon Exercise		

The C-2 warrants and Purchase Rights were exercised in conjunction with the Business Combination which closed on October 8, 2021 and the Company received proceeds of $15,559 thousand, which were net of $439 thousand in issuance costs, see Note 3.

The table below summarizes the shares subject to C-2 Purchase Right activity during the year ended December 31, 2021:

	December 31, 2020	Extinguished	Exercised	December 31, 2021
Series C-2 Purchase Right	39,971,716	26,231,295	13,740,421	—

The Company recorded net increases in the derivative liability of $223,165 thousand and $11,532 thousand for the years ended December 31, 2021 and 2020, respectively, for changes in the estimated fair value of the Series C-2 Redeemable Convertible Preferred Stock Purchase Right and C-2 Warrant exercisable upon completion of the Business Combination.

As of December 31, 2021 and 2020, the derivative liability associated with the C-2 Purchase Right was zero and $22,911 thousand, respectively.

Legacy ESS Warrants

Legacy ESS periodically issued warrants ("Legacy ESS warrants") in conjunction with the issuance of preferred stock or debt. As of December 31, 2021 and 2020, the following Legacy ESS warrants were outstanding:

	2021	2020
Common Stock Warrants	—	450,153
Series B Preferred Warrants	—	2,007,308
Series C-1 Preferred Warrants	—	103,107
Total Warrants	—	2,560,568

Legacy ESS outstanding warrants as of December 31, 2020 include awards issued in conjunction with stock and debt issuances discussed within Note 10.

Legacy ESS Series B redeemable convertible preferred stock warrants and Series C redeemable convertible preferred stock warrants were liability awards. Refer to Note 16.

Legacy ESS Series B redeemable convertible preferred stock warrants were issued at exercise prices ranging from $0.0007 per share to $0.83 per share. 100,161 shares of Series B redeemable convertible preferred stock warrants had a ten-year exercise period and the remainder did not expire until a significant transaction had occurred, as defined by the warrant purchase agreement. The warrants were fully vested at the issuance date.

Legacy ESS Series C-1 and C-2 redeemable convertible preferred stock warrants were issued with prices ranging from $0.00007 to $1.25 per share, a life of ten years and were fully vested at issuance.

Legacy ESS common stock warrants, all issued at a price of $0.0007 per share, were recorded at fair value within equity. Legacy ESS common stock warrants were fully vested at issuance and did not expire until a significant transaction has occurred, as defined by the Warrant Purchase Agreement.

The table below shows the Legacy ESS warrant activities during the year ended December 31, 2021:

	December 31, 2020	Issued	Exercised	December 31, 2021
Common Stock Warrants	450,153	—	450,153	—
Series B Preferred Stock Warrants	2,007,308	—	2,007,308	—
Series C-1 Preferred Stock Warrants	103,107	—	103,107	—
Series C-2 Preferred Stock Warrants	—	22,021,284	22,021,284	—
Total Warrants	2,560,568	22,021,284	24,581,852	—

The warrants were valued using the following assumptions:

	For the year ended December 31, 2021	
	Preferred B warrants	Preferred C warrants
Expected volatility	80 %	60% - 80%
Expected term (in years)	2.00	2.00
Risk-free interest rate	0.16% - 0.28%	0.16% - 0.32%
Dividend yield	0 %	0 %

	As of December 31, 2020	
	Preferred B warrants	Preferred C warrants
Expected volatility	80 %	80 %
Expected term (in years)	2.00	2.00
Risk-free interest rate	0.13 %	0.13 %
Dividend yield	0 %	0 %

In connection with the Business Combination, all Legacy ESS warrants were exercised during the year ended December 31, 2021.

13. COMMON STOCK WARRANTS

ESS assumed all warrants issued by STWO upon completion of the Business Combination (see Note 3). As of December 31, 2021, the Company had 7,377,913 Public Warrants, 3,500,000 Private Warrants and 583,334 Earnout Warrants outstanding.

As part of STWO's initial public offering, 8,333,287 Public Warrants were sold. The Public Warrants entitle the holder thereof to purchase one share of common stock at a price of $11.50 per share, subject to adjustments. The Public Warrants may be exercised only for a whole number of shares of common stock. No fractional shares will be issued upon exercise of the warrants. The Public Warrants will expire five years after completion of the business combination, on October 8, 2026, or earlier upon redemption or liquidation. The Public Warrants are listed on the NYSE under the symbol "GWH.W."

The Company may call the Public Warrants for redemption starting anytime, in whole and not in part, at a price of $0.01 per warrant, so long as the Company provides not less than 30 days' prior written notice of redemption to each warrant holder, and if, and only if, the reported last sale price of common stock equals or exceeds $18.00 per share or $10.00 per share for any 20 trading days within a 30-trading day period ending on the third trading day prior to the date the Company sends the notice of redemption to the warrant holders provided there is an effective registration statement covering the shares of common stock issuable upon exercise of the warrants.

The Company may call the Public Warrants for redemption starting anytime, in whole and not in part, at a price of $0.10 per warrant, so long as the Company provides not less than 30 days' prior written notice of redemption to each warrant holder; provided that holders will be able to exercise their warrants on a cashless basis prior to redemption and receive a number of shares determined based on the redemption date fair market value of the shares, and if, and only if, the reported last sale price of common stock equals or exceeds $10.00 per share or $10.00 per share for any 20 trading days within a 30-trading day period ending on the third trading day prior to the date the Company sends the notice of redemption to the warrant holders provided there is an effective registration statement covering the shares of common stock issuable upon exercise of the warrants.

Simultaneously with STWO's initial public offering, STWO consummated a private placement of 4,666,667 Private Warrants with STWO's sponsor. In connection with the Business Combination, STWO's sponsor agreed to forfeit 583,333 Private Warrants. Of the remaining 4,083,334 Private Warrants, 3,500,000 were immediately vested and 583,334 warrants (the "Earnout Warrants") were vested upon meeting certain Earnout Milestone Events on November 9, 2021. Each Private Warrant and Earnout Warrant is exercisable for one share of common stock at a price of $11.50 per share, subject to adjustment.

The Private Warrants and Earnout Warrants, post vesting on November 9, 2021, are identical to the Public Warrants, except that the Private Warrants and Earnout Warrants and the shares of common stock issuable upon exercise of the Private Warrants are not transferable, assignable or salable until 30 days after the completion of a Business Combination, subject to certain limited exceptions. Additionally, the Private Warrants and Earnout Warrants are non-redeemable so long as they are held by the initial purchasers or such purchasers' permitted transferees. If the Private Warrants and Earnout Warrants are held by someone other than their initial purchasers or their permitted transferees, then the Private Warrants and Earnout Warrants will be redeemable by the Company and exercisable by such holders on the same basis as the Public Warrants. Additionally, if the Company redeems the public warrants when the common stock equals or exceeds $10.00 per share for any 20 trading days within a 30-day period ending on the third trading day prior to the date the Company sends the notice of redemption to warrant holders and the closing price of the common share for any 20 trading days within the same period is less than $18.00 per share, the Company must concurrently redeem the Private Warrants and Earnout Warrants.

The table below shows the common stock warrant activities during the year ended December 31, 2021:

	December 31, 2020	Issued	Exercised	December 31, 2021
Earnout Warrants	—	583,334	—	583,334
Public Warrants	—	8,333,287	955,374	7,377,913
Private Warrants	—	3,500,000	—	3,500,000
Total Common Stock Warrants	—	12,416,621	955,374	11,461,247

The Company's common stock warrants were initially recorded at fair value upon completion of the Business Combination and are adjusted to fair value at each reporting date based on the market price of the Public Warrants, with the change in fair value recorded as a component of other income and expense in the consolidated statements of operations. For the year ending December 31, 2021, the Company recorded a net increase to the liabilities for Earnout Warrants, Public Warrants and Private Warrants of $974 thousand, $14,476 thousand and $5,355 thousand, respectively.

The Company received proceeds of $10,987 thousand related to the exercise of 955,374 Public Warrants during the year ending December 31, 2021.

14. EMPLOYEE STOCK PURCHASE PLAN

The Company adopted an Employee Stock Purchase Plan (the "ESPP Plan") in connection with the consummation of the Business Combination on October 8, 2021. All qualified employees may voluntarily enroll to purchase the Company's common stock through payroll deductions at a price equal to 85% of the lower of the fair market values of the stock as of the beginning or the end of the offering periods. An employee's payroll deductions under the ESPP Plan are limited to 15% of the employee's compensation. As of December 31, 2021, 3,060,000 shares were reserved for future issuance under the ESPP Plan.

15. STOCK-BASED COMPENSATION PLAN

2014 Equity Incentive Plan

The Company has a stock-based compensation plan called the 2014 Equity Incentive Plan ("2014 Plan"). Under the 2014 Plan, the Company is authorized to issue 15,482,675 shares of common stock. The stock awards may be issued as Incentive Stock Options ("ISO"), Non-statutory Stock Options ("NSO"), Stock Appreciation Rights, Restricted Stock Awards, or Restricted Stock Unit Awards. Only employees are eligible to receive ISO awards. Employees, directors, and consultants who are providing continuous service to the Company are eligible to receive stock awards other than ISOs.

No Stock Appreciation Rights, Restricted Stock Awards, or Restricted Stock Unit Awards are outstanding as of December 31, 2021 and 2020.

Option prices for incentive stock options are normally set at not less than the fair market value of the Company's common stock at the date of grant. Employee options generally cliff vest at the end of the first year and then 1/48th of the original grant over the remaining three years; however, some vesting dates granted under the 2014 Plan began prior to the grant date, which accelerated the vesting period for the related options. The Board has the power to accelerate the vesting of options granted. There were no accelerations during fiscal years 2020 and 2021. Options were contingent on continued employment with the Company. Grants expired 10 years from the date of grant.

Each Legacy ESS option from the 2014 Plan that was outstanding immediately prior to the Business Combination, whether vested or unvested, was converted into an option to acquire a number of shares of the Company's common stock (each such option, an "Exchanged Option") equal to the product (rounded down to the nearest whole number) of (i) the number of shares of Legacy ESS common stock subject to such Legacy ESS option immediately prior to the Business Combination and (ii) the Per Share Consideration, at an exercise price per share (rounded up to the nearest whole cent) equal to (A) the exercise price per share of such Legacy ESS option immediately prior to the consummation of the Business Combination, divided by (B) the Per Share Consideration. Except as specifically provided in the Merger Agreement, following the Business Combination, each Exchanged Option will continue to be governed by the same terms and conditions (including vesting and exercisability terms) as were applicable to the corresponding former Legacy ESS option immediately prior to the consummation of the Business Combination. All stock option activities were retroactively restated to reflect the Exchanged Options.

2021 Equity Incentive Plan

In October 2021, the Board of Directors of the Company adopted the ESS Tech Inc. 2021 Equity Incentive Plan (the “2021 Plan”). The 2021 Plan became effective upon consummation of the Business Combination . Under the 2021 Plan, the Company is authorized to issue 12,210,000 shares of common stock. The stock awards may be issued as ISO, NSO, Stock Appreciation Rights, Restricted Stock Awards, or Restricted Stock Unit Awards. The number of Shares available for issuance under the 2021 Plan will be increased on the first day of each fiscal year beginning with the 2022 fiscal year and ending with the 2031 Fiscal Year, in an amount equal to the least of (i) 15,260,000 Shares, (ii) five percent (5%) of the outstanding shares on the last day of the immediately preceding fiscal year, or (iii) such number of shares determined by the Company no later than the last day of the immediately preceding fiscal year. As of January 1, 2022, the number of Shares available for issuance under the 2021 Plan was increased by 5,400,000 in accordance with the plan and as approved by the Board.

The stock awards may be issued as ISO, NSO, Stock Appreciation Rights, Restricted Stock Awards, or Restricted Stock Unit Awards. Only employees are eligible to receive ISO awards. Employees, directors, and consultants who are providing continuous service to the Company are eligible to receive stock awards other than ISOs.

Option prices for incentive stock options are set at the fair market value of the Company’s common stock at the date of grant. Employee options generally cliff vest at the end of the first year and then 1/48th of the original grant over the remaining three years. Grants expire 10 years from the date of grant.

No ISOs, NSOs, Restricted Stock Awards, nor Stock Appreciation Rights are outstanding as of December 31, 2021.

Shares Available for Future Grant

As of December 31, 2021, shares available for future grant under the Company’s 2021 Plan was 9,785,574 shares, which includes shares assumed from the Company’s 2014 Plan.

Stock option and RSU activity, prices, and values adjusted by the Per Share Consideration, during the year ended December 31, 2021 is as follows (in thousands, except for share, per share, and contractual term data):

	Options Outstanding				Restricted Stock Units	
	Number of shares	Weighted average exercise price	Weighted average remaining contractual term (years)	Aggregate intrinsic values ($'000s)	Number of plan shares outstanding	Weighted average grant date fair value per Share
Balances as of December 31, 2019	2,104,223	$ 0.37	7.82	$ 821		
Recapitalization Impact	995,215	(0.12)				
Balances at December 31, 2019	3,099,438	$ 0.25	7.82	821		
Granted	3,271,856	0.33				
Exercised	(108,999)	0.06				
Forfeited	(529,873)	0.29				
Balances as of December 31, 2020	5,732,422	$ 0.30	8.23	4,333		
Granted	1,454,549	1.75			3,392,153	$ 10.69
Exercised	(2,496,070)	0.27				
Forfeited	(894,371)	0.46				
Balances as of December 31, 2021	3,796,530	$ 0.83	8.08	40,274	3,392,153	10.69
Options vested and exercisable - December 31, 2020	2,825,238	$ 0.26	7.21	2,215		
Options vested and exercisable - December 31, 2021	1,827,374	$ 0.31	7.20	20,337		

The aggregate intrinsic value is the fair market value on the reporting date less the exercise price for each option.

The aggregate intrinsic value of the options exercised was $6,244 thousand and $48 thousand during the years ended December 31, 2021 and 2020, respectively.

The fair value of each stock option award is estimated on the date of the grant using the Black-Scholes Merton option-pricing model. For options granted during the years ended December 31, 2021, and 2020, respectively, the weighted average estimated fair value using the Black-Scholes Merton option pricing model was $5.63 and $0.65 per option, respectively.

In accordance with ASC 718, the fair value of each option grant has been estimated as of the date of grant using the following weighted average assumptions:

	2021	2020
Risk-free rate	1.01 %	0.93 %
Expected dividends	—	—
Expected term	6 years	6 years
Expected volatility	75.14 %	71.06 %

The compensation expense is allocated on a departmental basis, based on the classification of the award holder. The following table presents the amount of stock-based compensation related to stock-based awards to employees on the Company's consolidated statements of operations and comprehensive loss during the years ended December 31, 2021 and 2020 (in thousands):

	2021	2020
Research and development	$ 2,233	$ 79
Sales and marketing	213	47
General and administrative	5,476	184
Total stock-based compensation	$ 7,922	$ 310

As of December 31, 2021, there was approximately $16,949 thousand of unamortized stock-based compensation cost related to unvested stock options and RSUs, which was expected to be recognized over a weighted average period of 2.15 years.

16. FAIR VALUE MEASUREMENTS

The Company follows ASC 820, *Fair Value Measurements*, which establishes a common definition of fair value to be applied when U.S. GAAP requires the use of fair value, establishes a framework for measuring fair value, and requires certain disclosure about such fair value measurements. The following table presents the Company's fair value hierarchy for its financial assets and liabilities measured at fair value on a recurring basis (in thousands):

December 31, 2021	Level 1	Level 2	Level 3	Total
Assets:				
Cash equivalents and restricted cash:				
Money market funds	$ 237,897	$ —	$ —	$ 237,897
Certificate of deposit	—	125	—	125
Total assets	$ 237,897	$ 125	$ —	$ 238,022
Liabilities:				
Earnout warrant liabilities	$ —	$ 1,476	$ —	$ 1,476
Public common stock warrants	18,666	—	—	18,666
Private common stock warrants	—	8,855	—	8,855
Total liabilities	$ 18,666	$ 10,331	$ —	$ 28,997

December 31, 2020	Level 1	Level 2	Level 3	Total
Assets:				
Cash equivalents and restricted cash:				
Money market funds	$ 3,046	$ —	$ —	$ 3,046
Certificate of deposit	—	326	—	326
Total assets	$ 3,046	$ 326	$ —	$ 3,372
Liabilities:				
Derivative liabilities	$ —	$ —	$ 22,911	$ 22,911
Warrant liabilities	—	—	3,329	3,329
Total liabilities	$ —	$ —	$ 26,240	$ 26,240

For fiscal year 2020 and 2021, there were no transfers among Level 1, Level 2, or Level 3 categories. The carrying amounts of the Company's notes payable, and accounts payable approximate their fair values due to their short maturities.

Level 1 Assets:

The Company invests in money market funds that have maturities of 90 days or less. Money market funds are classified as cash equivalents and are recorded at their carrying value, which approximates fair value.

Level 2 Assets:

The Company invests in a certificate of deposit with a maturity of one year from purchase date. The certificate of deposit is classified as restricted cash and is recorded at its carrying value, which approximates fair value.

Level 1 Liabilities:

The Company values its Public Common Stock warrants based on the market price of the warrant.

Level 2 Liabilities:

The Company values its Earnout Warrant liabilities and Private Common Stock warrants based on the market price of the Company's Public Common Stock warrants.

Level 3 Liabilities:

Bridge Loan

The Company accounted for the Bridge Loan under the fair value option election wherein the Bridge Loan was initially measured at its issue-date fair value and then subsequently re-measured at estimated fair value on a recurring basis at each reporting date. As a result of applying the fair value option, direct costs and fees related to the Bridge Loan were expensed as incurred.

The fair value of the Bridge Loan was based on significant inputs including, estimated time to maturity, which causes them to be classified as a Level 3 measurement within the fair value hierarchy. The valuation used assumptions and estimates the Company believed would be made by a market participant in making the same valuation. The Bridge Loan was repaid on October 8, 2021 as part of the Business Combination. See Note 10 for further details.

Legacy ESS Warrants

Freestanding warrants to purchase redeemable convertible preferred stock were accounted for as liability awards and recorded at fair value on their initial issuance date and adjusted to fair value at each reporting date, with the change in fair value being recorded in the Consolidated Statement of Operations and Other Comprehensive Income. The warrants were accounted for as liabilities as the underlying preferred shares were contingently redeemable upon occurrence of a change in control, which was outside the control of the Company.

The Company measured its warrant liabilities using Level 3 unobservable inputs within the Black-Scholes Merton option-pricing model. The Company used various key assumptions, such as the fair value of redeemable convertible preferred stock Series B and Series C, the volatility of peer companies' stock prices, the risk-free interest rate based on the U.S. treasury yield, and the expected term (based on remaining term to a significant event). The Company measured the fair value of the redeemable convertible preferred stock warrants at each reporting date, with subsequent gains and losses from remeasurement of Level 3 financial liabilities recorded through other expense, net in the Statements of Operations and Comprehensive Loss.

In connection with the Business Combination, all Legacy ESS warrants were exercised during the year ended December 31, 2021.

Rights to Purchase Legacy ESS Series C-2 Redeemable Convertible Preferred Stock

Legacy ESS's Series C Preferred Stock Purchase Agreement initially provided additional committed funding of up to $79,999 thousand, through the purchase of up to 39,971,716 shares of Series C-2 redeemable convertible preferred stock based on the completion of certain operational milestones at a predetermined price of $2.00 per share, to certain Series C-1 Investors. This commitment was called the Series C-2 Redeemable Convertible Preferred Stock Issuance Right, see Note 12.

The value of the Series C-2 Redeemable Convertible Preferred Stock Issuance Right was determined based on significant inputs not observable in the market, which represented a Level 3 measurement within the fair value hierarchy.

The Company utilized a probability weighting of successful completion of the Business Combination versus probability of the Company staying private in establishing the quantity of purchase rights to value and the fair value of the Series C-2 Redeemable Convertible Preferred Stock Issuance Right. The fair value of the Series C-2 Redeemable Convertible Preferred Stock Issuance Right was determined using a discounted cash flow model, which took into account the estimated value of Series C-2 stock, estimated time to purchase, probability of purchase and the risk-free interest rate based on the U.S. treasury yield. The Company measured the fair value of the Series C-2 Redeemable Convertible Preferred Stock Issuance Right at each reporting date, with subsequent gains and losses from remeasurement of Level 3 financial liabilities recorded through other expense, net in the Statements of Operations and Comprehensive Loss. The Company included the valuation of the related Series C-2 warrants that were only exercisable upon completion of the Business Combination with the valuation of the Series C-2 Convertible Preferred Stock Issuance Right.

The following table sets forth a summary of changes in the fair value of the Company's level 3 liabilities at fair value on a recurring basis for the years ended December 31, 2021 and 2020 (in thousands):

	2021	2020
Bridge loan:		
Beginning balance January 1	$ —	$ —
Fair value of Bridge loan funded	20,000	—
Accrued interest	1,578	—
Change in fair value	—	—
Repayment of loan principal and interest	(21,578)	—
Ending balance December 31	—	—
Warrant liabilities:		
Beginning balance January 1	3,329	1,989
Change in fair value	17,753	1,296
Fair value of warrants issued	5,096	44
Fair value of warrants exercised	(26,178)	—
Ending balance December 31	—	3,329
Series C-2 Convertible Preferred Stock Issuance Right liability:		
Beginning balance January 1	22,911	11,379
Change in fair value	223,165	11,532
Fair value of derivatives extinguished	(23,152)	—
Fair value of Series C-2 Convertible Preferred Stock Issuance Right exercised	(222,924)	—
Ending balance December 31	—	22,911
Total	$ —	$ 26,240

17. INCOME TAXES

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. The significant components of deferred tax assets and liabilities are as follows (in thousands):

	As of December 31,	
	2021	2020
Deferred Tax Assets:		
Net operating losses	$ 24,655	$ 11,566
Tax credit carryforward	292	47
Non-qualifying stock options	1,143	—
Other	1,231	837
Deferred tax assets	27,321	12,450
Valuation allowance	(27,321)	(12,450)
Deferred tax assets, net of valuation allowance	$ —	$ —

ASC Topic 740 requires that the tax benefit of net operating losses, temporary differences and credit carryforwards be recorded as an asset to the extent that management assesses that realization is "more likely than not."' Realization of the future tax benefits is dependent on the Company's ability to generate sufficient taxable income within the carryforward period. Because of the Company's history of operating losses, management believes that recognition of the deferred tax assets arising from the above-mentioned future tax benefits is currently not likely and, accordingly, has provided a valuation allowance for fiscal years 2021 and 2020. The valuation allowance increased by $14,871 thousand during the year ended December 31, 2021.

As of December 31, 2021, the Company has federal and state net operating loss carryforwards of $94,058 thousand and $94,023 thousand, respectively. Federal net operating losses generated prior to 2018 will start to expire in 2032. Federal net operating losses generated after 2017 do not expire. The state net operating losses will begin to expire in 2027. The Company also has federal research and development tax credit carryforwards totaling $584 thousand. The federal research and development credit carryforwards begin to expire in 2039, unless previously utilized.

The effective tax rate of the Company's provision for income taxes differs from the federal statutory rate as follows:

	Years Ended December 31,	
	2021	2020
Tax computed at federal statutory rate	21.0 %	21.0 %
State tax, net of federal tax benefit	0.6	3.0
Stock compensation	(0.1)	(0.2)
Transaction costs related to the Business Combination	(0.2)	—
Warrant liabilities revaluation	(1.7)	(8.9)
Derivative liabilities revaluation	(9.8)	—
Earnout shares liabilities revaluation	(6.8)	—
R&D tax credits	—	0.1
Other	0.1	—
Valuation allowance	(3.1)	(15.0)
Income tax expense (benefit)	— %	— %

The changes in the Company's uncertain tax positions are summarized as follows (in thousands):

Balance as of December 31, 2019	$	12
Additions in 2020		35
Balance as of December 31, 2020	$	47
Additions in 2021		245
Balance as of December 31, 2021	$	292

During the years ended December 31, 2021 and 2020, the Company recognized uncertain tax positions of $245 thousand and $35 thousand, respectively, related to a reduction of the research and development credit deferred tax asset. Unrecognized tax benefits may change during the next twelve months for items that arise in the ordinary course of business. The Company does not expect a material change to its unrecognized tax benefits over the next twelve months that would have an adverse effect on its operating results.

The Company recognizes interest and penalties accrued on any unrecognized tax benefits as a component of income tax expense. The Company had no accrued interest or penalties related to uncertain tax positions as of 2021 and 2020.

The Company files federal and certain state income tax returns, which provide varying statutes of limitations on assessments. However, because of net operating loss carryforwards, substantially all tax years since inception remain open to federal and state tax examination.

18. DEFINED CONTRIBUTION PLAN

The Company has a 401(k) plan to provide defined contribution retirement benefits for all employees who have completed six months of service. Employees may elect to contribute a portion of their pretax compensation to the 401(k) plan, subject to annual limitations. The Company may make profit-sharing contributions at the discretion of the Board of Directors. Employee contributions are fully always vested. For the years ended December 31, 2021 and 2020, the Company contributed $292 thousand and $173 thousand, respectively.

19. RELATED PARTY TRANSACTIONS

During the year ended December 31, 2020, the Company hired consultants through one of its Board members to review its technology. The Company paid $31 thousand to the consultants. In December 2020, the Company also entered into a sales agreement for the purchase and installation of one Energy Warehouse with a related party.

In April 2021, the Company signed a framework agreement with one of its investors, SB Energy Global Holdings One Ltd (“SBE”), to supply energy storage products to SBE in support of its market activities. Under this agreement, the Company has made various commitments to meet SBE’s potential need for energy storage products and is obligated to reserve a certain percentage of our manufacturing capacity to meet SBE’s future needs, subject to periodic reviews of its firm and anticipated orders. To date, no orders have been placed under the framework agreement.

Additionally, the Company entered into a preferred financing equity transaction with SBE and Breakthrough Energy Ventures, LLC as discussed in Note 12. These related parties were also issued 6,707,318 of the Earnout Shares discussed in Note 3.

As of December 31, 2021, the Company had recorded accounts receivable of $66 thousand and deferred revenue of $171 thousand for sales of Energy Warehouse products to related parties based on the December 2020 sales agreement above.

20. SUBSEQUENT EVENTS

In February 2022, the Compensation Committee of the Board of Directors granted various employees RSU awards under which the holders have the right to receive an aggregate of approximately 2,100,000 shares of the Company’s common stock. These awards vest in sixteen equal quarterly installments beginning on May 20, 2022.

130,044,756 Shares of Common Stock

PROSPECTUS

, 2022

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution

The following table sets forth all expenses to be paid by us in connection with the distribution of the shares of Common Stock being registered by this registration statement. All amounts shown are estimates except for the SEC registration fee.

We will bear all costs, expenses and fees in connection with the registration of the securities. The Selling Stockholders, however, will bear all brokers and underwriting commissions and discounts, if any, attributable to the sale of their securities.

	Amount to be Paid
SEC registration fee	$ 1,601
Accountant's fees and expenses	12,500
Legal fees and expenses	50,000
Financial printing and miscellaneous expenses	30,000
Total	$ 94,101

Item 14. Indemnification of Directors and Officers

Section 102(b)(7) of the DGCL allows a corporation to provide in its certificate of incorporation that a director of the corporation will not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except where the director breached the duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit. Our amended and restated certificate of incorporation provides for this limitation of liability.

Section 145 of the DGCL, provides, among other things, that a Delaware corporation may indemnify any person who was, is or is threatened to be made, party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of such corporation), by reason of the fact that such person is or was an officer, director, employee or agent of such corporation or is or was serving at the request of such corporation as a director, officer, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding, provided such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the corporation's best interests and, with respect to any criminal action or proceeding, had no reasonable cause to believe that his or her conduct was unlawful. A Delaware corporation may indemnify any persons who were or are a party to any threatened, pending or completed action or suit by or in the right of the corporation by reason of the fact that such person is or was a director, officer, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit, provided such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the corporation's best interests, provided further that no indemnification is permitted without judicial approval if the officer, director, employee or agent is adjudged to be liable to the corporation. Where an officer or director is successful on the merits or otherwise in the defense of any action referred to above, the corporation must indemnify him or her against the expenses (including attorneys' fees) which such officer or director has actually and reasonably incurred.

Section 145 further authorizes a corporation to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation or enterprise, against any liability asserted against such person and incurred by such person in any such capacity, or arising out of his or her status as such, whether or not the corporation would otherwise have the power to indemnify such person under Section 145.

Our Bylaws provide that we must indemnify and advance expenses to our directors and officers to the full extent authorized by the DGCL.

We have entered into indemnification agreements with each of our directors and executive officers. Such agreements may require us, among other things, to advance expenses and otherwise indemnify our executive officers and directors against certain liabilities that may arise by reason of their status or service as executive officers or directors, to the fullest extent permitted by law.

The indemnification rights set forth above shall not be exclusive of any other right which an indemnified person may have or hereafter acquire under any statute, any provision of our Certificate of Incorporation, Bylaws, agreement, vote of stockholders or disinterested directors or otherwise. Notwithstanding the foregoing, we shall not be obligated to indemnify a director or officer in respect of a proceeding (or part thereof) instituted by such director or officer, unless such proceeding (or part thereof) has been authorized by the Board pursuant to the applicable procedure outlined in our Bylaws.

Section 174 of the DGCL provides, among other things, that a director, who willfully or negligently approves of an unlawful payment of dividends or an unlawful stock purchase or redemption, may be held jointly and severally liable for such actions. A director who was either absent when the unlawful actions were approved or dissented at the time may avoid liability by causing his or her dissent to such actions to be entered in the books containing the minutes of the meetings of the Board at the time such action occurred or immediately after such absent director receives notice of the unlawful acts.

We currently maintain and expect to continue to maintain standard policies of insurance that provide coverage (1) to our directors and officers against loss rising from claims made by reason of breach of duty or other wrongful act and (2) to us with respect to indemnification payments that we may make to such directors and officers.

These provisions may discourage stockholders from bringing a lawsuit against our directors for breach of their fiduciary duty. These provisions also may have the effect of reducing the likelihood of derivative litigation against directors and officers, even though such an action, if successful, might otherwise benefit us and our stockholders. Furthermore, a stockholder’s investment may be adversely affected to the extent we pay the costs of settlement and damage awards against officers and directors pursuant to these indemnification provisions.

We believe that these provisions, the insurance, and the indemnity agreements are necessary to attract and retain talented and experienced officers and directors.

Item 15. Recent Sales of Unregistered Securities

PIPE Shares

On October 8, 2021, a number of third-party purchasers (the “Other PIPE Investors”) and certain existing securityholders of Legacy ESS (the “Insider PIPE Investors”, and together with the Other PIPE Investors, the “PIPE Investors”) purchased from ESS an aggregate of 25,000,000 newly-issued shares of Common Stock (the “PIPE Financing”) in a transaction exempt from registration pursuant to the exemption contained in Section 4(a)(2) of the Securities Act, for a purchase price of $10.00 per share and an aggregate purchase price of $250.0 million (the “PIPE Shares”), each pursuant to a separate subscription agreement (each, a “Subscription Agreement”), effective as of May 6, 2021. Pursuant to the Subscription Agreements, ESS gave certain registration rights to the PIPE Investors with respect to their PIPE Shares. The sale of the PIPE Shares was consummated concurrently with the closing of the Merger (the “Closing”). Pursuant to the Merger Agreement, ESS entered into a Registration Rights Agreements, dated as of October 8, 2021 (as described below), providing for certain registration rights to the Sponsor and certain securityholders of ESS.

Founder Shares and Private Placement Warrants

On July 27, 2020, the Sponsor paid $25,000, or approximately $0.003 per share, to cover certain expenses on our behalf in consideration of 7,187,500 Class B ordinary shares, par value $0.0001, 937,500 of which were subsequently forfeited in connection with STWO's initial public offering. In September 2020, the Sponsor transferred 50,000 Class B ordinary shares to each of our three independent directors. Such securities were issued in connection with our organization pursuant to the exemption from registration contained in Section 4(a)(2) of the Securities Act. In connection with the Business Combination, the Class B ordinary shares automatically converted into Class A ordinary shares.

The Sponsor is an accredited investor for purposes of Rule 501 of Regulation D. Each of the equity holders in the Sponsor is an accredited investor under Rule 501 of Regulation D. The sole business of the Sponsor is to act as the Company's sponsor in connection with STWO's initial public offering.

In connection with our initial public offering, the Sponsor purchased an aggregate of 4,666,667 private placement warrants, each exercisable to purchase one ordinary share at $11.50 per share, subject to adjustment, at a price of $1.50 per warrant, in a private placement that closed simultaneously with the closing of the initial public offering. This issuance was made pursuant to the exemption from registration contained in Section 4(a)(2) of the Securities Act.

No underwriting discounts or commissions were paid with respect to such sales.

Exercises of Assumed Stock Options

Pursuant to the Merger Agreement, all outstanding options of Legacy ESS were assumed by the Registrant and converted into options to purchase shares of our Common Stock with the same terms except for the number of shares exercisable and the exercise price, each of which was adjusted based on the Per Share Consideration (the "Assumed Options"). Through the date of this registration statement, we have issued 11,606 shares of our Common Stock pursuant to the exercise of the Assumed Options, with exercise prices ranging from $0.4503 to $0.79 per share (pre-conversion), which were issued pursuant to the 2014 Plan.

The issuances of the securities described above were deemed to be exempt from registration pursuant to Section 4(a)(2) of the Securities Act or Rule 701 promulgated under the Securities Act as transactions pursuant to compensatory benefit plans. The shares of Common Stock issued upon the exercise of options are deemed to be restricted securities for purposes of the Securities Act.

Item 16. Exhibits and Financial Statement Schedules

(a) Exhibits

Exhibit Index

		Incorporated By Reference			
Exhibit	**Description**	**Form**	**File No.**	**Exhibit No.**	**Filing Date**
2.1#	Merger Agreement, dated as of May 6, 2021, by and among STWO, SCharge Merger Sub, Inc. and ESS Tech, Inc.	8-K	001-39525	2.1	May 7, 2021
3.1	Amended and Restated Certificate of Incorporation of ESS	8-K	001-39525	3.1	October 15, 2021
3.2	Amended and Restated Bylaws of ESS	8-K	001-39525	3.2	October 15, 2021
4.1	Warrant Agreement, dated September 16, 2020, by and between STWO and Continental Stock Transfer & Trust Company	S-4	333-257232	4.1	June 21, 2021
4.2	Assignment, Assumption and Amendment Agreement to the Warrant Agreement, dated October 8, 2021, by and among ESS, STWO, Continental Stock Transfer & Trust Company, Computershare Trust Company, N.A. and Computershare Inc.	8-K	001-39525	4.2	October 15, 2021

5.1	Opinion of Wilson Sonsini Goodrich & Rosati, P.C. with respect to the legality of the securities being registered				
10.1	Form of Registration Rights Agreement	8-K	001-39525	10.4	May 7, 2021
10.2	Form of Subscription Agreement	8-K	001-39525	10.1	May 7, 2021
10.3	Sponsor Letter Agreement, dated as of May 6, 2021	8-K	001-39525	10.3	May 7, 2021
10.4	Stockholders' Agreement, dated as of May 6, 2021, by and among ESS, SBE and BEV	8-K	001-39525	10.5	October 15, 2021
10.5#	Framework Agreement, dated as of March 31, 2021, by and between SBE US Holdings One, Inc. and ESS Tech, Inc.	S-4	333-257232	10.13	June 21, 2021
10.6	Office Lease Agreement, dated July 24, 2017, by and between ESS Tech, Inc. and Parkway Woods Business Park, LLC	S-4	333-257232	10.7	June 21, 2021
10.7†	Energy Storage Systems, Inc. 2014 Equity Incentive Plan	S-4	333-257232	10.5	June 21, 2021
10.8†	Amendment to ESS Tech, Inc. 2014 Equity Incentive Plan	S-4	333-257232	10.6	June 21, 2021
10.9†	2021 Equity Incentive Plan and form of award agreements thereunder	S-4/A	333-257232	Annex D	September 9, 2021
10.10†	2021 Employee Stock Purchase Plan	S-4/A	333-257232	Annex E	September 9, 2021
10.11†	Outside Director Compensation Policy	8-K	001-39525	10.12	October 15, 2021
10.12	Form of Indemnification Agreement	8-K	001-39525	10.2	October 15, 2021
10.13†	Employment Agreement, dated April 1, 2021, by and between ESS Tech, Inc. and Eric Dresselhuys	S-4	333-257232	10.10	June 21, 2021
10.14†	Offer Letter, dated July 31, 2019, by and between ESS Tech, Inc. and Amir Moftakhar	S-4	333-257232	10.9	June 21, 2021
10.15†	Employment Agreement, dated May 23, 2021, by and between ESS Tech, Inc. and Craig Evans	S-4	333-257232	10.11	June 21, 2021
10.16†	Employment Agreement, dated March 3, 2015, by and between ESS Tech, Inc. and Yang Song	S-4	333-257232	10.12	June 21, 2021
16.1	Letter from Perkins & Company, P.C.	S-4/A	333-257232	16.1	July 28, 2021
16.2	Letter from Marcum LLP	Post-Effective Amendment No. 1 to S-1	333-260693	16.2	December 9, 2021
21.1	List of Subsidiaries	S-1	333-260693	21.1	November 2, 2021
23.1	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm				
23.2	Opinion of Wilson Sonsini Goodrich & Rosati, P.C. with respect to the legality of the securities being registered				
24.1	Powers of Attorney (included on signature page hereto)				
101.INS	Inline XBRL Instance 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 as Inline XBRL and included in Exhibit 101)				
107	Filing Fee Tables				

† Indicates management contract or compensatory plan or arrangement.
\# Portions of this exhibit have been omitted in accordance with Item 601 of Regulation S-K.

(b) Financial Statement Schedules

All financial statement schedules are omitted because the information called for is not required or is shown either in the consolidated financial statements or in the accompanying notes. The financial statements filed as part of this registration statement are listed in the index to the financial statements immediately preceding such financial statements, which index to the financial statements is incorporated herein by reference.

Item 17. Undertakings

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(a) To include any prospectus required by Section 10(a)(3) of the Securities Act;

(b) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(c) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

provided, however, that paragraphs (1)(a), (b) and (c) of this section do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the SEC by the registrant pursuant to section 13 or section 15(d) of the Exchange Act that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act to any purchaser, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after

effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

(5) That, for the purpose of determining liability of the registrant under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(a) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(b) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(c) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Wilsonville, State of Oregon, on March 4, 2022.

ESS TECH, INC.

By: /s/ Eric P. Dresselhuys
Eric P. Dresselhuys
Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Eric P. Dresselhuys, Craig Evans and Amir Moftakhar, and each one of them, as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for them and in their name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement, and to sign any new registration statement with respect to the offering contemplated thereby filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and all post-effective amendments thereto, and to file the same, with all exhibits thereto and other documents in connection therewith, with the 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 they might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Eric P. Dresselhuys Eric P. Dresselhuys	Chief Executive Officer and Director *(Principal Executive Officer)*	March 4, 2022
/s/ Amir Moftakhar Amir Moftakhar	Chief Financial Officer *(Principal Financial Officer)*	March 4, 2022
/s/ Jeff Bodner Jeff Bodner	Chief Accounting Officer *(Principal Accounting Officer)*	March 4, 2022
/s/ Craig Evans Craig Evans	Director	March 4, 2022
/s/ Raffi Garabedian Raffi Garabedian	Director	March 4, 2022
/s/ Rich Hossfeld Rich Hossfeld	Director	March 4, 2022
/s/ Michael R. Niggli Michael R. Niggli	Director	March 4, 2022
/s/ Claudia Gast Claudia Gast	Director	March 4, 2022
/s/ Kyle Teamey Kyle Teamey	Director	March 4, 2022
/s/ Alexi Wellman Alexi Wellman	Director	March 4, 2022
/s/ Daryl Wilson Daryl Wilson	Director	March 4, 2022

WILSON
SONSINI

Wilson Sonsini Goodrich & Rosati
Professional Corporation
650 Page Mill Road
Palo Alto, California 94304-1050
o: 650.493.9300
f: 650.493.6811

March 4, 2022

ESS Tech, Inc.
132426440 SW Parkway Ave. Bldg. 83
Wilsonville, OR 97070

Re: Registration Statement on Form S-1

Ladies and Gentlemen:

This opinion is furnished to you in connection with the Registration Statement on Form S-1, as may be amended (the "Registration Statement"), filed by ESS Tech, Inc. (f/k/a ACON S2 Acquisition Corp.), a Delaware corporation (the "Company"), with the Securities and Exchange Commission (the "Commission") in connection with the registration under the Securities Act of 1933, as amended (the "Securities Act"), of up to 4,092,576 shares of the Company's common stock, par value $0.0001 per share (the "Securities"), to be sold by the selling securityholders or their permitted transferees described in the prospectus included in the Registration Statement (the "Prospectus").

We are acting as counsel for the Company in connection with the registration of the Securities. As such counsel, we have made such legal and factual examinations and inquiries as we have deemed necessary or advisable for the purpose of rendering the opinions and statements set forth below. In rendering the opinions and statements expressed below, we have examined originals or copies, certified or otherwise identified to our satisfaction, of such documents, corporate records, certificates of public officials and other instruments as we have deemed necessary for the purposes of rendering this opinion.

In addition, we have reviewed originals or copies of such corporate records of the Company, certificates of public officials, a certificate of an officer of the Company as to factual matters, and such other documents which we consider necessary or advisable for the purpose of rendering the opinions set forth below. We have not independently established the facts stated therein.

In our examination, we have assumed the genuineness of all signatures, the authenticity and completeness of all documents submitted to us as originals, the conformity with the originals of all documents submitted to us as copies, the authenticity of the originals of such documents and the legal competence of all signatories to such documents. We have also assumed the authority of such persons signing on behalf of the parties thereto other than the Company and the due authorization, execution and delivery of all documents by the parties thereto other than the Company. We have assumed that the certificates representing the Securities have been properly authenticated by the signature of an authorized officer of the Company's transfer agent. We have also assumed the conformity of the documents filed with the Commission via the Electronic Data Gathering, Analysis and Retrieval System ("EDGAR"), except for required EDGAR formatting changes, to physical copies submitted for our examination and the absence of any evidence extrinsic to the provisions of the written agreements between the parties that the parties intended a meaning contrary to that expressed by those provisions.

We express no opinion as to any matter relating to the laws of any jurisdiction other than the federal laws of the United States of America and the General Corporation Law of the State of Delaware.

Based upon and subject to the foregoing qualifications, assumptions and limitations and the further limitations set out below, we are of the opinion that the Securities to be offered pursuant to the Registration Statement have been duly authorized and are validly issued, fully paid and nonassessable.

Our opinion that any document is legal, valid and binding is qualified as to:

(a) limitations imposed by bankruptcy, insolvency, reorganization, arrangement, fraudulent transfer, moratorium or other similar laws relating to or affecting the rights of creditors generally;

(b) rights to indemnification and contribution, which may be limited by applicable law or equitable principles; and

(c) the effect of general principles of equity, including without limitation concepts of materiality, reasonableness, good faith and fair dealing, and the possible unavailability of specific performance or injunctive relief, whether considered in a proceeding in equity or at law.

This opinion is furnished to you in connection with the filing of the Registration Statement, and is not to be used, circulated, quoted or otherwise relied upon for any other purpose.

We hereby consent to the filing of this opinion as an exhibit to the above-referenced Registration Statement and to the use of our name wherever it appears in the Registration Statement, the Prospectus, any Prospectus Supplement, and in any amendment or supplement thereto. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission thereunder.

Very truly yours,

/s/ Wilson Sonsini Goodrich & Rosati, P.C.

WILSON SONSINI GOODRICH & ROSATI
Professional Corporation

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the reference to our firm under the caption “Experts” and to the use of our report dated March 3, 2022, in the Registration Statement (Form S-1) and related Prospectus of ESS Tech, Inc. for the registration of shares of its common stock.

/s/ Ernst & Young LLP

Portland, Oregon
March 3, 2022

Exhibit 107

Calculation of Filing Fee Tables

FORM S-1
(Form Type)

ESS TECH, INC.
(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered and Carry Forward Securities

	Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered (1)(2)	Proposed Maximum Offering Price Per Unit (3)	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee (4)	Carry Forward Form Type	Carry Forward File Number	Carry Forward Initial effective date	Filing Fee Previously Paid In Connection with Unsold Securities to be Carried Forward
						Newly Registered Securities						
Fees to be paid	Equity	Common Stock, par value $0.0001 per share	Other	4,092,576	$4.22	$17,270,671	$92.70 per $1,000,000	$1,601				
Fees previously paid												
						Carry Forward Securities						
Carry Forward Securities												
		Total Offering Amounts						$1,601				
		Total Fees Previously Paid						$0				
		Total Fee Offsets						$1,601				
		Net Fee Due						$0				

(1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement shall also cover any additional shares of the registrant's common stock, par value $0.0001 ("Common Stock"), per share that become issuable as a result of any stock dividend, stock split, recapitalization, or other similar transaction effected without the receipt of consideration that results in an increase to the number of outstanding shares of registrant's common stock, as applicable.
(2) Consists of 4,092,576 shares of the registrant's Common Stock beneficially owned by certain former stockholders of ESS Tech Subsidiary, Inc., a Delaware corporation (formerly known as ESS Tech, Inc.) ("Legacy ESS"), which were previously registered pursuant to the registration statement on Form S-4 initially filed with the Securities and Exchange Commission (the "SEC") on June 21, 2021 (File No. 333-257232). These shares are registered for resale on this registration statement.
(3) Estimated solely for purposes of calculating the registration fee according to Rule 457(c) under the Securities Act based on the average of the high and low prices of the registrant's Common Stock quoted on the New York Stock Exchange on February 25, 2022.
(4) Calculated by multiplying the proposed maximum aggregate offering price of securities to be registered by the Fee Rate.

Table 2: Fee Offset Claims and Sources

	Registrant or Filer Name	Form or Filing Type	File Number	Initial Filing Date	Filing Date	Fee Offset Claimed	Security Type Associated with Fee Offset Claimed	Security Title Associated with Fee Offset Claimed	Unsold Securities Associated with Fee Offset Claimed	Unsold Aggregate Offering Amount Associated with Fee Offset Claimed	Fee Paid with Fee Offset Source
						Rules 457(b) and 0-11(a)(2)					
Fee Offset Claims											
Fee Offset Sources											
						Rule 457(p)					
Fee Offset Claims	ESS Tech, Inc.	S-1	333-261900(1)	December 27, 2021		$1,601	Equity	Common Stock, par value $0.0001 per share	6,500,000	$74,692,800	
Fee Offset Sources	ESS Tech, Inc.	S-1	333-261900(1)		December 27, 2021						$6,950

(1) The registrant withdrew the registration statement on Form S-1 (No. 333-261900) by filing a Form RW on February 8, 2022. The withdrawn registration statement on Form S-1 (No. 333-261900) was not declared effective and no securities were sold thereunder.

Table 3: Combined Prospectuses

Security Type	Security Class Title	Amount of Securities Previously Registered	Maximum Aggregate Offering Price of Securities Previously Registered	Form Type	File Number	Initial Effective Date
Equity	Common Stock, par value $0.0001 per share	125,952,180	$2,071,913,361	S-1	333-260693	November 10, 2021