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## DELTA REPORT

### 10-K

BE - BLOOM ENERGY CORP

10-K - DECEMBER 31, 2023 COMPARED TO 10-K - DECEMBER 31, 2022

The following comparison report has been automatically generated

TOTAL DELTAS 6186

█ CHANGES 365

█ DELETIONS 2800

█ ADDITIONS 3021

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

**FORM 10-K**

(Mark One)



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

For the fiscal year ended **December 31, 2022** **December 31, 2023**

or



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

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission File Number: **001-38598**



**BLOOM ENERGY CORPORATION**

(Exact name of registrant as specified in its charter)

**Delaware**

**77-0565408**

(State or other jurisdiction of incorporation or organization)

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

**4353 North First Street, San Jose, California**

**95134**

(Address of principal executive offices)

(Zip Code)

**(408) 543-1500**

(Registrant's telephone number, including area code)

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

**Title of Each Class**

**Trading Symbol**  **Symbol(s)**

**Name of each exchange on which registered**

Class A Common Stock, \$0.0001 par value

BE

New York Stock Exchange

(a) Our Class B Common Stock is not registered but is convertible into shares of Class A Common Stock at the election of the holder.

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

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

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

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

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

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

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

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

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

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

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

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

The aggregate market value of the registrant's Class A common stock held by non-affiliates of the registrant was approximately **\$2.3** **\$2.4** billion based upon the closing price of **\$16.50** **\$16.32** per share of our Class A common stock on the New York Stock Exchange on **June 30, 2022** **June 30, 2023** (the last trading day of the registrant's most recently completed second quarter). Shares of Class A common stock held by each executive officer, director and holder of 10% or more of the outstanding Class A common stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

The number **As** of February 12, 2024, there were 224,973,118 shares of the registrant's common stock outstanding as of February 14, 2023 was as follows:

Class A Common Stock, common stock, \$0.0001 par value, 190,405,579 shares  
Class B Common Stock, \$0.0001 par value 15,690,518 shares outstanding.

#### DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement for the **2023** **2024** Annual Meeting of Stockholders (the "2023" "2024 Proxy Statement") are incorporated into Part III of this Annual Report on Form 10-K. The **2023** **2024** Proxy Statement will be filed with the U.S. Securities and Exchange Commission ("SEC") within 120 days after the registrant's year ended **December 31, 2022** **December 31, 2023**.

**Bloom Energy Corporation**  
**Annual Report on Form 10-K for the Years Year Ended December 31, 2022 December 31, 2023**  
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Unless the context otherwise requires, the terms "we," "us," "our," "our," "Bloom Energy," "Bloom" and the "Company" each refer to Bloom Energy Corporation and all of its subsidiaries.

#### SPECIAL NOTE ABOUT FORWARD-LOOKING STATEMENTS

*This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). All statements contained in this Annual Report on Form 10-K other than statements of historical fact, including statements regarding our future operating results and financial position, our business strategy and plans and our objectives for future operations, are forward-looking statements. The words "believe," "may," "will," "estimate," "continue," "anticipate," "predict," "project," "potential," "seek," "intend," "could," "would," "should," "expect," "plan" and similar expressions are intended to identify forward-looking statements.*

*Forward-looking statements in this Annual Report on Form 10-K include, but are not limited to, our plans and expectations regarding future financial results, including our expectations regarding: our ability to expand into and be successful in new markets, including the biogas and hydrogen market; the impact of the COVID-19 pandemic; our expanded strategic partnership with SK ecoplant; statements about our supply chain (including any direct or indirect effects from the Russia-Ukraine war or geopolitical developments in China); operating results; the sufficiency of our cash and our liquidity; projected costs and cost reductions; development of new products and improvements*

to our existing products; our manufacturing capacity and manufacturing costs; the adequacy of our agreements with our suppliers; legislative actions and regulatory and environmental compliance; impact of the Inflation Reduction Act (the "IRA") on our business; competitive position; management's plans and objectives for future operations; our ability to obtain financing; our ability to comply with debt covenants or cure defaults, if any; our ability to repay our debt obligations as they come due; trends in average selling prices; the success of our customer financing arrangements; capital expenditures; warranty matters; outcomes of litigation; our exposure to foreign exchange, interest and credit risk; general business and economic conditions in our markets; industry trends; the impact of changes in government incentives; risks related to cybersecurity breaches, privacy and data security; the likelihood of any impairment of project assets, long-lived assets and investments; trends in revenue, cost of revenue and gross profit (loss); trends in operating expenses including research and development expense, sales and marketing expense and general and administrative expense and expectations regarding these expenses as a percentage of revenue; future deployment of our Bloom Energy Servers and Bloom Electrolyzers; our ability to expand our business with our existing customers; our ability to increase efficiency of our products; our ability to market out our products successfully in connection with the global energy transition and shifting attitudes around climate change; our business strategy and plans and our objectives for future operations; and the impact of recently adopted accounting pronouncements.

You should not rely upon forward-looking statements as predictions of future events. We have based the forward-looking statements contained in this Annual Report on Form 10-K primarily on our current expectations and projections about future events and trends that we believe may affect our business, financial condition, operating results and prospects. The outcome of the events described in these forward-looking statements is subject to risks, uncertainties and other factors including those discussed in Part I, Item 1A, Risk Factors and elsewhere in this Annual Report on Form 10-K. 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 or the extent to which any factor or combination of factors may cause actual results to differ materially from those contained in any forward-looking statements we may make in this Annual Report on Form 10-K. We cannot assure you that the results, events and circumstances reflected in the forward-looking statements will be achieved or occur. Actual results, events or circumstances could differ materially and adversely from those described or anticipated in the forward-looking statements.

The forward-looking statements made in this Annual Report on Form 10-K 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 Annual Report on Form 10-K to reflect events or circumstances after the date of this Annual Report on Form 10-K or to reflect new information or the occurrence of unanticipated events, except as required by law. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements and you should not place undue reliance on our forward-looking statements.

Our actual results and timing of selected events may differ materially from those anticipated in these forward-looking statements as a result of many factors including those discussed under Part I, Item 1A, Risk Factors and elsewhere in this Annual Report on Form 10-K.

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### Part I

#### ITEM 1 ■ BUSINESS

##### Overview

Bloom Energy is uniquely situated to provide innovative technology solutions to customers at an important moment in the world's transition to a net-zero carbon energy system. We manufacture one of the most advanced and versatile energy platforms, which delivers two products: the Bloom Energy Server® and the Bloom Electrolyzer™. With approximately 1.2 gigawatts of the Energy Servers accepted in more than 1,200 locations and 7 countries, our platform empowers businesses, essential services, critical infrastructure, energy companies, and communities with resilient, reliable, and sustainable energy solutions. Changing the future of energy is no small task, but our diverse group of thinkers, solvers and dreamers are up to the challenge. Our mission is employees are driven by our mission: to make clean, reliable energy affordable for everyone in the world. We created

The market conditions for our platform are promising. The three most important indicators of a well-functioning, energy transition — cost, reliability, and emissions — are all facing stiff headwinds. Customers are demanding lower carbon and resilient energy today with the first large-scale, commercially viable flexibility to move to net-zero solutions. Our platform is designed and produced to meet these demands and solve these challenges. Global electricity systems are now facing a range of significant challenges, including threats from extreme weather events, aging transmission and distribution systems, a wave of retiring generation assets, and unprecedented load growth that is far outpacing the installation of new renewable resources. Our time to power solutions and resiliency with 24x7x365 power generation address these needs.

The value propositions for our fuel cell-based power platform are very compelling. Built on the same solid oxide fuel-cell based power generation platform, we develop the Energy Server and the Electrolyzer with predominantly the same supply chain, manufacturing, and engineering expertise. These solutions share reliability, cost-down and efficiency advantages. We have driven down our costs due to our relentless commitment to innovation and discipline. By delivering either molecules of fuel or electrons, we can serve two different markets with one platform and that empowers businesses, essential services, critical infrastructure provides us with a diverse customer base. We have made significant progress toward our goal of utilizing our platform in a variety of new applications and we believe we are well-positioned as a core platform in the new energy transition to help organizations and communities achieve their net-zero objectives.

To date, nearly all of our revenue has been attributable to responsibly take charge sales of their energy.

Our technology, invented in the United States, is one of the most advanced electricity and hydrogen producing platforms on the market today, with one gigawatt deployed in over 1,000 locations and 6 countries. Our fuel-flexible Bloom our power generating Energy Server™ Server. The Energy Servers can use biogas, hydrogen, natural gas, or a blend of fuels to create quickly deployed resilient, sustainable, and cost-predictable power. The platform's fuel flexibility combined with a skid mounted and modular package means that Bloom's Energy Servers are well situated to serve as a rapidly deployable baseload electricity transition technology and solution today, without creating a stranded asset in the future. It can perform at significantly higher efficiencies than traditional, combustion-based resources. It can reduce carbon dioxide and air pollutants through a unique, non-combustion process that uses gas for a fundamentally different reason than any other technology — maximizing the utilization of hydrogen.

Our Energy Servers are inherently designed to deliver reliable electricity. They can provide reliability as a microgrid solution to customers who can't afford power outages. Our microgrids continue to generate power for our customers even when the grid isn't available. Our system also operates at a 99%+ availability due to its modular and fault-tolerant design, which includes multiple independent power generation modules that can be concurrently replaced during maintenance to provide uninterrupted service. Our Energy Servers also have the proven resiliency to withstand weather events, cybersecurity attacks, and other grid outages, providing reliable baseload power while the grid is still grappling with the proliferation of intermittent wind and solar generation. Our systems can be installed in a timeline far shorter than building new transmission lines, or any form of large-scale power generation. This 'Time to Power' value proposition is particularly meaningful for manufacturers, data centers, hospitals, and retailers, especially when the local utility is unable to provide the additional power to support their load growth or energy goals. We can be onsite and operating in months, while other power providers are quoting deliveries in years. With our Bloom Energy Server, we are also partnering with developers for significant opportunities in waste-to-energy. In addition, some instances, we are providing power solutions to enable lower carbon intensity renewable fuels, and in other cases, we are providing solutions to use biogas for resilient power across dairies, landfills, and wastewater treatment facilities.

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The Bloom Electrolyzer, which produces hydrogen, opens new markets, partnerships, and geographies for the same company. And the twenty plus years of expertise we have accumulated from building, installing and operating fuel cell systems is being leveraged to advance the electrolyzer systems we can deploy. The Bloom Electrolyzer is in the early stages of commercialization. But the results have shown its promise. In 2023, for example, we deployed the world's largest solid oxide platform that powers electrolyzer at our fuel cells is NASA Ames Research Center, located in Mountain View, California, and achieved a new record efficiency level of 37.5 kWh of electricity per kilogram of hydrogen generated. At its high efficiency, the basis for creating hydrogen efficiently. The Bloom Electrolyzer™ Electrolyzer uses less electricity to produce hydrogen than other electrolyzers, thereby potentially lowering the overall cost of producing hydrogen, a critical factor towards in accelerating the transition to hydrogen as a fuel. The Idaho National Laboratory (INL) has been studying to see how well it could produce hydrogen from electricity and steam from a nuclear facility, and their 2023 results showed that it was the most efficient electrolyzer that they ever tested. The Bloom Electrolyzer diversifies and expands our addressable market to industries that create with hard-to-abate emissions, such as heavy industry, industries and industries those seeking out zero-carbon transportation fuels.

We are committed to continuous improvement, innovation, and scale. We operated our electrolyzers at the Department of Energy's Idaho National Laboratory, where we demonstrated that we could produce 1 kg of hydrogen using as little as 37.7 kWh of electricity, an industry leading result, with an average performance of 39.2 kWh per kg of hydrogen.

We are enhancing our production capabilities to support growth. We opened our new, multi-gigawatt factory in Fremont, California, in 2022, which was an investment of \$200 million that significantly increased our capacity to produce our energy platforms. In Delaware, we also invested in our Newark factory to increase production capacity of Energy Servers and inaugurated a high volume electrolyzer manufacturing line for commercial deployment in the United States and Europe, where demand is ramping up. We are regularly taking deliberate steps to reduce costs and increase the efficiency of our platform. Our team has decades of experience in the various specialized disciplines and systems engineering concepts embedded in our technology. As of December 31, 2022 December 2023, we have 313 issued patents announced the Electrolyzer sale in the United States and 164 issued patents internationally.

At Bloom Energy, we look forward to a net-zero future. Our technology is designed to help enable this future in order to deliver reliable, low-carbon, electricity in a world facing unacceptable levels of power disruptions. Our distributed platform most often generates energy in close proximity to where the same electricity is consumed, thus avoiding the vulnerabilities of conventional transmission and distribution lines. Our resilient platform is designed to keep electricity available for our customers through hurricanes, earthquakes, typhoons, forest fires, extreme heat and grid failures. Unlike traditional combustion power generation, our platform is community-friendly and designed to significantly reduce emissions of criteria air pollutants. We have made tremendous progress toward our goal of utilizing our platform in variety of new applications such as our waste to energy, hydrogen and marine programs, and we are well-positioned as a core platform in the new energy paradigm to help organizations and communities achieve their net-zero objectives.

The United States is currently our second-largest market in terms of revenues, but our largest market in terms of installed base of Energy Servers. Some of our major customers include companies in industries such as data centers, retail, hospitals, farming, semiconductors and other manufacturing. Our resilient technology provides secure power to critical facilities, including data centers, hospitals and high-tech manufacturing. We also work with a number of U.S. financing and distribution partners who purchase and deploy our systems at end-customers' facilities in order to provide "electricity-as-a service." We are actively pursuing new business opportunities based on incentives for microgrids and renewable energy in the landmark Inflation Reduction Act, passed in August 2022.

Our largest market in terms of revenue is the Republic of Korea, a world leader in the deployment of fuel cells for utility-scale electric power generation. We began commercial operation in the Republic of Korea in 2018 and have grown our footprint to more than 400MW's of deployed Energy Servers across South Korea – by 2022, it had become to our largest market. partners SK ecoplant Co., Ltd. ("SK ecoplant", formerly known as SK Engineering & Construction Co., Ltd.), a subsidiary of the SK Group, with the technology to be deployed in a government-led project to deploy hydrogen as an energy source in a large-scale green hydrogen for use as transport fuel.

We are growing our research and manufacturing capabilities based in the United States and South Korea to meet the opportunities in the global markets. As of December 31, 2023, we have 325 active patents in the U.S. and 145 active patents internationally. In 2023, we scaled up production at our multi-gigawatt factory in Fremont, California, while streamlining and consolidating operations from our Sunnyvale, California, facility to our Fremont facility. The consolidation and ramp in production capacity during 2023 enabled us to produce our Energy Server platforms more efficiently. The plans provide for an additional ramp up in production with incremental investments. We invested in our Newark, Delaware, factory during 2023 to increase production capacity, including a high volume electrolyzer manufacturing line for commercial deployment in North America and Europe. Our Delaware team celebrated its 10th anniversary, growing from one employee in 2013 to nearly 800 in 2023, with installed production capacity at two gigawatts per year. Moreover, our joint venture with SK ecoplant is now capable of full assembly.

The U.S. is currently our largest market in terms of revenue and installed base of the Energy Servers. Our major customers include companies in industries such as utilities, data centers, agriculture, retail, hospitals, higher education, biotech, and manufacturing. Many of our customers look to solve "time to power" issues where they cannot get energy fast enough from the grid or current energy providers to meet their commercial objectives. Moreover, our resilient technology provides secure power to critical facilities, including

data centers, hospitals and high-tech manufacturing, while also serving to reduce greenhouse gas ("GHG") emissions. We also work with several global financing and distribution partners who purchase and deploy our systems at end-customers' facilities to provide "electricity-as-a-service."

Our second-largest market in terms of revenue and installed base of the Energy Servers is South Korea, a world leader in the deployment of fuel cells for utility-scale electric power generation. We began commercial operation in South Korea in 2018 and have grown our footprint to more than 492 megawatts of deployed Energy Servers across South Korea. SK ecoplant serves as the primary distributor of our systems in the Republic of Korea. In October 2021, we announced an expansion of our existing partnership with SK ecoplant, that includes which included purchase commitments of at least 500MW 500 megawatts of power for our Energy Servers between 2022 and 2025 2024 on a take or pay take-or-pay basis, the creation of hydrogen innovation centers to advance green hydrogen commercialization, and an equity investment in Bloom Energy. In September 2023, upon automatic conversion of all 13,491,701 shares of the Series B redeemable convertible preferred stock into shares of our Class A common stock, SK ecoplant became a related party to us with beneficial ownership of 10.5% of our outstanding Class A common stock. On December 21, 2023, we expanded our partnership with SK ecoplant through an incremental purchase commitment of 250 megawatts through 2027 and extended the timing of delivery of the remaining take-or-pay commitment to a minimum purchase commitment under the original agreement. For additional information, please see Part II, Item 8, Note 11 — *Related Party Transactions*, and Note 17 — *SK ecoplant Strategic Investment*.

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We are enhancing In fiscal 2023, we expanded our capabilities and adding resources to expand our market reach internationally for our electrolyzer solutions, waste-to-energy solutions, and our resiliency solutions for off-takers such as data centers and other industrial processes. In 2022, we entered presence in the European market by signing contracts with customers in Italy, the U.K., Germany, and we signed a marketing initiative in Spain and Portugal with a regional renewable energy marketing enterprise. Belgium. We also strengthened our presence in Asia by expanding to Taiwan, signing additional contracts in Taiwan and Thailand. We are also operating smaller deployments in India and Japan with commercial customers, with additional projects in development in other Southeast Asia locations and Australia. We plan to continue our efforts to increase our operations internationally in 2023, 2024.

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### **Power-Related Industry Background Sectors**

#### **• Distributed Electricity Generation:**

There are numerous challenges facing the traditional system for producing and delivering electricity. We believe overcoming these challenges will be the foundation of a transformation in transform how electricity is produced, delivered, and consumed. We believe this transformation could will be similar to the seismic shifts seen in the computer and telecommunications industries, where centralized mainframe computing and landline telephone systems ultimately gave way to the more distributed technologies seen today, as well as and the reimagining of business processes, culture, and customer experiences. As further described below, this could position us to provide a unique solution to meet customers' challenges during this energy transition, especially with increasing power demands from the growth of artificial intelligence (AI) driven business services.

**Providing a resilient energy solution is now a strategic imperative: imperative.** The rising frequency and intensity of natural disasters and extreme weather in recent years underscores a critical need for greater grid resilience.

According to the National Centers for Environmental Information, during 2022, there were eighteen separate 2023 was the year with the most frequent billion-dollar weather and climate disaster events (28) ever recorded, including severe storms, tropical cyclones, flooding, winter storms, and wildfires. The total cost from these events of 2022 was \$165.0 billion and was the third most costly year on record, behind 2017 and 2005. 2022 was the eighth consecutive year (2015-2022) in which 10 or more billion-dollar weather and climate disaster events have impacted the United States.

Stakeholders across industries grapple with the question of how to continue providing energy during more frequent and intense natural disasters while maintaining a course toward achieving their climate targets. These climate threats are compounded by an An increasing concern over the threat of cyber-attacks and physical sabotage to the centralized grid infrastructure. infrastructure compounds these climate threats. These acute issues further add to a chronic concern; the fragility of decades-old energy system elements that have suffered from deferred maintenance and replacement, which can only be partially remedied by the billions of dollars of new investment from the recently passed infrastructure bill. replacement. In an increasingly electrified world, from electric vehicles, to automated manufacturing, to the digitalization of everything, power supply and reliability are more important now than ever. This has elevated the discussion around the essential role that critical. We believe distributed generation and microgrids can play an important role in improving the resilience of both businesses and the grid. As outages increase, businesses are considering consider the "cost of not having power" instead of just the "cost of power." Energy resilience is becoming an issue business leaders can no longer afford to neglect — both from a strategic and cost financial perspective.

**There is a rise in centralized capacity constraints: constraints.** The traditional centralized grid model is increasingly showing weaknesses. For example, in September of 2022, California issued an emergency proclamation order, documenting the drastic measures that must be taken to secure sufficient capacity to be able to avert catastrophic blackouts. Californians were asked to conserve energy, customers with diesel generators were being asked to run them and the state suspended many environmental permitting rules and regulations related According to the deployment North American Electric Reliability Corporation's ("NERC") 2022 Long-Term Reliability Assessment, more than half of the U.S. has a high or elevated risk of insufficient electricity supply over the next five years. Simultaneously, consumer and business demand for electricity is increasing rapidly.

Electrification of transportation, increasing data center build out, and industrial decarbonization are expected to lead to a rapid increase in power generation. This is one demand. The expected capacity constraints in combination with increasing demands for electricity in the U.S. reflect two of the many reasons why microgrids, localized energy systems that can operate alongside a main central grid or disconnect and operate autonomously, are playing an increasingly important role, providing a critical, twenty-four hours a day and seven days a week ("24x7"), always-on energy solution, powering critical infrastructure, offsetting demand on the grid, and supplying power to the grid when it is most needed.

**There is an increasing focus on reducing harmful local emissions: emissions.** Air pollution is the fifth a leading risk factor for mortality worldwide. Calculations worldwide, and the economic impacts of poor air quality are substantial. Recent estimates find that every dollar invested in air pollution control since the passage of the Clean Air Act in the U.S. has produced an economic benefit of \$30: a return on investment of 30:1. These benefits reflect the increased economic productivity of healthier, longer-lived citizens and reduced health benefits associated with reducing localized air pollution such care costs.

- **Clean Hydrogen Production:**

Clean hydrogen is gaining considerable attention as nitrogen oxides, which are produced by combusting a flexible zero-carbon fuel and particulate matter emissions have been found to exceed the economic energy storage medium. It can be stored and health benefits of reducing carbon emissions. The COVID-19 pandemic has only further shed light on these detrimental health impacts. Recent studies have linked long-term exposure to air pollution utilized in various industrial, transportation, and COVID-19 death rates. They have also found that, nationwide, low-income communities of color are exposed to significantly higher levels of pollution, experiencing higher levels of lung disease and other ailments as a result.

**Hydrogen is one of the keys to a zero-carbon future:** power generation applications. We believe clean hydrogen will be a critical factor in the energy industry of the future, a truly clean alternative for both natural gas and transportation fuels and an alternative means to store energy. The International Energy Agency (IEA) forecasts hydrogen demand will increase by 1.5X current demand by 2030 to reach more than 150 (Mt), with some forecasts setting the demand to be as high as 600 Mt by 2050. (Deloitte's 2023 Global Green Hydrogen Outlook).

**Hydrogen is one of the keys to a zero-carbon future.** Hydrogen's unique advantages — incredibly high energy density, zero carbon gas emissions, when used as a fuel, and ease of storage and transportation — being the most abundant element on earth — make it an especially attractive investment opportunity for those interested in a zero-carbon

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energy mix. The key limiting factor in the use of using hydrogen, which does not readily exist in nature as a separate molecule, is that it cannot be mined, extracted or otherwise produced in its desired state without a manufacturing process. As both the transportation and the electricity sectors transition to a zero-carbon future, there will thus be increasing demand for both technologies that can both efficiently generate power using hydrogen and for large-scale electrolysis that can produce clean hydrogen at scale.

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In December 2023, we announced a sale to SK ecoplant of Bloom's electrolyzer technology to deploy hydrogen as an energy source in a large-scale green hydrogen demonstration involving the local government. The first-of-its-kind demonstration for South Korea, which will commence in late 2025, includes 1.8 megawatts of Bloom's industry leading solid oxide electrolyzer cells ("SOEC") technology to develop green hydrogen at scale for use as transport fuel. For this project, Bloom and SK ecoplant will combine the Bloom Electrolyzer with SK ecoplant's engineered infrastructure to produce hydrogen ready to be used as transport fuel.

### **Products & Services**

Our Solutions solid oxide fuel cell technology platform is the foundation for our Energy Servers and Electrolyzers. Solid oxide fuel cells are more efficient than other fuel cell structures because they run at higher temperatures than other fuel cell technologies.

#### **Distributed Electricity Production Bloom Energy Server**

Our baseload-power fuel cell solution, power generation platform, the Bloom Energy Server, is designed to deliver reliable, resilient, clean and affordable energy for utilities and organizations alike. Suitable to operate parallel with the grid, independent of the grid, or as part of a larger microgrid ecosystem, the Bloom Energy Server is based on our proprietary solid oxide technology that converts fuel, such as natural gas, biogas, hydrogen, or a blend of these fuels, into electricity through an electrochemical process without combustion. The electrical output of our Energy Server is designed to be connected to the customer's main electrical feed, thereby avoiding the transmission and distribution losses associated with a centralized grid system. The modular nature of our solution enables any number of the Energy Servers to be clustered together in various configurations, providing solutions from hundreds of kilowatts to hundreds of megawatts. The Energy Server is designed to be easily integrated into community environments due to its aesthetically attractive design, compact space requirement, minimal noise profile and lack of near-zero criteria air pollutants. When fueled with biogas,

The Energy Servers convert methane, which would otherwise be let into our atmosphere or flared, into electricity. Increasing regulations against methane pollution creates an opportunity for innovative solutions like Bloom Energy Servers, utilized in the following applications:

- **Carbon capture.** Our Energy Servers, when combined with another party's carbon capture technology, can provide zero-carbon electricity. Our standard natural gas or biogas-fueled Energy Server vents CO<sub>2</sub> into the atmosphere as a byproduct. Used for When used to facilitate carbon capture, the Energy Server is configured to vent

anode exhaust gas, including the CO<sub>2</sub>, which may then be consolidated, compressed CO<sub>2</sub> for consolidation, compression, and processed to separate the CO<sub>2</sub> processing for sequestration or other industrial applications. The compression and processing of the anode exhaust can be done by industrial gas companies. Bloom's anode exhaust, once dried, has a 95% purity of CO<sub>2</sub>. This makes it one of the purest streams of CO<sub>2</sub> out of any power generation technology using natural gas, making it comparatively simple and inexpensive to capture. The Inflation Reduction Act (the "IRA")

- **Combined heat & power ("CHP").** High-temperature cathode exhaust from the Energy Server can be channeled, allowing the resulting exhaust heat to be fed to one or more heat recovery devices, such as a water heater or an absorption chiller to support air conditioning, refrigeration, and/or process fluid cooling for use in commercial buildings or other industrial plant. We released a combined heat and power offering that increases the tax credit for carbon capture efficiency of our technology to 85% with a goal of reaching, through continuous improvement, the 90% threshold. Compared to combustion technologies and sequestration other fuel cell products, the Bloom Energy Server has one of the highest electrical efficiencies in the industry.
- **Waste to \$85/ton of CO<sub>2</sub>, in addition to lowering the annual threshold quantity of captured emissions required to qualify for the credit to 18,750 metric tons, as well as allowing direct pay for tax-exempt organizations and transferable credits for other taxpayers.**

#### Hydrogen Generation

We believe we are uniquely positioned for the hydrogen future of tomorrow. Using the same Energy. Bloom Energy's solid oxide platform as our Energy Server, the Bloom Electrolyzer is designed fuel cells ("SOFCs") provide an electrochemical pathway to produce scalable and cost-effective hydrogen solutions. Our modular design makes the Bloom Electrolyzer ideal for applications across gas, utilities, nuclear, concentrated solar, ammonia and heavy industries. Our solid oxide, high-temperature electrolyzer is designed convert biogas to produce hydrogen onsite more efficiently than low-temperature PEM and alkaline electrolyzers. Because it operates at high temperatures, the Bloom Electrolyzer is designed to require less energy to break up water molecules and produce hydrogen. As electricity accounts for nearly 80 percent of the cost of without combustion, producing hydrogen from electrolysis, using less carbon-neutral electricity improves the economics of hydrogen production and helps bolster adoption. The Electrolyzer is designed to produce green hydrogen from 100 percent renewable power. The hydrogen produced onsite at a customer's facility can either be used as fuel or stored for consumption at a later point.

#### Marine Transportation

We have also adapted our Energy Servers to advance the decarbonization of the marine industry through the design and development of fuel cell powered ships. The marine transportation sector contributes to global pollution, as many ships continue to use carbon-rich fuels such as bunker fuel, diesel, and other hydrocarbons. As global infrastructure for low and emission-free fuels continue to develop, our modular, fuel-flexible and upgradable platform is designed to allow for existing ships in service to be upgraded, allowing the marine transportation sector long-term flexibility and scalability for improved ship design. Furthermore, noise with near zero air pollution and mechanical vibrations are substantially reduced when Energy Servers are used as a power source aboard ships. Our platform is IMO 2040- and 2050-ready today, with the ability to operate on liquefied natural gas, biogas and blended hydrogen. We are committed to developing the platform to accommodate multiple renewable fuels, such as green methanol and bioethanol, as the marine fuel market develops.

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#### Our Value Proposition

Our energy platform has three key value propositions: resiliency, sustainability and predictability. The three elements of our value proposition emphasize those areas where there is a strong customer need and where we believe we can deliver superior performance.

**Resiliency:** Our Energy Servers avoid the vulnerabilities of conventional transmission and distribution lines by generating power on-site where the electricity is consumed. The system operates at very high availability due to its modular and fault-tolerant design, which includes multiple independent power generation modules that can be hot-swapped to provide uninterrupted service. Unlike traditional combustion generation, water usage. Bloom Energy Servers can be serviced utilize proven, off-the-shelf gas conditioning equipment to process raw biogas into a suitable fuel for power generation.

- **Marine Fuel Cells.** Bloom's platform is well positioned to address impending emissions regulations and maintained without powering down offer higher efficiency than traditional power sources. Marine fuel cell powered ships can obtain immediate emissions reductions for the system. Importantly, Bloom Energy Servers that utilize existing cleanest and most efficient operation by utilizing liquefied natural gas infrastructure rely on a redundant underground mesh network, intended to provide for extremely high ("LNG") as the primary fuel availability that is protected from the natural disasters that often disrupt the power grid source.

**Sustainability:** Our Energy Servers uniquely address both the causes and consequences of climate change. Our projects lower carbon emissions by displacing less-efficient fossil fuel generation on the grid, which improves air quality, including in vulnerable communities, by generating electricity without combustion, offsetting combustion from grid resources as well as eliminating the need for dirtier diesel backup power solutions. Our microgrid deployments provide customers with critical resilience to grid instability, including disruptions resulting from climate-related extreme weather events. Our Energy Servers achieve this while consuming no water during operation, with optimized land use as a result of our high-power density.

A large part of our ongoing innovation is focused on the continued reduction of carbon emissions from our Energy Servers, and we are engaged in multiple efforts to align our product roadmap with a zero-carbon trajectory. We are developing new applications and market opportunities in sectors with dirtier grids and higher marginal emissions displacement.

In July 2021, we announced a commitment to match our customer's gas consumption with certified low-leak natural gas, reducing the release of harmful methane emissions stemming from upstream gas production. We are doing this by off-setting the pipeline gas used by our customers with credits for low-leak gas. On April 21, 2022, Bloom Energy and EQT, the largest producer of natural gas in the United States, announced they had closed a trade agreement for the transfer of MiQ + Equitable Origin certificates representing a mix

of social, environmental and governance attributes related to the production environment. Bloom has contracted for certificates to apply to its domestic fleet's anticipated natural gas consumption for 2022 and 2023. This program provides a certified leak rate our customers can use to inform lifecycle carbon accounting of their Energy Servers and reinforces our commitment to environmental stewardship and gas sector transformation.

EQT's certified natural gas production currently comprises 4.5% of all-natural gas produced in the United States, making EQT not only the nation's largest natural gas producer, but also the nation's largest producer of certified natural gas. Together, Bloom and EQT are leading the market for certified natural gas, which not only allows end-users to reduce the emissions associated with their value chain but also incentives emissions reduction efforts by producers. By converting its U.S. fleet of fuel cell installations – deployed at more than 700 sites – to EQT's certified natural gas, an estimated 176,000 metric tons of CO<sub>2</sub>e emissions can be avoided per year when compared to the national average leak rate, the equivalent of more than 38,000 passenger vehicles taken off the road annually. By transitioning our domestic fleet of fuel cells to certified natural gas, we believe we are taking an immediate and impactful step to help eliminate harmful methane emissions as we lay the foundation for a net-zero future.

We are also focused on scaling the generation and use of renewable natural gas (RNG). RNG is pipeline quality natural gas derived from biogas produced from decomposing organic waste, generally from landfills, agricultural waste or wastewater treatment facilities. It can be used as low carbon or net-zero fuel for our Energy Servers, or directly as the power solution in the renewable fuel process which lowers the Carbon Intensity score associated with the renewable fuel commodity.

Carbon intensity is simply defined as CO<sub>2</sub> emissions per unit of energy by the U.S. Energy Information Administration. The carbon intensity score measures greenhouse gas ("GHG") emissions associated with producing, distributing and consuming a fuel, which is measured in grams of CO<sub>2</sub> equivalent to megajoule (gCO<sub>2</sub>e/MJ). Different fuels emit different amounts of carbon dioxide in relation to the energy they produce when burned. For example, biofuels such as ethanol and biodiesel have been proven to emit significantly lower GHG emissions than petroleum-based fuels.

Additionally, we are pushing technology and business model boundaries to pioneer carbon capture and utilization and storage potential. It is both more feasible and cost-effective to capture CO<sub>2</sub> emissions from our Energy Servers than from combustion generation, as no costly and complex separation of other gases like nitrogen is required. Captured CO<sub>2</sub> emissions can be stored in underground geologic formations or utilized in new products or processes.

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We continue to progress on our development and commercialization of scalable and cost-effective 100 percent hydrogen solutions and zero emission power generation. Our flexible and modular platform approach allows for customization at the time of equipment commissioning and a pathway to upgrade existing systems to align with the sustainability goals of our customers over time. In 2021, we announced the commercial availability of our hydrogen-powered fuel cells and electrolyzers capable of producing clean hydrogen. Our 100 kilowatt hydrogen-powered Energy Server project in the Republic of Korea commenced operations in April 2021 and our Electrolyzers have been successfully installed and began producing hydrogen in January 2022.

Finally, our Electrolyzer is the most efficient electrolyzer technology available today that splits water molecules to produce clean hydrogen. We collaborated with the Department of Energy's Idaho National Lab to prove this efficiency using our electrolyzer and excess nuclear energy to produce clean hydrogen at record-breaking efficiencies. We are now working with many other industries on a variety of applications in the hydrogen economy.

**Predictability: Competition** In contrast to the rising and unpredictable cost outlook for grid electricity, we offer our customers the ability to lock in cost for electric power over the long-term. Unlike the grid price of electricity, which reflects the cost to maintain and update the entire transmission and distribution system, our price to our customers is based solely on their individual project. In the regions where the majority of our Energy Servers are deployed, our solution typically provides electricity to our customers at a cost that is competitive with traditional grid power prices. In addition, our solution provides greater cost predictability versus rising grid prices. Whereas grid prices are regulated and subject to frequent change based on the utility's underlying costs, customers can contract with us for a known price in each year of their contract. Moreover, we provide customers with a solution that offers all of the fixed equipment and maintenance costs for the life of the contract.

Our Energy Servers are designed to deliver 24x7 power with very high availability, mission-critical reliability and grid-independent capabilities. The Energy Server can be configured to eliminate the need for traditional backup power equipment, such as diesel generators, batteries and uninterruptible power systems, by seamlessly delivering power before and after a grid failure. Our Energy Servers are designed to offer consistent power supply for mission critical operations that require a high level of electrical reliability and uninterrupted availability, such as data centers, hospitals, and biotechnology facilities. This is particularly important as society becomes more reliant on digital systems and sophisticated operational technology. Power quality issues can cause equipment failure, downtime, data corruption and increased operational costs.

Further, our Energy Servers were designed to provide 'quick time to power' – the ability to be deployed and begin generating power in as little as days or weeks – as an important value proposition for customers that need to ramp up power quickly. This capability is ideal for customers who need critical power but are facing utility capacity constraints, delays or additional costs. The modularity, quick deployment, ease of installation and small footprint of our Energy Servers facilitate ease of accessibility to power.

Our Energy Server can be augmented to provide grid-independent operation. Customers can elect an Energy Server technical solution for mission critical applications, such as in data centers or a more basic grid outage protection, such as for a retail store. Customers also have a variety of choices for financing vehicles, contract duration, pricing schedules and fuel procurement.

## **Technology**

Our solid oxide technology platform is the foundation for both our Energy Servers and our Electrolyzers. Solid oxide is unique from other fuel cell chemistries in that it runs at a higher temperature, making it more efficient than other fuel cell technologies. The solid oxide fuel cells in our Energy Servers convert fuel, such as natural gas, biogas, hydrogen, or a blend of fuels, into electricity through an electrochemical reaction without burning the fuel. Each individual fuel cell is composed of three layers: an electrolyte sandwiched between a cathode and an anode. The electrolyte is a solid ceramic material, and the anode and cathode are made from inks that coat the electrolyte. Unlike other types of fuel cells, no precious metals, corrosive acids, or molten materials are required. These fuel cells are the foundational building block of our Energy Servers. Regardless of the starting size of a solution, further scaling can be accomplished after the initial system is deployed, creating ongoing flexibility and scalability for the customer.

Our electrolyzer technology dates to the 1980s, when our co-founders first developed electrolyzers to support the U.S. military and later NASA's Mars exploration programs. In the early 2000s, 19 patents were awarded to Bloom Energy for its electrolyzer technology. With reduced renewable energy costs and the global movement to decarbonize, we believe it is the right moment to commercialize our hydrogen technology which is ready for deployment at scale. The Bloom Electrolyzer is based on our solid oxide technology and is designed to generate hydrogen from electricity at superior efficiencies compared to PEM and alkaline solutions. Our electrolyzer advances decarbonization efforts by providing a clean fuel for carbon-free

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generation, injection into the natural gas pipeline, transportation, or for use in industrial processes. Because it operates at high temperatures, the Bloom Electrolyzer requires less energy to break up water molecules and produce hydrogen.

### **Research and Development**

Our research and development organization has addressed complex applied materials, processing and packaging challenges through the invention of many proprietary advanced material science solutions. Over more than a decade, Bloom has built a world-class team of solid oxide fuel cell scientists and technology experts. Our team comprises technologists with degrees in Materials Science, Electrical Engineering, Chemical Engineering, Mechanical Engineering, Civil Engineering and Nuclear Engineering, and includes 52 PhDs within these or related fields. This team has continued to develop innovative technology improvements for our Energy Servers. Since our first-generation technology, we have reduced the costs and increased the output of our systems through the next generation of our Energy Servers and increased the life of our fuel cells by over two and half times.

We have invested and will continue to invest a significant amount in research and development. See our discussion of research and development expenses in Part II, Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations* of this Annual Report on Form 10-K for further information.

### **Competition**

We primarily compete against gas engines, combined heat and power systems, and the utility grid; for grid-independent operations, grids; we compete with diesel generators. generators for grid-independent operations. Our solutions are based on superior reliability, resiliency, cost savings, predictability, and sustainability, all of which can be customized to the needs of individual customers. Customers do not currently have alternative solutions that provide all of these important attributes in one platform. As we work to drive our costs

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down and make technological improvements, we expect our value proposition to be become more competitive relative to grid power in additional markets.

Other sources of competition and the attributes that differentiate us include:

- *Intermittent solar power paired with storage.* Solar power is intermittent and best suited for addressing daytime peak power requirements, while our Energy Servers are designed to provide stable baseload generation. Storage technology is intended to address the intermittency of solar power, but power. However, the low power density of the combined technologies and the challenges of extended poor weather events that sharply decrease solar power production and battery recharging makes make the solution impractical for most commercial and industrial customers looking for on-site solutions to offset a significant amount of power. As a point of comparison, our Energy Servers to provide the same power output in 1/125<sup>th</sup> of the footprint of as our Energy Servers, a photovoltaic solar installation allowing will require 125 times more space. This allows us to serve far more a bigger portion of a customer's energy requirements based on a customer's their available and typically limited space.
- *Intermittent wind power.* Power from wind turbines is intermittent, similar to solar power. Typically, wind power is deployed for utility-side, grid-scale applications in remote locations but not as a customer-side, distributed power alternative due to prohibitive space requirements and permitting issues. Where distributed wind power is available, it can be combined with storage, with similar benefits and challenges to solar-and-storage combinations. Remote wind farms feeding into the grid do not help end customers avoid the vulnerabilities and costs of the transmission and distribution system.
- *Traditional co-generation systems.* These systems deliver a combination of electric power and heat from combustion sources. We believe we compete favorably because of our non-combustion platform, superior electrical efficiencies, significantly less complex deployment (avoiding heating systems integration and requiring less space), superior availability, aesthetic appeal, and reliability. Unlike these systems, which depend on the full and concurrent utilization of waste heat to achieve high efficiencies, we can provide highly efficient systems to any customer based solely on their power needs.
- *Traditional backup equipment.* As our Energy Servers deliver reliable power, particularly in grid-independent configurations where our Energy Servers can operate during grid outages, they can obviate prevent the need for traditional backup equipment, such as diesel generators. By providing combustion-free power 24x7 rather than just as a backup, we generally offer a better integrated, more reliable, cleaner, and more cost-effective solution than these grid-plus-backup systems.

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- *Other commercially available fuel cells.* Basic fuel cell technology is over 100 years old. Our Energy Server uses advanced solid oxide fuel cell technology, which produces electricity directly from oxidizing a fuel. The type of solid oxide fuel cell we compete against has a solid oxide or ceramic electrolyte. The advantages of our technology include higher efficiency, long-term stability, elimination of the need for an external fuel reformer, ability to use biogas, natural gas, or hydrogen as a fuel, low emissions, and relatively low cost. There are a variety of fuel cell technologies, characterized by their electrolyte material, including:
  - *Proton exchange membrane fuel cells ("PEM").* PEM fuel cells are typically used in onboard transportation applications, such as powering forklifts, because of their compactness and ability for quick starts and stops. However, PEM technology requires an expensive platinum catalyst, which is susceptible to poisoning by trace amounts of impurities in the fuel or exhaust products. These fuel cells require high-cost fuel input sources of energy or an external fuel reformer, which adds to the product's cost, complexity, and electrical inefficiency of the product. As a result, they are not typically an economically viable option for stationary baseload power generation.
  - *Molten carbonate fuel cells ("MCFC").* MCFCs are high-temperature fuel cells that use an electrolyte composed of a molten carbonate salt mixture suspended in a porous, chemically inert ceramic matrix of beta-alumina solid electrolyte. The primary disadvantages of current MCFC technology are durability and lower electrical efficiency compared to solid oxide fuel cells. Current versions of the product are built for 300 kilowatt systems and they are monolithic rather than modular. Smaller sizes are typically not economically viable. In many applications where the heat produced by these fuel cells is not commercially or internally useable continuously, mitigating the heat buildup also becomes a liability.
  - *Phosphoric acid fuel cells ("PAFC").* PAFCs are a type of fuel cell that uses liquid phosphoric acid as an electrolyte. Developed in the mid-1960s and field-tested since the 1970s, they were the first fuel cells to be commercialized. PAFCs have been used for stationary power generators with output in the 100 kilowatt range. PAFCs are best suited to combined heat and power output applications that require carefully matching and constant

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monitoring of power and heat requirements (heat is typically not required all year long thus significant efficiency is lost), often making the technology difficult to implement. Further, disadvantages include low power density and poor system output stability.

### **Value Proposition**

- *Resiliency.* Our Energy Servers avoid the vulnerabilities of conventional transmission and distribution lines by generating power on-site. The system operates at very high availability due to its modular and fault-tolerant design, which includes multiple independent power generation modules that can be hot-swapped to provide uninterrupted service. Unlike traditional combustion generation, Bloom Energy Servers can be serviced and maintained without powering down the system. Importantly, Bloom Energy Servers that utilize existing natural gas infrastructure rely on a redundant underground mesh network, intended to provide for extremely high fuel availability that is protected from the natural disasters that often disrupt the power grid.
- *Low temperature electrolyzers Sustainability.* Our Energy Servers uniquely address both the causes and consequences of climate change. Our projects lower carbon emissions by displacing less-efficient fossil fuel generation on the grid, which improves air quality, including in vulnerable communities, by generating electricity without combustion, offsetting combustion from grid resources as well as eliminating the need for dirtier diesel backup power solutions. Our microgrid deployments provide customers with critical resilience to grid instability, including disruptions caused by climate-related extreme weather events. Our Energy Servers are designed to achieve this while emitting near-zero criteria pollutants, consuming no water during steady-state operation, and minimizing land use impacts due to our high-power density.
- *Predictability.* In contrast to the rising and unpredictable cost outlook for grid electricity, we offer our customers the ability to lock in the cost of electric power over the long term. Unlike the grid price of electricity, which reflects the cost to maintain and update the entire transmission and distribution system, our price to our customers is based solely on their individual projects. In regions where most of our Energy Servers are deployed, we provide electricity to our customers at a cost that is competitive with the grid price of electricity. Our solution provides greater cost predictability versus rising grid prices. Whereas grid prices are subject to frequent change based on the utility's underlying costs, customers can contract with us for a known price in each year of their contract. Moreover, we provide customers with a solution that offers all of the fixed equipment and maintenance costs for the life of the contract. Our Energy Servers are designed to deliver 24x7 power with very high availability, mission-critical reliability and grid-independent capabilities.
- *Time to Power.* Our Energy Servers were designed to provide 'quick time to power' — the ability to be deployed and generate power in weeks — an important value proposition for customers needing to ramp up power quickly. This capability is ideal for customers who need critical power but face utility capacity constraints, delays, or additional costs. The modularity, quick deployment, ease of installation, and small footprint of our Energy Servers facilitate ease of accessibility to power.

### **Bloom Electrolyzer**

We believe we are uniquely positioned for the hydrogen future of tomorrow. The Bloom Electrolyzer is designed to produce scalable and cost-effective hydrogen solutions based on the same solid oxide platform as our Energy Server. The Bloom Electrolyzer is ideal for applications across gas, utilities, nuclear, concentrated solar, ammonia and heavy industries. Our solid oxide, higher-temperature Electrolyzer is designed to produce hydrogen onsite more efficiently than lower-temperature PEM and alkaline electrolyzers. Because

it operates at higher temperatures, the Bloom Electrolyzer is designed to require less electric energy to break up water molecules and produce hydrogen. As electricity accounts for nearly 80 percent of the cost of producing hydrogen from electrolysis, using less electricity improves the economics of hydrogen production and helps bolster adoption. The Bloom Electrolyzer is designed to produce green hydrogen when using low- or zero-carbon electric power. The hydrogen produced onsite at a customer's facility can be used as fuel or stored for consumption at a later point.

#### **Value Proposition**

- **Higher Efficiency.** Fuel (steam) supplied to the Bloom Electrolyzer undergoes an electrochemical reaction at 700-900 degrees Celsius which is higher than other currently available technologies. This leads to a fundamental efficiency advantage to produce hydrogen by consuming less electricity.

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- **Scale.** Bloom has reached scale in the Energy Server by growing revenues at a 30% compound annual growth rate over the last decade. Our commercial field experience in fuel cells directly transfers to our hydrogen production products, as we build upon the same core platform, supply chain, manufacturing process, partners, and advanced remote software monitoring across all our products and applications. Our experience as a developer of fuel cell projects, in addition to our role as an original equipment manufacturer ("OEM"), enables us to engage with customers and deliver turnkey projects.
- **Modular Design.** As with the Bloom Energy Server, Bloom's modular design allows for targeted maintenance in individual electrolyzer modules while the rest of the facility continues to operate. This helps to avoid lengthy and costly shutdowns.

#### **Electrolyzer Competition**

Given that the green hydrogen industry is at an early stage, no single technology has gained a leadership position. In electrolysis, electrical efficiency is a function of temperature, with higher efficiency favored by higher temperature due to better reaction kinetics at higher temperatures and lower polarization losses. The Bloom Electrolyzer, which uses solid oxide electrolyzer cells ("SOEC"), is differentiated from Alkaline, Proton Exchange or Polymer Electrolyte Membrane (PEM), PEM, and Anion Exchange Membrane (AEM) ("AEM") electrolysis which are low temperature electrolysis methodologies using liquid water. With high temperature electrolysis, the water needs to be heated, vaporized, and brought to operating temperature. By The thermal energy requirements are reduced by using steam at or near operating temperature as the input to the electrolyzer, the thermal energy requirements are reduced. Integration of Electrolyzer. Integrating SOEC with another process with available waste heat to provide the thermal energy provides additional efficiency gains.

#### **Research and Development**

Our research and development organization has addressed complex applied materials, processing and packaging challenges by inventing many proprietary advanced material science solutions. Over more than a decade, Bloom has built a world-class team of solid oxide fuel cell scientists and technology experts. Our team comprises technologists with degrees in Materials Science, Electrical Engineering, Chemical Engineering, Mechanical Engineering, Civil Engineering and Nuclear Engineering, and includes 57 PhDs within these or related fields. This team has continued to develop innovative technological improvements for our Energy Servers. Since our first-generation technology, we have reduced the costs, increased the output of our systems, and increased the life of our fuel cells by over two and half times.

We have invested and plan to continue to invest a significant amount in research and development. See our discussion of research and development expenses in Part II, Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations* of this Annual Report on Form 10-K for further information.

#### **Intellectual Property**

Intellectual property is an essential differentiator for our business, and we seek protection for to protect our intellectual property whenever possible. We rely upon through a combination of patents, copyrights, trade secrets, and trademark laws, along with trademarks, employee and third-party non-disclosure agreements, and other contractual restrictions to establish and protect our proprietary rights. restrictions.

We have developed a significant patent portfolio to protect elements of our proprietary technology. As of December 31, 2022 December 31, 2023, we had 313 issued 325 active patents and 136 141 patent applications pending in the United States, U.S., and we had an international patent portfolio comprising 164 issued 145 active patents and 845 414 patent applications pending. Our U.S. patents are expected to expire between 2023 2022 and 2041 2042. While patents are an important essential element of our intellectual property strategy, our business as a whole is not dependent on any one patent or any single pending patent application.

We continually regularly review our development efforts to assess the existence and patentability of new intellectual property. We pursue the registration of our domain names, and trademarks, and service marks in the United States U.S. and in some international locations. "Bloom Energy" and the "BE" logo logos are our registered trademarks in certain countries for use with the Energy Servers and our other products. We also hold registered trademarks for, among others, "Bloom Box," "BloomConnect," "BloomEnergy," and "Energy Server" in certain countries. In an effort to protect our brand, as of December 31, 2022 December 31, 2023, we had 7 registered trademarks and 1 pending application in the U.S. and 46 registered trademarks and 15 pending applications across Australia, Brazil, Canada, Chile, China, the European Union, India, Israel, Japan, Mexico, Oman, Singapore, South Africa, Republic of Korea, Saudi Arabia, Taiwan, the United Arab Emirates, and the United Kingdom.

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eight registered trademarks and two pending applications in the United States and 40 registered trademarks across Australia, China, the European Union, India, Japan, Republic of Korea, Taiwan, the United Kingdom.

When appropriate, we enforce our intellectual property rights against other parties. For more information about risks related to our intellectual property, please see the risk factors set forth under the caption Part I, Item 1A, *Risk Factors* ■ *Risks Related to Our Intellectual Property*.

### Manufacturing Facilities

Our primary manufacturing facilities for **fuel cells** **Energy Servers** and **Energy Servers** **Electrolyzers** assembly are in **Sunnyvale, California**, Fremont, California, and Newark, Delaware. We own our 178,000 square-foot manufacturing facility in Newark, which was our first purpose-built Bloom Energy manufacturing center and was designed specifically for copy-exact duplication as we expand, which we believe will help us scale more efficiently. Our Newark facility includes an additional 25 acres available for factory expansion and/or the co-location of supplier plants.

In September 2023, as part of the approved restructuring plan (the "Restructuring Plan"), we initiated a closure of our 50,000 square-foot manufacturing, warehousing, research and development ("R&D") facility in Sunnyvale, California, which lease expired in December 2023. Under the Restructuring Plan, we are consolidating the Sunnyvale facility with our manufacturing facility in Fremont, California, and performing an optimization of our manufacturing workforce. The restructuring activities are expected to be completed in the first half of fiscal 2024, subject to local law and consultation requirements, as well as our business needs. For more information about the restructuring, please see Part II, Item 8, Note 12 — *Restructuring*.

We lease various manufacturing facilities in California and Delaware. The current leases for our 50,000 square-foot principal Sunnyvale manufacturing facility and 44,000 square-foot Mountain View manufacturing facility expire in December 2023 and June 2023, respectively. We leased a new an 89,000 square-foot R&D and manufacturing facility in Fremont, California, that which became operational in April 2021. The lease term terms of our 56,000 square-foot Repair & Overhaul ("R&O") manufacturing facilities in Newark, Delaware, expires with a total area of 56,000 square feet expire in December 2026 and April 2027. In September 2023, according to the Restructuring Plan, we approved the relocation of a portion of our R&O department of our Newark manufacturing and warehousing facility to Mexico. We expect the relocation to be completed in the fourth quarter of fiscal 2024.

Additionally, we leased a new 164,000 square-foot manufacturing facility in Fremont, California that expires in February 2036. In July 2022 we announced the grand opening of this multi-gigawatt manufacturing facility, which represented a \$200 million investment. This followed the recent expansion of the Company's global headquarters in San Jose in June 2021 as well as the opening, in June 2022, of a new research and technical center and a global hydrogen development facility in Fremont with a total space of 73,000 square feet.

In 2020, we established a light-assembly facility in the Republic of Korea, in connection with our efforts to develop a local supplier ecosystem through a joint venture with SK ecoplant. Operations began in early July 2020. Based on the expanded relationship between us and SK ecoplant, the joint venture in 2022 was further extended extended in 2022-2023.

Please see Part I, Item 2, *Properties* for additional information regarding our facilities.

### Supply Chain

Our supply chain has been developed, since our founding, with a group of high-quality suppliers that support automotive, **semiconductor** semiconductors and other traditional manufacturing organizations. The production of fuel cells requires rare earth elements, precious metals, scarce alloys and industrial commodities. Our operations require raw materials, and in certain cases, third-party services that require special manufacturing processes. We generally have multiple sources of supply for our raw materials and services except in cases where we have specialized technology and material property requirements. Our supply base is spread around many geographies in Asia, Europe and India, consisting of suppliers with multiple areas of expertise in compaction, sintering, brazing and dealing with specialty material manufacturing techniques. Where possible, we responsibly source components like interconnects and balance of system components from various manufacturers on both a contracted and a purchase order basis. We have multi-year supply agreements with some of our supply partners for supply continuity and pricing stability. We are working with our suppliers and partners along all steps of the value chain to reduce costs by improving manufacturing technologies and expanding economies of scale.

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There have been a number of disruptions throughout the global supply chain as the global economy reopens; chain; demand for certain components has outpaced the return of the global supply chain to full production. We Though the supply constraints for a majority of our raw materials and components are expected to ease in 2024, we have experienced an increase in lead times with respect to the delivery of most some of our components due to a variety of factors, including supply shortages, shipping delays and labor shortages, and we expect this to continue into the first half of 2023. During 2022, shortages. Though we experienced delays from certain vendors and suppliers as a result of these factors, although we were able to mitigate the impact so that we did not experience significant delays in the manufacture of our Energy Servers. For additional information on our supply chain, please see Part II, Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations* ■ *Overview* ■ *Certain Factors Affecting our Performance*.

### Services

We provide operations and maintenance agreements ("O&M Agreements") for all of our Energy Servers, which are typically renewable at the election of the customer on an annual basis. The customer agrees to pay an ongoing service fee, and

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in return, we monitor, maintain, and operate the Energy Servers systems on the customer's or owner's behalf. We currently service and maintain every installed Energy Server worldwide.

As of **December 31, 2022** December 31, 2023, our in-house service organization had 136 dedicated field service personnel distributed across multiple locations in both the **United States** U.S. and internationally. Our standard O&M Agreements include full remote monitoring and 24x7 **operation of operational capability over the systems** as well as scheduled and unscheduled maintenance, which in practice includes preventative maintenance, such as filter and adsorbents replacements and on-site part and periodic fuel cell replacements.

Our two Remote Monitoring and Control Centers ("RMCC") provide 24x7 coverage of every **installed** Energy Server **installation** worldwide. By situating our RMCC centers in the **United States** U.S. and India, we are able to provide 24x7 coverage cost effectively and also provide a dual redundant system with either site able to operate continuously should an issue arise. Each Energy Server we ship includes instrumentation and a secure telemetry connection that enables **either** RMCC to monitor over 500 system performance parameters in real time. This comprehensive monitoring capability enables the RMCC operators to have a detailed understanding of the internal operation of our Energy Servers. Using proprietary, internally developed software, the RMCC operators can detect changes and override the onboard automated control systems to remotely adjust parameters to **ensure the maintain optimum system performance is maintained**. **performance**. In addition, we undertake advanced predictive analytics to identify potential issues before they arise and undertake adjustments prior to a failure occurring.

Our services organization also has a dedicated **Repair & Overhaul ("R&O")** &O facility, **which is currently based in Delaware, Delaware**. As discussed in **close proximity** section **Manufacturing Facilities**, in September 2023 as part of the Restructuring Plan we approved the relocation of the R&O Department to Mexico. This will help to realign our **product manufacturing** facility. This **R&O operational focus** to support our multi-year growth, scale the business, and improve our cost structure and operating margins. **The** facility undertakes full refurbishment of returned fuel cells with the capability to restore **it** them to full power, efficiency, and life with a less than **three weeks** three-week turnaround. **Close proximity** to our Delaware manufacturing facility enables us to review the condition of returned modules and it informs improved manufacturing processes.

### **Purchase and Financing Options**

In order to appeal to the largest variety of customers, we make available several options to **our customers**, **them**. Both in the **United States** U.S. and internationally, we sell **our** Energy Servers directly to customers. In the **United States**, U.S., we also enable customers' use of the Energy Servers through a power purchase or Power Purchase Agreement (as defined below) and a Managed Services Agreement (as defined below) (whereby we sell and lease offering, back the Energy Servers in order to supply energy to our customers), each made possible through third-party ownership financing arrangements.

Often, our offerings are designed to take advantage of local incentives. In the **United States**, U.S., our financing arrangements are structured to optimize both federal and local incentives, including the Investment Tax Credit ("ITC" (the "ITC") and accelerated depreciation. Internationally, our sales are made primarily to distributors who **on-sell** **sell** to, and install for, customers; these deals are also structured to use local incentives applicable to our Energy Servers. Increasingly, we use trusted installers and other sourcing collaborations in the **United States** U.S. to generate transactions.

With respect to the third-party financing options in the **United States**, U.S., a customer may choose a contract for the use of the Energy Servers in exchange for a capacity-based flat payment (a "Managed Services Agreement") or one for the purchase of electricity generated by the Energy Servers in exchange for a scheduled dollars per kilowatt hour rate (a "Power Purchase Agreement" or "PPA").

Certain customer payments in a Managed Services Agreement are required, regardless of the level of performance of the Energy Server; in some cases it may also include a variable payment based on the Energy Server's performance or a performance-related set-off. Managed Services Agreements are then financed pursuant to a sale-leaseback with a financial institution (a "Managed Services Financing").

PPAs are typically financed on a portfolio basis. We have financed portfolios through tax equity partnerships, acquisition financings and basis whereby we make direct sales of PPAs to investors (each, a "Portfolio Financing"). investors.

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For additional information about our different financing options, please see Part II, Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations* — **Purchase and Financing Options**.

### **Sales, Marketing and Partnerships**

We sell our **Energy Servers** products through a combination of direct and indirect sales channels. At present, most of our U.S. sales are through our direct sales force, which is segmented by vertical and type of account. A large part of our direct sales force is now focused on our expansion efforts in the **United States** and creating new opportunities internationally. We are also expanding our relationship with utilities and other commercial customers across the **U.S.** including hospitals, manufacturing facilities, data centers, agribusinesses, financial institutions, and telecom facilities. **U.S.** We have developed a network of strategic

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energy advisors that originate new opportunities and referrals to Bloom Energy, which has been a valuable source of high-quality leads.

We pursue relationships with other companies and partners in areas where collaboration can produce product advancement and acceleration of entry into new geographic and vertical markets. The objectives and goals of these relationships can include one or more of the following: technology exchange, joint sales and marketing, installation, customer financing or service.

As we have cultivated sales as well as strategic and financing partners over the past several years, our sales have been concentrated among a few large customers and distributors each year. During the year ended December 31, 2022 December 31, 2023, revenue from two customers accounted for approximately 38% 37% and 37% 26% of our total revenue, respectively. Please see Part II, Item 8, Note 1 — Nature of Business, Liquidity and Basis of Presentation — Concentration of Risk — Customer Risk.

SK ecoplant in the Republic of Korea is a our strategic power generation and distribution partner. Together, we have transacted nearly 330MW of projects totaling more than \$2.3 billion of equipment and expected service revenue. In October 2021, we announced an expansion of our existing partnership with SK ecoplant, that includes purchase commitments for at least 500MW 500 megawatts of our Energy Servers between 2022 and 2025 2024 on a take or pay take-or-pay basis, the creation of hydrogen innovation centers in the United States U.S. and the Republic of Korea to advance green hydrogen commercialization, and an equity investment in Bloom Energy. Please In September 2023, SK ecoplant became a related party to us with the beneficial ownership of 10.5% of our outstanding Class A common stock. On December 21, 2023, we further expanded our business partnership with SK ecoplant through the increase of SK ecoplant's purchase commitments for Bloom Energy products of 250 megawatts through 2027 and extended the timing of delivery of the remaining take-or-pay commitment under the original agreement. For additional information, please see Part II, Item 8, Note 17 — SK ecoplant Strategic Investment in Part II, Item 8, Financial Statements and Supplementary Data, Investment.

### Sustainability

We are driven by the promise of our contribution to the transformation and decarbonization of energy and transportation sectors globally. We are working to make our technology available across a growing list of regions and applications including biogas, carbon capture, hydrogen, marine, combined heat and power, and microgrid projects critical to aligning with a two-degree 1.5 degree warming trajectory. Our natural gas based gas-based Energy Servers are also an important source of near-term emission reductions, and we're we are committed to evolving the gas sector though through our technology development and leading market-based activity.

One manifestation of our market-based evolution is our responsibly sourced gas program. On April 21, 2022, Bloom Energy Servers produce clean, reliable energy without combustion that provide greenhouse gas, air quality, water, land-use and EQT, resilience benefits for customers and the communities they serve. The Bloom Electrolyzer is based upon the same solid oxide technology platform in a large producer of natural gas in the United States, announced a certificate trade agreement for MIQ+Equitable Origin certified natural gas. Bloom has purchased certificates for its U.S. fleet's anticipated natural gas consumption for the next two years. This agreement reinforces our commitment to provide affordable, reliable and clean energy sources that were produced with the highest ESG standards.

We continue to progress our development and commercialization of scalable highly efficient and cost-effective hydrogen production process. Our innovative solid oxide fuel cell platform technology offers modular and zero emission power generation solutions. Our flexible solutions configurable to address both the causes and modular platform approach allows for customization at the time consequences of equipment commissioning and a pathway to upgrade existing systems to align with the sustainability goals of our customers over time, climate change.

As a manufacturer, our commitment to sustainability is reflected not only through the impacts of our products in operation but also through our internal commitment to resource efficiency, responsible design, materials management and recycling. We endeavor to consistently increase our supply chain responsibility and approach to human capital management in ways that help us to continue to deliver products that add long-term societal value.

We are driven by the promise of our contribution to the transformation and decarbonization of energy and transportation sectors globally. We are working to make our technology available across a growing list of applications including biogas, carbon capture, hydrogen, marine and microgrid projects critical to aligning with a two-degree warming trajectory.

Bloom Energy Servers produce clean, reliable energy without combustion that provide greenhouse gas, air quality, water, land-use and resilience benefits for customers and the communities they serve. The Bloom Electrolyzer is designed to utilize the same solid oxide technology platform in a highly efficient and cost-effective hydrogen production process. Our innovative solid oxide fuel cell platform technology offers modular and flexible solutions configurable to address both the causes and consequences of climate change.

Our Energy Servers withdraw water only during start-up and if the system needs to restart. Otherwise, Energy Servers use no water during operation, avoiding water withdrawals of more than 18,000 gallons per megawatt hour. Conversely, thermal power plants require significant amounts of water for cooling. In fact, the number one use of water in the United States is for cooling power plants. Based on data from the Energy Information Administration ("EIA"), total water withdrawal by U.S.

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thermoelectric power plants is over 50 trillion gallons annually. The water intensity of U.S. thermoelectric power plants is approximately 13,000 gallons per megawatt hour. This results in over 108 Olympic-sized pools of water saved annually for a 1 megawatt Bloom fuel cell in the United States. Importantly, 55.4% of Bloom's installed base of Energy Servers is in California where all 58 counties are under a drought emergency proclamation and the state is in the driest period in the last 1,200 years. Critically, Bloom projects contribute to enhanced water abundance, improved watershed and ecosystem health through avoided water withdrawal and consumption across the state.

We are focused on energy efficiency in our production and administrative processes and have introduced a significant amount of energy-efficient plant automation over the last several years. Our own Energy Servers power most of our facilities, where suitable, as efficient and resilient energy sources. We also use our Energy Servers to charge

employee vehicles at manufacturing facility locations, and as we broaden the integration of our Energy Servers across our real estate portfolio, we will continue to support our employees with lower carbon intensity and resilient onsite electric vehicle charging.

We take a cradle-to-grave perspective on product design and use. We strive to reuse components and recoverable materials where feasible and use conflict-free, non-toxic new resources where needed. We design our equipment so that components can be easily refurbished as needed instead of requiring new equipment. Finally, we seek to cover as many materials and components as possible practicable during end-of-life management, reusing these materials and components. As a function of From an approximately 30,000-pound Bloom Energy Server, the weight of components that go to the landfill without a recycling or refurbishment stream comprises approximately 510 pounds, or approximately less than approximately 2% of the total server Energy Server weight.

In 2023, we continued our responsibly sourced gas program by acquiring and retiring MiQ+ Equitable Origin certified-low-leak natural gas certificates, representing reduced release of harmful methane emissions stemming from upstream gas production. The program provides a validated leak rate that can be used to inform lifecycle carbon accounting and reinforces

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our commitment to environmental stewardship and gas sector transformation. Use of certified natural gas helps us take an immediate and impactful step to help eliminate harmful methane emissions as we lay the foundation for a net-zero future.

### **U.S. & Global Climate Issues**

Global warming Climate change and resulting extreme weather are having significant economic, environmental and social impacts in the United States U.S. and around the world. These effects and anticipated future impacts have resulted in a wide array of market and regulatory responses, and we expect that these types of responses will continue to do so. Our business can be impacted by climate change, and by those market and regulatory responses, in a variety of ways. We closely follow the impacts of climate change on the energy system, and its customers, as well as the regulatory, policy and voluntary measures taken in response to those impacts, so that we may understand and respond to changing conditions that may affect our company, Company, our customers, and our investors and business partners. We are responsive to the recommendations from the Task Force on Climate-related Financial Disclosures ("TCFD"), as well as disclosure guidance from the Sustainability Accounting Standards Board ("SASB"). We issued our first TCFD and SASB-aligned Sustainability Report in 2021 covering 2020 followed by another aligned report additional annual reports covering activities in 2021 and 2022. We plan to issue a sustainability report annually.

The direct impacts of climate change on energy systems, including the increased risk they pose to energy service disruption, may provide an opportunity for our extremely reliable and resilient energy generation. New or more stringent international accords, national or state legislation, or regulation of greenhouse gas emission GHG emissions may increase demand for our bioenergy and hydrogen-based products, but they may also make it more expensive or impractical to deploy natural gas-fueled Energy Servers in some markets, notwithstanding their enhanced environmental performance relative to combustion-based technologies or may cause the loss of regulatory or policy incentives for those deployments. Examples include an anticipated greenhouse gas GHG standard for participation in favorable fuel cell tariffs under consideration in California, new climate emissions restrictions or the introduction of carbon pricing, and the adoption of bans or restrictions on new natural gas interconnections by some local jurisdictions. For more on climate and environmental related risks, see Part I, Item 1A, *Risk Factors* Risks Related to Legal Matters and Regulations.

### **Permits and Approvals**

Each Energy Server and Electrolyzer installation must be designed, constructed and operated in compliance with applicable federal, state, international and local regulations, codes, standards, guidelines, policies and laws. To operate our systems, we, our customers and our partners are each required to obtain applicable permits and approvals from for the installation of the Energy Servers and the Electrolyzers, which may include federal, state, and local authorities for the installation of Energy Servers and Electrolyzers and authority approvals; for the interconnection systems with the local electrical utility utility; and, where the gas distribution system is used, the gas utility as well.

### **Government Policies and Incentives**

There are varying policy frameworks across the United States U.S. and internationally designed to support and accelerate the adoption of clean and/or reliable distributed power generation and hydrogen technologies, such as the manufacturing and deployment of our Energy Servers and our Electrolyzers. These policy initiatives often come in the form of tax incentives, cash grants, performance incentives, environmental attribute credits, permitting regimes, interconnection policies and/or applicable gas or electric tariffs.

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The U.S. federal government provides businesses with an Investment Tax Credit ("ITC") the ITC under Section 48 of the Internal Revenue Code, available to the owners of our Energy Servers for the tax year in which the systems are placed into service. On August 7, 2022, the U.S. Senate passed the Inflation Reduction Act of 2022 (the "IRA") IRA under the fiscal year 2022 budget reconciliation instructions. On August 16, 2022, the IRA was signed into law. This new bill became the U.S. federal government's largest-ever investment to fight climate change. The IRA includes numerous investments in climate protection, and, among them, an extension and expansion of the ITC and the Production Tax Credit under Section 45 of the Internal Revenue Code, the addition of expanded tax credits for other technologies and for manufacturing of clean energy equipment, as well as terms allowing parties to more easily monetize the tax credits. The IRA contains a multi-tiered credit-amount structure for many applicable tax credits. Specifically, many of the credits have a lower base credit amount that can be increased up to five times if the taxpayer can satisfy applicable prevailing wage or apprenticeship requirements. The IRA also creates certain

bonus tax credit amounts relevant to projects involving Bloom products that are placed in service, or of which construction begins, in 2023 and 2024 available by satisfying and that satisfy domestic content criteria and/or locating are located within an "energy community" community." The IRA also creates tax credits for the production of hydrogen and carbon capture, as well as incentives for clean energy manufacturing. By implementing the IRA, the U.S. federal government aims to make an impact on energy markets so that cleaner options are more affordable to consumers.

Our Energy Servers are currently installed at customer sites in eleven twelve states in the United States, U.S., each of which has its own enabling policy framework. Some states have utility procurement programs and/or renewables portfolio standards for which our technology is eligible. Our Energy Servers currently qualify for a variety of benefits and incentives, such as tax exemptions,

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interconnection benefits, relief from utility charges and other forms of economic and energy benefits, in many 21 states including Connecticut, New Jersey, Maryland, Massachusetts, New York, Pennsylvania, Rhode Island, Illinois, Indiana, Michigan, Ohio, West Virginia, Tennessee, Virginia, North Carolina, Delaware, Kentucky, Washington, New Hampshire, Vermont, and Maine. These policy provisions are subject to change.

Some municipal jurisdictions are considering or have recently enacted building codes or local ordinances that limit access to the natural gas pipeline distribution network, primarily in California and the Northeast. Specific policies vary widely as to whether or not they impact our ability to do business in a given jurisdiction and the vast majority apply only to new, rather than existing, buildings. While these jurisdictions comprise a small minority of our current and prospective business footprint, local consideration of such codes and ordinances continues to evolve.

### **Government Regulations**

Our business is subject to a changing patchwork of energy and environmental laws and regulations that prevail at the federal, state, regional and local level as well as in those foreign jurisdictions in which we operate. Most existing energy and environmental laws and regulations preceded the introduction of our innovative fuel cell technology and were adopted to apply to technologies existing at the time, namely large coal, oil or gas-fired power plants, and more recently solar and wind plants.

Although we generally are not regulated as a utility, existing and future federal, state, international and local government statutes and regulations concerning electricity heavily influence the market for our Energy Servers and services. These statutes and regulations often relate to electricity pricing, net metering, incentives, taxation, competition with utilities, the interconnection of customer-owned electricity generation, interconnection to the gas distribution system, and other issues relevant to the deployment and operation of our products, as applicable. Federal, state, international and local governments continuously modify these statutes and regulations. Governments, often acting through state utility or public service commissions, change and adopt or approve different requirements for regulated entities and rates for commercial customers on a regular basis. These changes can have a positive or negative impact on our ability to deliver cost savings to customers.

At the federal level, the Federal Energy Regulatory Commission ("FERC" (the "FERC") has authority to regulate, under various federal energy regulatory laws, wholesale sales of electric energy, capacity, and ancillary services, and the delivery of natural gas in interstate commerce. Some of our tax equity partnerships in which we participate investment vehicles who own Bloom Energy Servers are subject to regulation under the FERC with respect to market-based sales of electricity, which requires us to file notices and make other periodic filings with the FERC. In addition, our project with Delmarva Power & Light Company is subject to laws and regulations relating to electricity generation, transmission, and sale at the federal level and in Delaware. To operate our systems, we obtain interconnection agreements from the applicable local primary electricity and gas utilities. In almost all cases, interconnection agreements are standard form agreements that have been pre-approved by the state or local public utility commission or other regulatory bodies with jurisdiction over interconnection agreements. As such, no additional regulatory approvals are typically required for deployment of our systems once interconnection agreements are signed, although they may be required for the export and subsequent sale of electricity or other regulated products.

Product safety standards for stationary fuel cell generators have been established by the American National Standards Institute ("ANSI" (the "ANSI"). These standards are known as ANSI/CSA FC-1. Our products are designed to meet these standards. Further,

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we utilize the Underwriters' Laboratory, or UL, to certify compliance with these standards. The Energy Server installation guidance is provided by NFPA 853: Standard for the Installation of Stationary Fuel Cell Power Systems. Installations at sites are carried out to meet the requirements of these standards.

Currently, there is little guidance from environmental agencies on whether or how certain environmental Environmental laws and regulations may apply to our technologies. These laws can give rise to liability for administrative oversight costs, cleanup costs, property damage, bodily injury, fines, and penalties. Capital and operating expenses needed to comply with environmental laws and regulations can be significant, and violations may result in substantial fines and penalties or third-party damages. In addition, maintaining compliance with applicable environmental laws, such as the Comprehensive Environmental Response, Compensation and Liability Act in the United States, U.S., requires significant time and management resources.

Several states and regions in which we currently operate including California, require permits for where emissions of hazardous air pollutants based on would exceed applicable thresholds. In most states and regions where this is the quantity of emissions, most of which require case, permits have only been required for quantities of emissions that are higher than those observed from our larger Energy Servers. Server installations. Other states and regions in which we operate, including New York, New Jersey and North Carolina, have specific air permitting exemptions for fuel cells.

For more information about the regulations to which we are subject and the risks to our costs and operations related thereto, please see the risk factors set forth under the caption Part I, Item 1A, *Risk Factors* — *Risks Related to Legal Matters and Regulations*.

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### **Backlog**

The timing of delivery and installations of our products has a significant impact on the timing of the recognition of our product and installation revenues. Many factors can cause a lag between the time a customer signs a contract and our recognition of product revenue. These factors include the number of our Energy Servers installed per site, local permitting and utility requirements, environmental, health and safety requirements, weather, and customer facility construction schedules. Many of these factors are unpredictable and their resolution is often outside of our or our customers' control. Customers may also ask us to delay an installation for reasons unrelated to the foregoing, including delays in their financing arrangements. Further, due to unexpected delays, deployments may require unanticipated expenses to expedite delivery of materials or labor to ensure the installation meets our timing objectives. These unexpected delays and expenses can be exacerbated in periods in which we deliver and install a larger number of smaller projects. In addition, if even relatively short delays occur, there may be a significant shortfall between the revenue we expect to generate in a particular period and the revenue that we are able to recognize. For our installations, revenue and cost of revenue can fluctuate significantly on a periodic basis depending on the timing of acceptance and the type of financing used by the customer.

### **Human Capital**

We are committed to attracting and retaining exceptional talent. Investing in and inspiring our people to do their best work is critical for our success. As of **December 31, 2022**, we had approximately 2,530 full-time employees worldwide, of which 2,166 were located in the United States, 327 were located in India, and 37 were located in other countries. During **2022, 2023**, our workforce **grew** decreased by **47% 6%** as compared to **2021**, predominantly because of the restructuring actions we initiated in September 2023 with one of the goals being an optimization of our workforce across multiple functions. For additional information, please see Part II, Item 8, Note 12 — *Restructuring*.

In order to attract and retain our employees, we strive to maintain an inclusive, diverse and safe workplace, with opportunities for our employees to grow and develop in their careers. This is supported by strong compensation, benefits, and health and wellness programs. We are mission driven and hire and develop talent with a passion toward achieving our mission.

### **Inclusion and Diversity**

Our cultural foundation is that of innovation, results, respect, and doing the right thing. One of our greatest strengths is a very talented and diverse employee population. We believe diverse talent leads to better decision making and best positions us to meet the needs of our customers, stockholders, and the communities in which we live and work.

We continuously evolve our hiring strategies, track our progress and hold ourselves accountable to advancing global diversity. We seek to hire employees from a broad pool of talent with diverse backgrounds, perspectives and abilities, and we believe diverse leaders serve as role models for our inclusive workforce. We are proud of In fiscal 2023, we continued with our progress, yet we strive for continuous improvement. Our talent acquisition strategy includes recruiting candidates from underrepresented groups through targeted outreach and advertising. In 2022, we also introduced an Effective Interviewing course for hiring managers and interviewers, which covered unconscious bias, legal questions, and a positive candidate experience.

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Our continued engagement with organizations that partner with diverse communities have been essential to our efforts to increase women, veteran, and minority representation in our workforce. With the recent hiring efforts in Manufacturing, we've made concerted efforts to advertise and reach out to underrepresented minorities and women in the surrounding counties of our California and Delaware sites. We are actively engaged with local community leaders to broaden our reach to underserved communities. One example is participation in establishing the manufacturing cohort Smart Manufacturing Technology Earn and Learn program with Ohlone College, in Fremont California. We CA. Through the program we hired 10 cohort candidates 8 interns and converted 3 to train and to obtain business experience, with the ultimate goal of hiring them as full time employees. We also partner with several veteran search firms to identify talent leaving the military. In 2022, fiscal 2023, we filled with veterans 50% 40% of Bloom's field service and remote monitoring service roles. In Delaware State, we have worked with the Dover Air Force base and 10% of manufacturing maintenance roles. Delaware National Guard for hiring events. Bloom was awarded the Warrior Friendly Business award for 2023 by the Delaware National Guard.

Finally, our University/Early Careers Program has allowed the company to focus on hiring a diverse early careers workforce. In addition to Ohlone College, we We are also partnering with City College of New York/Colin Powell School to identify summer intern talent. These are students from underrepresented minorities, with the majority of them being the first to attend college in their family. We also have partnerships with a number of HBCUs, including Delaware State University and Howard University. The result of these outreach commitments represents 20% African American, 22% Hispanic was that 64% of our interns were ethnically diverse and 40% Women were women. The City College of overall newly graduated hires. New York collaboration will be continuing in 2024 with more interns.

Our continued engagement with organizations that work with diverse communities has been vital to our efforts to increase women and minority representation in our workforce. Our "Careers at Bloom Silicon Valley" campaign targets recruiting diverse talent from underserved communities for hourly manufacturing roles. To promote inclusivity, we advertise

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our jobs in multiple languages and participate in community job fairs giving equal access to opportunities. We actively engage opportunities Bloom held numerous job fairs in the community including underserved areas around Fremont, Stockton, Salinas, Soledad, Seaside, Marina, Gilroy and Alameda in California State. To help preserve jobs in the community, Bloom partnered with local community leaders companies doing layoffs to gain access to untapped underserved communities to attract talent hire manufacturing talent. Cepheid being one such organization that is generally not easily accessible. We are building a diverse talent slate of future generation leaders through our progressive university program. we hired 171 employees from.

### **We recruit talent in diverse communities through:**

- Veteran outreach programs
- Society of Women Engineers
- Society of Hispanic Engineers
- Society of Black Engineers
- Historical Black Colleges and Universities

## Employee Demographics

We believe that our statistics are strong, our culture of inclusivity is stronger (as of December 31, 2022 December 31, 2023):

- 68% 66% of our employee population in the United States U.S. is ethnically diverse
- Women make up 23% 25% of our employee population globally
- Our senior leadership team of eleven individuals includes three included on December 31, 2023 seven ethnically diverse individuals and three two women
- Women make up 17% 16% of our leadership population (Director-level and above)
- Ethnic minorities represent 42% 43% of our leadership (Director-level and above)

In addition, BEWL (Bloom Energy Women Leadership) was launched in 2022 with the mission of creating a positive environment for women of Bloom to thrive. BEWL is global, targeting for experiential learning, networking, and development for the women at Bloom.

### **Talent Development and Employee Engagement**

We have introduced a comprehensive Contribution Assessment Program designed to link performance to business results, enabling each employee to make a direct connection between their role and contributions and the success of Bloom. This comprehensive program includes goal setting, monthly check-ins, feedback solicitation, and self-assessments. Our Contribution Assessment Program provides employees with the opportunities to achieve their goals and engage in meaningful feedback discussions with their manager leading to development, exposure to new experiences, and real-time learning.

We provide a series of global employee learning sessions to support our employees' ability to effectively engage with their managers. We delivered a "management essentials" training in 2022. We have expanded our development focus by investing in building management capabilities. Our employees have easy access to resources to empower their success via our newly introduced internal website.

We place tremendous emphasis on employee engagement and retention. We administered our first employee engagement survey ("We're Listening") with a record participation rate of 77%. Follow-up actions included specific focus groups with concrete initiatives (investment in development programs and benefits enhancement).

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BE Inspired, a new learning series taught by Bloom leaders and employees to the broader Bloom organization strives to increase the depth and breadth of understanding of strategy, our products, and business operations. This series provides the opportunity for all Bloom employees to gain real time knowledge they can use immediately for their roles in the company.

### **Compensation and Benefits**

Our talent strategy is integral to our business success, and we design competitive and innovative compensation and benefits programs to help meet the needs of our employees. In addition to salaries, these programs (which vary by country/region) include: include annual bonuses, stock awards, an employee stock purchase plan, a 401(k) plan, healthcare and insurance benefits, health savings and flexible spending accounts, paid time off, parental leave, flexible work schedules, an extensive mental health program and fitness center. We also added access to financial planning and education for all levels of the organization, muskulo-skeletal health. In fiscal 2023, we are also introducing introduced Tuition Reimbursement and family forming benefits. In addition to our broad-based equity award programs, we have used targeted equity-based grants to facilitate retention of critical talent with specialized skills and experience.

## **Building Connections – With Each Other and our Communities**

Building connections between our employees and community is key to achieving our mission. Employee engagement is enhanced through connections, education, and the pride of giving back. Our Connected Employee Series offers cross-functional education to all employees and our Employee Community Series introduces influential community leaders to our increasing role in the broader community and world.

### **Health, Safety and Wellness**

The success of our business is fundamentally connected to the well-being of our people. Accordingly, we are committed to the health, safety and wellness of our employees. We provide our employees and their families with access to a variety of innovative, flexible and convenient health and wellness programs, including benefits that provide and encourage proactive protection and to support their financial, physical and mental well-being by providing tools and resources accessible at or outside of work.

In response to the COVID-19 pandemic, in 2020-2022, we implemented significant changes that we determined were in the best interest of our employees, as well as the communities in which we operate, and which comply with government regulations. This included having some of our employees work from home in 2020 and the first half of 2021 and moving to a hybrid model effective from summer 2021 through the whole year 2022, while implementing additional safety measures for the 49% of our employees continuing critical on-site work in our manufacturing, installation and service organizations. For these populations, we have developed a robust program of on-site testing. Starting during the summer of 2021, we reopened our offices, with testing and vaccination requirements, but we continue to remain flexible and attentive to our employees concerns and safety. As of January 2023, in coordination with local laws, we maintain limited testing requirements and have reinstated a five-day a week back to office schedule.

### **Community Investment in 2022**

Our employees are mission-driven and passionately invest their time in support of our local communities. Our annual Bloom Energy Stars and Strides charity race in San Jose raises money for the Valley Medical Center Foundation, and funds raised for the inaugural Stars and Strides Delaware race in 2022 directly supported the Delaware Center for Homeless Veterans and the Delaware National Guard Youth Foundation. In California, our employees partnered with the City of San Jose for an Earth Day Tree Planting, helping increase North San Jose's tree canopy as part of a larger effort to address climate change locally, and participated in a holiday toy drive with Family Giving Tree.

In Delaware, our employees supported events to raise funds and provided volunteer hours to support the American Heart Association, the Blood Bank of Delmarva, Delaware Foundation for Science and Math Education, The Newark Partnership, and Delaware Energy Access and Equity Collaborative.

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### **Seasonal Trends and Economic Incentives**

Our business and results of financial operations are **not** subject to industry-specific seasonal **fluctuations**. **fluctuations with the majority of bookings completed in the second half of a fiscal year**. The desirability of our solution can be impacted by the availability and value of various governmental, regulatory and tax-based incentives which may change over time.

### **Corporate Facilities**

Our corporate headquarters and principal executive offices are located at 4353 North First Street, San Jose, CA 95134, and our telephone number is (408) 543-1500. Our headquarters is used for administration, research and development, and sales and marketing and also houses one of our RMCC facilities.

Please see Part I, Item 2, *Properties* for additional information regarding our facilities.

### **Available Information**

Our website address is [www.bloomenergy.com](http://www.bloomenergy.com) and our investor relations website address is <https://investor.bloomenergy.com>. Websites are provided throughout this document for convenience only. The information contained on the referenced websites does not constitute a part of and is not incorporated by reference into this Annual Report on Form 10-K. Through a link on our website, we make available the following filings as soon as reasonably practicable after they are electronically filed with or furnished to the SEC: our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and any amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act, as well as proxy statements and certain filings relating to beneficial ownership of our securities. The SEC also maintains a website at [www.sec.gov](http://www.sec.gov) that contains all reports that we file or furnish with the SEC electronically. All such filings, including those on our website, are available free of charge.

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### ITEM 1A RISK FACTORS

*Investing in our securities involves a high degree of risk. You should carefully consider the material risks and uncertainties described below that make an investment in us speculative or risky, as well as the other information in this Annual Report on Form 10-K, including our consolidated financial statements and the related notes and "Management's*

*Discussion and Analysis of Financial Condition and Results of Operations" before you decide to purchase our securities. A manifestation of any of the following risks could, in circumstances we may or may not be able to accurately predict, render us unable to conduct our business as currently planned and materially and adversely affect our reputation, business, prospects, growth, financial condition, cash flows, liquidity, and operating results. In addition, the occurrence of one or more of these risks may cause the market price of our Class A common stock to decline, and you could lose all or part of your investment. It is not possible to predict or identify all such risks and uncertainties, as our operations could also be affected by factors, events, or uncertainties that are not presently known to us or that we currently do not consider to present presenting significant risks to our operations. Therefore, you should not consider the following risks to be a complete statement of all the potential risks or uncertainties that we face.*

#### **Risk Factor Summary**

The following summarizes the more complete risk factors that follow. It should be read in conjunction with the complete Risk Factors section and should not be relied upon as an exhaustive summary of all the material risks facing our business.

##### *Risks Related to Our Business, Industry, and Sales*

- The distributed generation industry is an emerging market and distributed generation may not receive widespread market acceptance or demand may be lower than we expect, which may make evaluating our business and future prospects difficult.
- Our products involve a lengthy sales and installation cycle, and if which may lengthen further as we fail to close sales on a regular and timely basis, our business could be harmed.
- Our Energy Servers products have significant upfront costs, and we will need to attract investors to help customers finance purchases.
- The economic benefits of our Energy Servers to our customers depend on both the price of gas available from the local gas utilities and the cost of electricity available from alternative sources, including local electric utility companies, and such cost structure is subject to change.

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- If we are not able to continue to reduce our cost structure in the future costs or to meet service performance expectations with respect to our ability to become profitable products, our profitability may be impaired.
- Deployment of our Energy Servers relies on interconnection requirements, export tariff arrangements and utility tariff requirements that are each subject to change.
- Deployment of our Energy Servers relies on fuel supply and fuel specification requirements, both of which are subject to may change.
- We currently face and will continue to face significant competition.
- We derive a substantial portion of our revenue and backlog from a limited number of customers, and the loss of or a significant reduction in orders from a large customer could have a material adverse effect on our operating results and other key metrics.
- Our future growth will depend in part on expanding and diversifying our new product products and market opportunities, and if we do not successfully execute on our new product and market opportunities, or if our new product and market opportunities are more limited than we expect, our operating results and future growth prospects could be adversely affected.
- Our ability to develop new products and enter into new markets could be negatively impacted if we are unable to identify and successfully engage with partners to assist in such development or expansion, where necessary or useful.
- Our products may not be successful if we are unable to maintain alignment with evolving industry standards and requirements.

##### *Risks Related to Our Products and Manufacturing*

- Our future success depends in part on our ability to increase our production capacity for our Energy Servers and new features and products, and we may not be able to do so in the time frame required, due to availability of parts and equipment among other factors, or not be able to do so in a cost-effective manner.
- If our products contain manufacturing defects, our business and financial results could be harmed.
- The performance of our products may be affected by factors outside of our control, which could result in harm to our business and financial results.
- If our estimates of the useful life for our Energy Servers products are inaccurate or we do not meet our performance warranties and performance guarantees, or if we fail to accrue adequate warranty and guaranty reserves, our business and financial results could be harmed.
- Our business is subject to risks associated with construction, utility interconnection, fuel supply, cost overruns and delays, including those related to obtaining government permits and other contingencies that may arise in the course of completing installations.
- The failure of our suppliers to continue to deliver necessary raw materials or other components of our products in a timely manner and to specification could prevent us from delivering our products within required time frames and could cause installation delays, cancellations, penalty payments and damage to our brand and reputation.
- We have in some instances, entered into long-term supply agreements that could result in excess or, if one or more suppliers do not produce for any reason, insufficient inventory, above market pricing or higher costs, and negatively affect our results of operations.
- We face supply chain competition including competition from businesses in other industries, which could result in insufficient inventory and negatively affect our results of operations.
- We, and some of our suppliers, obtain capital equipment used in our manufacturing process from sole suppliers and, if this equipment is damaged or otherwise unavailable, our ability to deliver our products on time will suffer.
- Our business has been and continues to be adversely affected by the COVID-19 pandemic.
- Possible new trade tariffs could have a material adverse effect on our business.

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- A failure to properly comply with foreign trade zone laws and regulations could increase the cost of our duties and tariffs.
- Any significant disruption to the operations at our headquarters or manufacturing facilities could delay the production of our products, which would harm our business and results of operations. product production.
- Our limited history of manufacturing new products, such as our Electrolyzers, makes it difficult to evaluate our future prospects and challenges we may encounter.

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### *Risks Related to Government Incentive Programs*

- Our business currently benefits from the availability of rebates, tax credits and other financial programs and incentives, and the reduction, modification, or elimination of changes to such benefits could cause our revenue to decline and harm our financial results.
- In the United States, we We rely on tax equity financing arrangements to realize the benefits provided by U.S. federal tax credits benefits and accelerated tax depreciation and in the event these programs are terminated, our financial results could be harmed. We we also rely on incentives in the Korean, European and other international markets.

### *Risks Related to Legal Matters and Regulations*

- We are subject to various national, state and local laws and regulations, that could impose substantial costs upon us including environmental laws and cause delays in regulations, regarding the delivery and installation of our products.
- The installation and operation of our products are subject to environmental laws and regulations in various jurisdictions, and there have been in the past and could continue to be uncertainty with respect to both how these laws and regulations may change over time and the interpretation of these environmental laws and regulations to our products, especially as they evolve.
- As we expand into international markets, we may be subject to local content requirements or pressures which could increase cost costs or reduce demand for our products.
- With respect to our products that run, in part, on natural gas, fossil fuel, we may be subject to a heightened risk of regulation to a potential for the loss of certain incentives, and/or and to changes in our customers' energy procurement policies.
- Existing regulations and changes to such regulations impacting the electric power industry may create technical, regulatory, and economic barriers, which could significantly reduce demand for our Energy Servers products or affect the financial performance of current sites.
- We may become subject to product liability claims, which could harm our financial condition and liquidity if we are not able to successfully defend or insure against such claims.
- Current or future litigation Litigation or administrative proceedings could have a material adverse effect on our business, our financial condition and our results of operations. business.

### *Risks Related to Our Intellectual Property*

- Our failure to effectively protect and enforce our intellectual property rights may undermine our competitive position, and litigation to protect our intellectual property rights may be costly.
- Our patent applications may not result in issued patents, and our issued patents may not provide adequate protection, either of which may have a material adverse effect on our ability to prevent others from commercially exploiting products similar to ours. be successfully challenged in litigation or post-grant proceedings.
- We may need to defend ourselves against claims that we infringed, misappropriated, or otherwise violated the intellectual property rights of others, which may be time-consuming and would cause us to incur substantial costs.

### *Risks Related to Our Financial Condition and Operating Results*

- We have incurred significant losses in the past and we may not be profitable for the foreseeable future. in future periods.
- Our financial condition and results of operations and other key metrics are likely to fluctuate on a quarterly basis in future periods, which could cause our results for a particular period to fall below expectations, resulting in a severe decline in the price of our Class A common stock. fluctuate.
- If we fail to manage our growth effectively, our business and operating results may suffer.
- If we fail to maintain effective internal control over financial reporting in the future, the accuracy and timing of our financial reporting may be adversely affected.
- Our ability to use our deferred tax assets to offset future taxable income may be subject to limitations that could subject our business to higher tax liability. limitations.

### *Risks Related to Our Liquidity*

- We must maintain the confidence of our customers in our liquidity, including in our ability to timely service our debt obligations and in our ability to support and grow our business over the long-term. long term.
- Our indebtedness, and restrictions imposed by the agreements governing our and our PPA Entities' outstanding indebtedness, may limit our financial and operating activities and may adversely affect our ability to incur additional debt to fund future needs.
- We may not be able to generate sufficient cash to meet our debt service obligations or our growth plans.
- Under some circumstances, we may be required to or elect to make additional payments to our PPA Entities or the Equity Investors.

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### *Risks Related to Our Operations*

- Expanding operations internationally could expose us to additional risks.
- Data security breaches and cyberattacks could compromise our intellectual property or other confidential information and cause significant damage to our business, **the product performance, of our fleet of Energy Servers, our brand and our reputation.**
- If we are unable to attract and retain key employees and hire qualified management, technical, engineering, finance and sales personnel, our ability to compete and successfully grow our business could be harmed.
- Competition for manufacturing employees is intense, and we may not be able to attract and retain **the qualified and skilled employees needed to support our business employees.**

### *Risks Related to Ownership of Our Common Stock*

- The stock price of our **Class A** common stock has been and may continue to be volatile.
- We may issue additional shares of our **Class A** common stock in connection with **any future conversion conversions** of the Green Notes, (as defined herein) or in connection with our transaction with SK ecoplant, which may dilute our existing stockholders and potentially adversely affect the market price of our **Class A** common stock.
- The dual class structure of our common stock and the voting agreements among certain stockholders have the effect of concentrating voting control of our Company with KR Sridhar, our Chairman and Chief Executive Officer, and also with those stockholders who held our capital stock prior to the completion of our initial public offering, which limits or precludes your ability to influence corporate matters and may adversely affect the trading price of our **Class A** common stock.

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- We do not intend to pay dividends for the foreseeable future.
- Provisions in our charter documents and under Delaware law could make an acquisition of us more difficult, limit **shareholders' stockholders'** rights, and limit the market price of our **Class A** common stock.
- Increased scrutiny regarding ESG **practices and disclosures** could result in additional costs and adversely impact our **business, brand and reputation. business.**

### **Risks Related to Our Business, Industry and Sales**

***The distributed generation industry is an emerging market and distributed generation may not receive widespread market acceptance or demand may be lower than we expect, which may make evaluating our business and future prospects difficult.***

The distributed generation industry is still an emerging market in an otherwise mature and the heavily regulated energy utility industry, and we cannot be sure that industry. It is uncertain whether potential customers will accept embrace distributed generation broadly, in general, or our Energy Servers specifically, in particular. Enterprises may be unwilling to adopt our Energy Server solution over traditional or competing power sources like such as distributed solar or electricity from the grid, for any number of reasons, including grid. This could be due to the perception that our technology or our company is unproven, lack of confidence in our business model, the unavailability of third-party service providers to operate and maintain the Energy Servers, and lack of awareness of our product, or their perception of regulatory or political headwinds. challenges, including challenges pertaining to technologies that use natural gas fuels or have carbon emissions.

The viability and demand for our Energy Servers in the distributed generation market may be impacted by many factors outside of our control, including:

- market acceptance of our **products; products** (including, for example, anti-natural gas sentiment or misalignment with renewable and zero carbon procurement goals);
- cost competitiveness, reliability, and performance of our products compared to traditional or competing power sources;
- availability and amount of government subsidies and incentives;
- the emergence, continuance, or success of, or increased government support for, other alternative energy generation technologies and products;
- prices of traditional or competing power sources;
- geopolitical and macroeconomic instability, including wars, terrorism, political unrest, (including, for example, the conflict between Russia and Ukraine and tensions between China and Taiwan), actual or threatened public health emergencies and outbreak of disease, (including for example, the COVID-19 pandemic), inflation, the recessionary environment, boycotts, adoption or expansion of government trade restrictions, and other business restrictions which may negatively impact the demand for our products, or which may cause our customers to push out, cancel, or refrain from placing orders; and
- an increase in interest rates or tightening of the supply of capital in the global financial markets (including a reduction in total tax equity availability) which could make it difficult to finance our products.

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If the market for our products and services does not continue to develop as we anticipate, our business will be harmed. As a result, predicting our future revenue and appropriately budgeting for our expenses is difficult, and we have limited insight into trends that may emerge and affect our business. If actual results differ from our estimates or if we adjust our estimates in future periods, our operating results and financial position could be materially and adversely affected.

### ***Our products involve a lengthy sales and installation cycle, and if we fail to close sales on a regular and timely basis, our business could be harmed.***

Our sales cycle is typically 12 to 18 months but can vary considerably. In order to To make a sale, we must typically provide a significant level of education to prospective customers regarding the use and benefits of our product products and our technology. The period between initial discussions with a potential customer and the eventual sale of even a single product usually depends on a number of factors, including the potential customer's budget, selection of financing type, and term of the contract. In addition, we have started to focus on larger projects, which tend to have longer sales cycles. Prospective customers often undertake a significant evaluation process that may further extend the sales cycle, and which evaluation may be negatively impacted by general market and economic conditions such as inflation, rising interest rates, availability of capital, a recessionary environment, geopolitical instability, energy availability and costs, and the availability and effects of government initiatives. Once a customer makes a formal decision decides to purchase our product, the fulfillment it takes a significant amount of time for us to fulfill the sales order by us requires a substantial amount of time. order. Generally, the time it takes between nine to twelve months or more from the entry into a sales contract with a customer and until the installation of our Energy Servers can range from nine to twelve months or more. This products. The lengthy sales and installation cycle is cycles are subject to a number of significant risks, over some of which we have little or no are outside of our control. Because of both Due to the long sales and long installation cycles, we may expend significant resources without having certainty being certain of generating a sale.

These lengthy sales

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The transfer of control of our product to our customer based on its delivery and installation cycles increase the risk that an installation may be delayed and/or may not be completed. In some instances, has a customer can cancel an order for a particular site prior to installation, and we may be unable to recover some or all of our costs in connection with design, permitting, installation and site preparations incurred prior to cancellation. Cancellation rates can be as high as 5% to 10% in any given period due to factors outside of our control, including an inability to install an Energy Server at the customer's chosen location because of permitting or other regulatory issues, delays or unanticipated costs in securing interconnection approvals or necessary utility infrastructure, unanticipated changes in the cost, or other reasons unique to each customer. Our operating expenses are based significant impact on anticipated sales levels, and many of our expenses are fixed. If we are unsuccessful in closing sales after expending significant resources or if we experience delays or cancellations, our business could be materially and adversely affected. Since, in general, we do not recognize revenue on the sales of our products until delivery or complete installation, a small fluctuation in the timing of the completion recognition of our product and installation revenue. Many factors can cause a lag between the time that a customer signs a contract and our recognition of product revenue. These factors include the number of the Energy Servers installed per site, local permitting and utility requirements, environmental, health and safety requirements, weather, customer facility construction schedules, customers' operational considerations, and the timing of financing. Many of these factors are unpredictable and their resolution is often outside of our or our customers' control. Customers may also ask us to delay an installation for reasons unrelated to the foregoing, such as, for sales transactions could cause our operating results contracts, delays in their financing arrangements. Further, due to vary materially from unexpected delays, deployments may require unanticipated expenses to expedite delivery of materials or labor to ensure the installation meets the timing objectives. These unexpected delays and expenses can be exacerbated in periods in which we deliver and install a larger number of smaller projects. In addition, if even relatively short delays occur, there may be a significant shortfall between the revenue we expect to generate in a particular period and the revenue that we are able to period. recognize.

### ***Our Energy Servers products have significant upfront costs, and we will need to attract investors to help customers finance purchases.***

Our Energy Servers products have significant upfront costs. In order to expand our offerings to costs, which may be a barrier for some customers who lack may not have the financial capability to purchase our Energy Servers directly and/or who prefer to lease the product or contract for our services on a pay-as-you-go model, products directly. To address this, we subsequently have developed various financing options that enabled allow customers to use of the Energy Servers our products on a pay-as-you-go basis or through third-party financing arrangements. These options enable our customers to access our products without making a direct purchase through third-party ownership financing arrangements purchase. For an overview of these more information on the different financing arrangements available, please see Part II, Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations* — Purchase and Financing Options. If in any given quarter we or our customers are not able to secure funding, in a timely fashion, or our customers are unable to secure their own financing in a timely fashion, our financial condition and results of operations and financial condition will would be negatively impacted. We continue to harmed. To attract new customers, we continually innovate our customer contracts to attempt to attract new customers and these which may have different terms and financing conditions from prior transactions.

We rely on and need to grow committed financing capacity with existing partners or attract additional partners to support our growth, finance new projects, and new types of expand our product offerings. In addition, at any point in time, Additionally, our ability to deploy our backlog is contingent on securing available financing. Our directly tied to our ability to attract secure financing, which is often an unpredictable process. Attracting third-party financing depends on many is a complex process that is influenced by factors that are outside of beyond our control, including an investors' ability to utilize the fluctuations of interest and currency exchange rates, the availability of tax credits and other government incentives interest rate and/or currency exchange fluctuations, for investors, our perceived creditworthiness and the prevailing condition of credit markets generally. Our financing of customer markets. We finance our customers' purchases of our Energy Servers is subject to products based on certain conditions, such as the customer's their credit quality and the expected minimum internal rate of return on the customer engagement, and if engagement. If these conditions are not satisfied, met, we may not be unable able to finance their purchases of our Energy Servers, products, which would have an adverse effect a negative impact on our revenue in a particular period. If we are unable to help our customers arrange financing for our Energy Servers generally, products, our business will could be harmed. Additionally, the Managed Services Financing option, as with all leases, is also limited by the customer's willingness to commit to making fixed payments, regardless of the products' performance of the Energy Servers or our performance of our obligations under the customer

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agreement. To the extent if we are unable to arrange future financings financing for any of our current projects, it could negatively impact our business would business.

In the U.S., our capacity to offer our Energy Servers through financed arrangements depends in large part on the ability of financing parties to optimize the tax benefits associated with the Energy Servers, such as the ITC or accelerated depreciation. Interest rate fluctuations, and internationally, currency exchange rate fluctuations, may also impact the attractiveness of any financing offerings for our customers. Our ability to finance a PPA or a lease is also related to, and may be negatively impacted, limited by, the creditworthiness of the customer.

Further, in our sales process for those transactions that require financing, require that we make certain assumptions regarding the cost of financing capital. Actual financing costs may vary differ from our estimates and financing may be more difficult or costly to secure, or may not be available, due to factors outside of beyond our control, including such as changes in customer creditworthiness, macroeconomic factors, such as like inflation, interest rates, a recessionary environment, geopolitical instability, and volatility in capital markets, the market volatility. The returns offered by other investment opportunities available to our financing partners and other factors, factors may further affect financing availability. If the cost of financing ultimately exceeds our estimates, or we or our customers are unable to secure financing, we may not be unable able to proceed with some or all of the impacted projects, or our revenue from such projects may be less than our estimates.

***The economic benefits of our Energy Servers to our customers depend on both the price of gas available from the local gas utilities and the cost of electricity available from alternative sources, including local electric utility companies, and such cost structure is subject to change.***

We believe that a customer's decision to purchase our Energy Servers is significantly influenced by its price, the price predictability of electricity generated by our Energy Servers in comparison to the retail price, and the future price outlook of electricity from the local utility grid and other energy sources. These prices are subject to change and may affect the relative

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benefits of our Energy Servers. Factors that could influence these prices and are beyond our control include the impact of energy conservation initiatives that reduce electricity consumption; construction of additional power generation plants (including nuclear, coal or natural gas); technological developments by others in the electric power industry; the imposition of interconnection, "departing load," "standby," power factor charges, greenhouse gas emissions charges, or other charges by local electric utility or regulatory authorities; and changes in the rates offered by local electric utilities and/or in the applicability or amounts of charges and other fees imposed or incentives granted by such utilities on customers. In addition, even with available subsidies for our products, in those areas where the current low cost of grid electricity is low, including in some states in the United States U.S. and some foreign countries, does our Energy Servers may not render our product be economically attractive.

Furthermore, an increase actual or perceived potential increases in the price of natural gas or other fuels or curtailment of availability (e.g., as a consequence of physical limitations or adverse regulatory conditions for the delivery of or production of natural gas or other fuels) or the inability to obtain natural gas or other fuel service could make our Energy Servers less economically attractive to potential customers and reduce demand. While our Energy Servers can operate using hydrogen or biofuels, the availability and current high cost of those natural gas alternatives in a particular location may make them less attractive to potential customers, reducing the differentiation of demand for our products.

***If we are not able to continue to reduce our cost structure in the future costs or to meet service performance expectations with respect to our Energy Servers, products, our ability to become profitable profitability may be impaired.***

We must continue need to reduce the manufacturing costs for our Energy Servers products to expand our markets. Additionally, certain of our existing service contracts were entered into based rely on projections regarding service costs cost reductions that assume continued advances may not be realized. Increases in our manufacturing and services processes that we may be unable to realize. Future increases to the cost of components component and raw materials would material costs could offset our cost-cutting efforts, slowing our growth and causing our financial results and operational metrics to reduce our manufacturing and services costs, suffer. For example, during the second half of 2021, we experienced price increases in raw materials, which are used in our components and subassemblies for our Energy Servers. Any increases Servers.

Our expenses have increased and may increase in the costs of components, raw materials and/or labor, whether future due to factors such as a result of supply chain constraints or pressures, inflation or rising interest rates, 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 and sales. We need to reduce costs to expand into new markets (in which the price of electricity from the grid is lower) while still maintaining our current margins, we will need to continue to reduce our costs. Increases in any of these costs or our margins. Any 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 Our inability to reduce our Energy Server cost structure in the future, we product costs may not be able to achieve impact our profitability, which could have a material adverse effect on our business and our prospects.

***Deployment of our Energy Servers relies on interconnection requirements, export tariff arrangements and utility tariff requirements that are each subject to change.***

Because our Energy Servers are designed to operate at a constant output 24x7, while our customers' demand for electricity typically fluctuates over the course of the day or week, there are often periods when our Energy Servers are

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producing more electricity than a customer may require, and such excess electricity **must** be exported to the local electric utility. Export of customer-generated power from our Energy Servers is generally provided for in the markets in which we offer our fuel cells pursuant to applicable laws, regulations and tariffs, but not under all circumstances, and may be restricted **or made costlier** due to interconnection, relevant tariff or other issues. Many, but not all, local electric utilities provide compensation to our customers for such electricity under "fuel cell net metering" (which often differs from solar net metering) or other customer generation programs.

Utility tariffs and fees, interconnection agreements and fuel cell net metering requirements are subject to changes in availability and terms, and some jurisdictions do not allow interconnections or export at all. At times in the past, such changes have had the effect of significantly reducing or eliminating the benefits of such programs. Changes in the availability of, or benefits offered by, utility tariffs, the applicable net metering requirements or interconnection agreements **in the jurisdictions in which we operate or in which we anticipate expanding into in the future** could adversely affect the demand for our Energy Servers. For example, in California, the fuel cell net metering tariff expressly addressing fuel cells **and providing certain incentives and export capability** (referred to as the "Fuel Cell Net Energy Metering" ("FC NEM")) **currently expires** **expired** at the end of 2023 **although** **other** and is no longer available to new customers. Existing customers can remain on the tariff if they comply with adopted greenhouse gas emission standards, which in some cases may result in increased cost. There are also some more generally applicable tariffs **are** available for customers deploying **new fuel cells**, **cells**, however, they have limitations and the loss of FC NEM may impact our ability to sell our Energy Servers for use in California. We cannot predict the outcome of the many regulatory proceedings addressing tariffs that would include customers utilizing fuel cells. If **there** an economical tariff for customers utilizing fuel cells is not available in a given jurisdiction, it may limit or end our ability to sell and install our Energy Servers in that jurisdiction. Further, **permitting permits** and other requirements applicable to electric and gas interconnections are subject to change. For example, some jurisdictions are limiting new gas interconnections, although others are allowing new gas interconnections for non-combustion resources like our Energy Servers.

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**Deployment of our Energy Servers relies on fuel supply and fuel specification requirements, and fuel supply and fuel specifications which are subject to change.**

Because **our** Our Energy Servers are designed to operate at a constant output 24x7, our Energy Servers require 24x7. Therefore, they need a constant source of fuel such as natural gas, biogas, or **hydrogen**. **hydrogen** to keep them running. Fuel for our Energy Servers is typically provided by local gas utilities. **We** Our customers rely on local gas such utilities to provide a constant supply of fuel supply within that meets our fuel specifications. Additionally, However, if new regulations may require a switch to a different fuel for which there may be limited availability, such as biogas. **biogas**, it can create challenges for our products and their sales. Adverse fuel supply constraints or fuel outside of our fuel specifications may create challenges for delay or prevent the deployment of our Energy Servers to be deployed consistent with our project timelines or our customers' expectations. **Servers**.

We **currently face and will continue to face significant competition.**

We compete for customers, financing partners and incentive dollars **with** **from** other electric power providers. Our Bloom Energy Servers compete with a broad range of companies and technologies, including traditional energy suppliers, such as public utilities, and other energy providers utilizing traditional co-generation systems, nuclear, hydro, coal or geothermal power, companies utilizing intermittent solar or wind power paired with storage, and other commercially available fuel cell companies utilizing PEM, MCFC or PAFC companies. We also compete with traditional backup energy equipment such as diesel generators. Our Electrolyzers compete with low temperature electrolyzer companies using Alkaline, Proton, PEM or AEM electrolysis. See our discussion of competition in Item 1 **Business** **Energy Server Competition**.

Many of our competitors, such as traditional utilities and other companies offering distributed generation products, have longer operating histories, customer incumbency advantages, access to and influence with local and state governments, and access to more capital resources than us. Significant developments in alternative technologies, such as energy storage, wind, solar or hydro power generation, or improvements in the efficiency or cost of traditional energy sources, including coal, oil, natural gas used in combustion, or nuclear power, may materially and adversely affect our business and prospects in ways we cannot anticipate. We may also face new competitors **who are not currently in the market, including companies with newer or better technologies, products, or products, larger providers or traditional utilities or other existing competitors that may enter our market segments, resources**. If we fail to adapt to changing market conditions and to compete successfully with grid electricity or new competitors, our growth will be limited, which would adversely affect our business results.

**We derive a substantial portion of our revenue and backlog from a limited number of customers, and the loss of or a significant reduction in orders from a large customer could have a material adverse effect on our operating results and other key metrics.**

In any particular period, a substantial amount of our total revenue has and could continue to come from a relatively small number of customers. As an example, in the year ended **December 31, 2022** **December 31, 2023**, two customers accounted for approximately **38%** **37%** and **37%** **26%** of our total revenue. The loss of any large customer order or any delays in installations of new products with any large customer would materially and adversely affect our business results.

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**Our future growth will depend on expanding and diversifying our new product products and new market opportunities, and if we do are not successfully execute on our new product and new market opportunities, or if our new product and new market opportunities are more limited than we expect, successful, our operating results and future growth prospects could be adversely affected.**

We are attempting plan to enhance our future growth opportunities by expanding the features of and uses for our Energy Servers, including providing options for carbon capture and heat capture features, enabling use in marine transportation output, by expanding our production and by developing sales of our Electrolyzer, and launching our Electrolyzer. Additionally, we are by expanding the markets in which we sell our Energy Servers. These are new features, products, and markets for us. products. As a result, these opportunities will require our attention, which may include includes personnel, financial resources and management attention. If we do not appropriately allocate our resources in line with the market and the developing to, or execute on, these opportunities, our business and results of operations could be adversely affected.

Our investments also may not result in the growth we expect, or the timing of when we expect it, for a variety of reasons, including but not limited to, changes in growth trends, evolving and changing markets and increasing competition, market opportunities, and technology and product innovation, innovation, and changes in policy support, taxation and subsidies, and regulation. We may introduce new technologies or products that do not work, are not delivered on a timely basis, are not developed according to product and/or cost specifications, or are not well received by customers. customers, or do not receive the policy, taxation and subsidies, or other regulatory support that was anticipated. Moreover, there may be fewer opportunities than we expect due to a decline in business or economic conditions or a decreased demand in these markets or for our new products from our expectations, our inability to successfully execute our sales and marketing plans, or for other reasons. In addition to our current growth opportunities, our future growth may be reliant on our ability to identify and develop potential new growth opportunities. This process is inherently risky and may result in investments in time and resources for which we do not achieve any return or value. These risks are enhanced by attempting to introduce multiple breakthrough technologies and products simultaneously.

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Our growth opportunities and those opportunities we may pursue are subject to constant and rapidly changing and evolving technologies and evolving industry standards and may be replaced by new technology concepts or platforms. If we do not develop innovative and reliable product offerings and enhancements in a cost-effective and timely manner that are attractive to customers in these markets, if we are otherwise unsuccessful entering and competing in these new product categories, if the new product categories in which we invest our limited resources do not emerge as the opportunities or do not produce the growth or profitability we expect, or when we expect it, or if we do not correctly anticipate changes and evolutions in technology and platforms, our business and results of operations could be adversely affected.

**Our ability to develop new products and enter into new markets could be negatively impacted if we are unable to identify and successfully engage with partners to assist in such development or expansion, where necessary or useful. expansion.**

We As we continue to develop new features and products as well as enter into new markets. As we sell new features and products, such as our Energy Servers for marine transport and our Electrolyzers, and move expand into new markets, including international markets, we may need to identify business partners and suppliers in order to facilitate such development and expansion. Identifying such partners and suppliers is a lengthy process and is subject to significant risks and uncertainties, such as an inability to negotiate mutually acceptable terms or such partner's inability to execute as negotiated. In addition, there could be delays in the design, manufacture and installation of new products and we may not be timely in the development of new products or entry into new markets, limiting our ability to expand our business and harming our financial condition and results of operations.

**Our products may not be successful if we are unable to maintain alignment with evolving industry standards and requirements.**

As we continue to invest in research and development to sustain or enhance our existing products, such as our Energy Server, it is possible that the introduction of new technologies and the emergence of new industry standards or requirements could render them make our products less desirable or obsolete. Further, in developing our products, we have made, and will continue to make assumptions with respect to which standards, requirements, or requirements policies will be required demanded by our customers, standards-setting organizations and applicable law. If market acceptance of our products is reduced or delayed or the standards-setting organizations or legislative or regulatory authorities fail to develop timely, commercially viable commercially-viable standards that support our products, our business would be harmed.

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### Risks Related to Our Products and Manufacturing

**Our future success depends in part on our ability to increase our production capacity for our Energy Servers and new features and products, and we may not be able to do so in the time frame required, due to availability of parts an equipment among other factors, a timely or not be able to do so in a cost-effective manner.**

To the extent we are successful in growing our business, we may need to increase our the production capacity of our Energy Servers. products. Our ability to plan, construct and equip additional manufacturing facilities is subject to significant risks and uncertainties, including the following:

- 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, geopolitical instability, inflation, and labor shortages and delays in the delivery of manufacturing equipment and subsystems that we manufacture or obtain from suppliers (including due to the COVID-19 pandemic).

- Adding shortages. Expanding manufacturing capacity in any international location will subject internationally may also expose us to new laws and regulations including those pertaining to labor and employment, environmental and export / import. In addition, it brings with it the risk of managing larger scale foreign operations.
- We carries risks. There is also a possibility that we may not be unable to achieve the production throughput necessary able 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 targets for a variety of reasons, including reliance on third-party relationships in the development and operation of additional production capacity, which may subject us to the risk that such third parties who do not fulfill their obligations to us under our arrangements with them.
- We may be unable to attract or retain qualified personnel. For example, currently the market for manufacturing labor has been constrained, which could pose a risk to our ability to increase production.us.

If we are unable to expand our manufacturing facilities or develop our existing facilities in a timely manner, to meet increased demand, we may be unable to further scale our business, which would negatively affect our results of operations and financial condition. Conversely, if the demand for our products 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.

***If our products contain manufacturing defects, our business and financial results could be harmed.***

Our products are complex, and they may contain undetected or latent errors or defects. In the past, we have experienced latent defects only that were discovered once the Energy Server was deployed in the field. Changes in our supply chain or the failure of our suppliers to otherwise provide us with components or materials that meet our specifications could introduce defects into in our products. As we grow our manufacturing volume, the chance of manufacturing defects could increase. In addition, new feature launches, product introductions or design changes made for the purpose of cost reduction, performance improvement, fulfilling new customer requirements or new market demand or improved reliability could introduce new design defects that may impact product performance and life. Any design or manufacturing defects or other failures of our products, to perform as expected including catastrophic product failures, could cause us to incur significant service and re-engineering costs, a large field recall, divert the attention of our engineering personnel from product development efforts, and significantly and adversely affect customer satisfaction, market acceptance, and our business reputation.

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If any of our products are defective or fail because of their design, or if changes in applicable laws or regulations, or in the enforcement thereof, require us to redesign or recall our products, we also may incur additional costs and expenses. The process of identifying and recalling a product may be lengthy and require significant resources, and we may incur significant replacement costs, contract damage claims from our customers, product liability, property damage, personal injury or other claims and liabilities, and brand and reputational harm. Significant costs or payments made in connection with warranty and product liability claims and product recalls could harm our financial condition and results of operations.

Furthermore, we may be unable to correct manufacturing defects or other failures of our products in a manner satisfactory to our customers, which could adversely affect customer satisfaction, market acceptance, and our business reputation.

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***The performance of our products may be affected by factors outside of our control, which could result in harm to our business and financial results.***

Field conditions, such as the quality of the natural gas or alternative fuel supply and utility processes, which vary by region and may be subject to seasonal fluctuations or environmental factors such as smoke from wild fires, have affected can impact the performance of our Energy Servers and are not always possible to predict until the Energy Server is products in operation. unpredictable ways. As we move into new geographies and deploy new features, products and service configurations, we may encounter new and unanticipated field conditions from time to time (including as a result of climate change). Adverse impacts on performance may require us to incur significant service and re-engineering costs or divert the attention of our engineering personnel from product development efforts. Furthermore, we may be unable to adequately address the impacts of factors outside of our control in a manner satisfactory to our customers. Any of these circumstances could significantly and adversely affect customer satisfaction, market acceptance, and our business reputation.

***If our estimates of the useful life for our Energy Servers products are inaccurate or we do not meet our performance warranties and performance guaranties, or if we fail to accrue adequate warranty and guaranty reserves, our business and financial results could be harmed.***

We offer certain customers the opportunity to renew their O&M Agreements (defined herein) on an annual basis, for up to 20 years, at prices predetermined at the time of purchase of the Energy Server, prices. We also provide performance warranties and performance guaranties covering the efficiency and output performance of our Energy Servers, products. Our pricing of these contracts and our reserves for warranty and replacement are based upon our estimates of the useful life of our Energy Servers products and those components that are replaced as a part of standard maintenance, including assumptions regarding improvements in power module life that may fail to materialize. We do not have a long history with at a large number of field deployments, scale, and our estimates may prove to be incorrect. Failure to meet these warranty and performance guaranty

levels requirements may require us to replace the Energy Servers at our expense products or refund their cost to the customer, or require us to make cash payments to the customer based on actual performance, as compared to expected performance, capped at a percentage of the relevant equipment purchase prices. We accrue for product warranty costs and recognize losses on service or performance warranties when required by U.S. GAAP based on our estimates of costs that may be incurred and based on historical experience. However, as we expect our customers to renew their O&M Agreements each year, the total liability over time may be more than the accrual. Actual warranty expenses have in the past been and may in the future be greater than we have assumed in exceed estimates. If our estimates the accuracy of which may be hindered due to our limited history operating at our current scale. Therefore, if our estimates of the useful life for our products are inaccurate or we do not meet our performance warranties and performance guarantees, or if we fail to accrue adequate warranty and guaranty reserves to make cash payments as required, our business and financial results could be harmed.

**Our business is subject to risks associated with construction, utility interconnection, fuel supply, cost overruns and delays, including those related to obtaining government permits and other contingencies that may arise in the course of completing installations.**

Because we often do not recognize revenue Our financial results depend on the sales timely installation of our products, until installation, our financial results depend to some degree on the timeliness of the installation of our products. Furthermore, in some cases, the installation of our products which may be on a fixed price basis, which subjects us to the risk of cost overruns or other unforeseen expenses in the installation process.

The construction, installation, and operation of our Our products at a particular site is also generally are subject to regulation and oversight and regulation in accordance compliance with national, state, and local laws and ordinances relating to building codes, safety, environmental protection, and related matters in the jurisdictions where we operate, and typically require various local and other governmental approvals and permits, including environmental approvals and permits, that vary by jurisdiction. In some cases, permits. Delays in obtaining these approvals and permits require periodic renewal, could stall the installation process of our products and adversely affect our revenue. For more information regarding these restrictions, please see the risk factors in the section entitled titled "Risks Related to Legal Matters and Regulations." As a result, unforeseen delays in the review and permitting process could delay the timing of the construction and installation of our products and could therefore adversely affect the timing of the recognition of revenue related to the installation, which could harm our operating results in a particular period.

In addition, the completion of many of our installations depends on the availability of and timely connection to the natural gas grid and the local electric grid. In some jurisdictions, local utility companies or the municipality have denied our request for connection or have required us to reduce the size of certain projects. In addition, some municipalities have recently adopted restrictions that prohibit any new construction that allows for the use installation of natural gas, gas service to new construction. For more information regarding these restrictions, please see the risk factor entitled titled "As a technology With respect to our products that runs, run, in part, on fossil fuel, we may be subject to a heightened risk of regulation to a potential for the loss of certain incentives, and to changes in our customers' energy

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procurement policies." Any delays in our ability to connect with utilities, delays in the performance of installation-related services, or poor performance of installation-related services by our general contractors or sub-contractors will could have a material adverse effect on our results and could cause operating results to vary materially from period to period.

As our business grows and we increase the number of distributors to sell our products, delays in project development, interconnection and permitting may affect our distributors' ability to sell their inventories of our products and they may decide

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to decrease future orders of our products or we may choose to support deployment of their inventory with our end customers, either of which could adversely affect revenue and cash flows.

Furthermore, we rely on the ability of our third-party general contractors to install products at our customers' sites and to meet our installation requirements. We currently work with a limited number of general contractors, which has impacted and may continue to impact our ability to make installations as planned. Our work with contractors or their sub-contractors may have the effect of our being required to comply with additional rules (including rules unique to our customers), working conditions, customers, site remediation, and other requirements, which can add costs and complexity to an installation project. The timeliness, thoroughness, and quality of the installation-related services performed by some of our general contractors and their sub-contractors in the past have not always met our expectations or standards and may not meet our expectations and standards in the future.

Lengthy sales and installation cycles can increase the risk of customer disputes or delayed or incomplete installations. For example, see Part II, Item 7, *Certain Factors Affecting Our Performance, Energy Market Conditions*. Sometimes, a customer may cancel an order prior to installation, meaning we may be unable to recover some, or all of our costs incurred in connection with design, permitting, installation and site preparations. Cancellation rates can be as high as 5% to 10% in any given period due to factors outside of our control, such as permitting or regulatory issues, delays or unexpected costs in securing interconnection approvals, utility infrastructure, cost changes, or other reasons unique to each customer. Our operating expenses are based on anticipated sales levels, and many of our expenses are fixed. If we are unsuccessful in closing sales after expending significant resources or if we experience customer disputes, delays or cancellations, our reputation, business, financial condition, results of operations or cash flows could be materially and adversely affected. Additionally, under our revenue recognition policy, we do not recognize revenue on product sales until delivery or complete installation. Therefore, a small fluctuation in the timing of the sales transaction's completion could cause our operating results to vary materially from period to period.

**The failure of our suppliers to continue to deliver necessary raw materials or other components of our products in a timely manner and to specification could prevent us from delivering our products within required time frames and could cause installation delays, cancellations, penalty payments and damage to our brand and reputation.**

We rely on a limited number of third-party suppliers, and in some cases sole suppliers, for some of the raw materials and components used to manufacture our products, including certain rare earth materials and other materials that may be of are in limited supply. If our suppliers provide insufficient inventory to meet customer demand, or such inventory is not at the level of quality required to meet our standards, or if our suppliers are unable or unwilling to provide us with the contracted quantities (as we have limited or in some case no alternatives for supply), our results of operations could be materially and negatively impacted. If we fail to develop or maintain our relationships with our suppliers, or if there is otherwise a shortage or lack of availability of any required raw materials or components, we may be unable to manufacture our products, or our products may be available only at a higher cost or after a long delay.

Due to increased demand across a range of industries, the global supply chain for certain raw materials and components, including semiconductor components and specialty metals, has experienced significant strain. The COVID-19 pandemic, the macroeconomic environment and geopolitical instability have also contributed to and exacerbated this strain. There can be no assurance that the impact of these issues on the supply chain will not continue, or worsen, in the future. Significant delays and shortages could prevent us from delivering our products to our customers within required time frames and cause order cancellations, and could increase our costs, which would adversely impact our cash flows and the results of operations.

In some cases, we have had to create our own supply chain for some of the components and materials utilized in our fuel cells. We have made significant expenditures to expand and bolster our supply chain. In many cases, we entered into contractual relationships with suppliers to jointly develop the components we needed. These activities are time and capital intensive. In addition, some of our suppliers use proprietary processes to manufacture components. We may be unable to obtain comparable components from alternative suppliers without considerable delay, expense, or at all, as replacing these suppliers could require us either to make significant investments to bring the capability in-house or to invest in a new supply chain partner. Some of our suppliers are smaller, private companies, which are heavily dependent on us as a customer. If our suppliers face difficulties obtaining the credit or capital necessary to expand their operations when needed, they could be unable to supply necessary raw materials and components needed to support meet our planned sales and services operations, requirements, which would negatively impact our sales volumes and cash flows.

The failure by us to obtain raw materials or components in a timely manner or to obtain raw materials or components that meet our quantity and cost requirements could impair our ability to manufacture our products, increase the costs of our products, or increase the costs of servicing our existing portfolio of Energy Servers. products. If we cannot obtain substitute materials or components on a timely basis or

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on acceptable terms, we could be prevented from delivering our products to our customers within required time frames or service our existing fleet of Energy Servers in accordance with their respective O&M Agreements, products, which could result in sales and installation delays, cancellations, penalty payments, warranty breaches, or damage to our brand and reputation, any of which could have a material adverse effect on our business and results of operations. In addition, we rely on our suppliers to meet quality standards, and the failure of our suppliers to meet those quality standards could cause delays in the delivery of our products, unanticipated servicing costs, and damage to our brand and reputation.

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**We have, in some instances, entered into long-term supply agreements that could result in excess or, if one or more suppliers do not produce for any reason, insufficient inventory, above market pricing or higher costs, and negatively affect our results of operations.**

We have entered into long-term supply agreements with certain suppliers. Some of these supply agreements provide for fixed or inflation-adjusted pricing, substantial prepayment obligations and in a few cases, supplier purchase commitments. These arrangements could mean that we end up paying for inventory that we do not need or that is at a higher price than the market. Further, we face significant specific counterparty risk under long-term supply agreements when dealing with suppliers without a long, stable production and financial history. Given the uniqueness of our product, many of our suppliers do not have a long operating history and are private companies that may not have substantial capital resources. In the event any such supplier experiences financial difficulties, it may be difficult or impossible, or may require substantial time and expense, for us to recover any or all of our prepayments. We do not know whether we will be able to maintain long-term supply relationships with our critical suppliers or whether we may secure new long-term supply agreements. Additionally, many of our parts and materials are procured from foreign suppliers, which exposes us to risks including unforeseen increases in costs or interruptions in supply arising from changes in applicable international trade regulations such as taxes, tariffs, or quotas. Any of the foregoing could materially harm our financial condition and our results of operations.

**We face supply chain competition, including competition from businesses in other industries, which could result in insufficient inventory and negatively affect our results of operations.**

Certain of our suppliers also supply parts and materials to other businesses, including businesses engaged in the production of consumer electronics and other industries unrelated to fuel cells. As a relatively low-volume purchaser of certain of these parts and materials, we may be unable to procure a sufficient supply of the items in the event that our suppliers fail to produce sufficient quantities to satisfy the demands of all of their customers, which could materially harm our financial condition and our results of operations.

**We, and some of our suppliers, obtain capital equipment used in our manufacturing process from sole suppliers, and if this equipment is damaged or otherwise unavailable, our ability to deliver our products on time will suffer.**

Some of the capital equipment used to manufacture our products and some of the capital equipment used by our suppliers have been developed and made specifically for us, are not readily available from multiple vendors, and would be difficult to repair or replace if they did not function properly. If any of these suppliers were to experience financial difficulties or go out of business or if there were any damage to, or a breakdown of, our manufacturing equipment and we could not obtain replacement equipment in a timely manner, our business would suffer. In addition, a supplier's failure to supply this equipment in a timely manner with adequate quality and on terms acceptable to us could disrupt our production schedule or increase our costs of production and service.

**Our business has been and continues to be adversely affected by the COVID-19 pandemic.**

We continue to monitor and adjust as appropriate our operations in response to the COVID-19 pandemic. While we maintain protocols to minimize the risk of COVID-19 transmission within our facilities, there is no guarantee that these measures will prevent an outbreak.

If a significant number of employees are exposed and sent home, particularly in our manufacturing facilities, our production could be significantly impacted. Furthermore, since our manufacturing process involves tasks performed at both our California and Delaware facilities, an outbreak at either facility would have a substantial impact on our overall production, and in such case, our cash flow and results of operations including revenue will be adversely affected.

We have experienced and continue to experience delays from certain vendors and suppliers, which, in turn, could cause delays in the manufacturing and installation of our products and adversely impact our cash flows and results of operations including revenue. Alternative or replacement suppliers may not be available and ongoing delays could affect our business and growth. In addition, new and potentially more contagious variants of the COVID-19 virus may develop, which can lead to future disruptions in the availability or price of these or other parts, and we cannot guarantee that we will succeed in finding alternate suppliers that are able to meet our needs. In addition, international air and sea logistics systems have been and continue to be heavily impacted by the COVID-19 pandemic. Actions by government agencies may further restrict the operations of freight carriers and the operation of ports, which would negatively impact our ability to receive the parts and supplies we need to manufacture our products or to deliver them to our customers.

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Our installation operations have also been impacted by the COVID-19 pandemic. For example, our installation projects have experienced delays relating to, among other things, shortages in available labor for design, installation and other work; the inability or delay in our ability to access customer facilities due to shutdowns or other restrictions; the decreased productivity of our general contractors, their sub-contractors, medium-voltage electrical gear suppliers, and the wide range of engineering and construction related specialist suppliers on whom we rely for successful and timely installations; the stoppage of work by gas and electric utilities on which we are critically dependent for hook-ups; and the unavailability of necessary civil and utility inspections as well as the review of our permit submissions and issuance of permits by multiple authorities that have jurisdiction over our activities.

We are not the only business impacted by these shortages and delays, which means that we are subject to risk of increased competition for scarce resources, which may result in delays or increases in the cost of obtaining such services, including increased labor costs and/or fees. An inability to install our products would negatively impact our acceptances, and thereby impact our cash flows and results of operations, including revenue.

As to maintenance operations, if we are delayed in or unable to perform scheduled or unscheduled maintenance, our previously-installed products will likely experience adverse performance impacts including reduced output and/or efficiency, which could result in warranty and/or guaranty claims by our customers and increase our service costs. Further, due to the nature of our products, if we are unable to replace worn parts in accordance with our standard maintenance schedule, we may be subject to increased costs in the future.

We continue to remain in close communication with our manufacturing facilities, employees, customers, suppliers, and partners, but there is no guarantee we will be able to mitigate the impact of this ongoing situation. As the COVID-19 pandemic reaches endemic stages, the future impact on our business operations, supply chain, and demand for our products remains highly dependent on future developments.

**Possible new trade tariffs could have a material adverse effect on our business.**

Our business is dependent on the availability of raw materials and components for our products, particularly electrical components common in the semiconductor industry, specialty steel products / processing and raw materials. For example, prior products. Prior tariffs imposed on steel and aluminum imports increased the cost of raw materials for our Energy Servers and decreased the available supply. Additional new trade tariffs or other trade protection measures that are proposed or threatened and the potential escalation of a trade war and retaliation measures could have a material adverse effect on our business, results of operations and financial condition. Consequently, the imposition of tariffs on items imported by us from China or other countries could increase our costs and could have a material adverse effect on our business and our results of operations.

**A failure to properly comply with foreign trade zone laws and regulations could increase the cost of our duties and tariffs.**

We have established two foreign trade zones one in California and one in Delaware, through qualification with U.S. Customs and Border Protection, and are approved which allow for "zone to zone" transfers between our California and Delaware facilities, facilities located in those states. Materials received in a foreign trade zone are not subject to certain U.S. duties or tariffs until the material enters U.S. commerce. We benefit from the adoption of foreign trade zones by reduced duties, deferral of certain duties and tariffs, and reduced processing fees, which help us realize a reduction in duty and tariff costs. However, the operation of our foreign trade zones requires compliance with applicable regulations and continued support of U.S. Customs and Border Protection with respect to the foreign trade zone

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program. If we are unable to maintain the qualification of our foreign trade zones, or if foreign trade zones are limited or unavailable to us in the future, our duty and tariff costs would increase, which could have an adverse effect on our business and results of operations.

**Any significant disruption ~~in to~~ to the operations at our headquarters or manufacturing facilities could delay the production of our products, which would harm our business and results of operations.**

We monitor our fleet of Energy Servers from our headquarters and an offshore location and manufacture our products in a limited number of manufacturing facilities, any of which could become unavailable either temporarily or permanently for any number of reasons, including equipment failure, material supply, public health emergencies, cyber-attacks or catastrophic weather, including extreme weather events or flooding resulting from the effects of climate change, or geologic events. Our headquarters and several of our Fremont manufacturing facilities facility are located in the San Francisco Bay Area, an area that is susceptible to earthquakes, floods and other natural disasters. The occurrence of a natural disaster such as an earthquake, drought, extreme heat, flood, fire, localized extended outages of critical utilities (such as California's public safety power shut-offs) or transportation systems, or any critical resource shortages could cause a significant interruption in our business, damage or

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destroy our facilities, our manufacturing equipment, or our inventory, and cause us to incur significant costs, any of which could harm our business, our financial condition and our results of operations. Our disaster recovery plans, and ~~readiness insurance~~ may not be sufficient to restore our headquarters, manufacturing facilities or operations. The insurance we maintain against fires, earthquakes operations and other natural disasters may not be adequate to cover our losses, in any particular case, respectively.

**Our limited history of manufacturing new products, such as our Electrolyzers, makes it difficult to evaluate our future prospects and the challenges we may encounter.**

With respect to the manufacture and sale of Electrolyzers, while we have a history of manufacturing and selling our Energy Servers, we have a limited history with regard to our Electrolyzers, which are based in part on the same technology, technology. As a result, there is little historical basis to make judgments on the capabilities associated with our enterprise, management, and our ability to produce an Electrolyzer specifically. Electrolyzers. Our ability to generate the profits we expect to achieve from the sale of Electrolyzers will depend, in part, on our ability to effectively manufacture Electrolyzers, respond to market demand, and add new manufacturing capacity in a an efficient, cost-effective manner. In addition, we must continue to increase the efficiency of our manufacturing process to compete successfully.

### **Risks Related to Government Incentive Programs**

**Our business currently benefits from the availability of rebates, tax credits and other financial programs and incentives, and the reduction, modification, or elimination of changes to such benefits could cause our revenue to decline and harm our financial results.**

We utilize governmental rebates, tax credits, and other financial incentives to lower the effective price of our products to our customers in the United States U.S. and Japan, India, and the Republic of Korea and Taiwan (collectively, our "Asia Pacific region").

The U.S. federal government and some state and local governments provide incentives to current and future end users and purchasers of our Energy Servers 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. Our Energy Servers have qualified for tax exemptions, incentives, or other customer incentives in many states including the states of California, Connecticut, Massachusetts, New Jersey and New York. states. Some states have utility procurement programs, Renewable Renewables Portfolio Standards ("RP Standards" "RPSs") and/or Clean Energy Standards ("CE Standards" "CESs") for which our technologies are eligible. Our eligible; our Energy Servers are currently installed may not be eligible for other RPSs and CESs, particularly when fueled in eleven U.S. states, each of which may have its own enabling policy framework. whole or in part with natural gas. Financiers and Equity Investors (as defined below) may also take advantage of these financial incentives, lowering the cost of capital and energy to our customers.

For example, many of our installations in California interconnect with investor-owned utilities on Fuel Cell Net Energy Metering ("FC NEM") tariffs. FC NEM tariffs will be were available for new California installations until December 31, 2023. However, to To remain eligible for those FC NEM tariffs, at least some installations currently on those tariffs are likely to be required to meet greenhouse gas emissions standards. Bloom has filed an Application for Rehearing and a Stay in the FC NEM proceeding that challenges the legality of implementing said greenhouse gas emissions standards, which require our systems to be significantly cleaner than the grid resources they are displacing. If that challenge is unsuccessful, however, compliance with the greenhouse gas emissions standards may be required for any customer that remains on the FC NEM tariffs in 2024 and could require acquiring in-state biogas that is scarce and where available comes at a significant cost. Other generally applicable tariffs are available for customers deploying fuel cells, and we do not impose the greenhouse gas standards currently limited to FC NEM. We are working through the appropriate channels to determine whether to migrate certain customers to these generally applicable tariffs. We are also working through appropriate regulatory channels to establish alternative tariffs as well, for our customers. If our customers are unable the cost to interconnect under remain on the FC NEM tariffs is significant or suitable alternatives interconnection and tariff costs may increase, and such an increase are not available, it may negatively impact our existing customer base and future demand for our products. Additionally, the uncertainty regarding requirements for service under any of these tariffs could negatively impact the perceived value of or risks associated with our products, which could also negatively impact demand.

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The U.S. federal government offers certain federal tax benefits, including the Production Tax Credit under Section 45 of the Internal Revenue Code (the "PTC") and the **ITC**. The recent passing **Investment Tax Credit** under Section 48 of the Internal Revenue Code (the "ITC"), both of which are currently set to be succeeded by "technology-neutral" versions set forth in Sections 45Y and 48E, respectively, for projects that commence construction beginning in 2025. The IRA offers a number of new federal tax benefits, many of which we may utilize in the future in connection with the sale of our Energy Servers and Electrolyzers. Our customers, **Financiers, financiers**, and Equity Investors may expect us to be able to facilitate their optimization of the tax benefits available pursuant to the IRA. Each of these federal tax benefits have certain legal and operational requirements. For example, any taxpayer taking the benefit of the ITC must meet certain requirements regarding ownership and use for a period of five years. If the energy property is disposed of or otherwise ceases to be qualified investment credit property before expiration of such a five-year period, it could result in a partial reduction in incentives. There may be uncertainty as to how the new regulations promulgated under the IRA are interpreted. If IRS guidance regarding implementation of the IRA is delayed or viewed by investors as unclear, tax credit financing may be delayed or downsized, harming our ability to finance sales. Our failure to either (i) interpret the new requirements under the IRA regarding among other things, prevailing wage, apprenticeship, domestic content, siting in an "energy community," accurately or (ii) adequately update our supply-chain, manufacturing, installation, and record-keeping processes to meet such requirements, may result in a partial or full reduction in the related federal tax benefit and our customers, **Financiers, financiers** and Equity Investors may require us to indemnify them for certain of such reductions. **Change** **Changes** in federal tax benefits over time also may affect our future performance. For example, currently commercial purchasers of fuel cells are eligible to claim the federal bonus depreciation benefit. **Unless legislation extends the bonus depreciation deadlines, However, under current rules it will be phased down, beginning which began in 2023 and will expire continue until expiring at the end of 2026.**

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**2026 in the absence of legislation.** Similarly, commercial fuel cell purchasers can claim the ITC. Under current law, fuel cell projects must begin construction on or before December 31, 2024, in order to claim up to 50% ITC, after which part of this benefit will expire unless extended.

Some countries outside the **United States** **U.S.** also provide incentives to current and future end users and purchasers of our Energy Servers and Electrolyzers. For example, in the Republic of Korea, **RP Standards** **RPSs** and **CE Standards** **CESs** are in place to promote the adoption of renewable, low- or zero-carbon power generation. The Korean **RP Standards** are scheduled to be **RPSs** **were** replaced in 2023 with the Clean Hydrogen Portfolio Standard ("CHPS"). This may impact the demand for our Energy Servers in the Republic of Korea. Initially, we do not expect the CHPS to require 100% hydrogen as a feedstock for fuel cell projects. **The Ministry of Trade, Industry, and Economy is expected to announce details of the CHPS incentive mechanism in 2023.** For the years ended December 31, 2022 and 2021, our revenue in the Republic of Korea accounted for 44% and 38% of our total revenue, respectively. Therefore, if sales of our Energy Servers to this market decline in the future, this may have a material adverse effect on our financial condition and results of operations.

Changes in the availability of rebates, tax credits, and other financial programs and incentives could reduce demand for our **Energy Servers or future** products, impair sales financing, and adversely impact our business results. Additionally, these incentives and procurement programs or obligations 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. The continuation of these programs and incentives depends upon **continued political support which to date has been bipartisan and durable support.**

**In the United States, U.S., we rely on tax equity financing arrangements to realize the benefits provided by federal tax benefits and accelerated tax depreciation and in the event these programs are terminated, our financial results could be harmed. We also rely on incentives in the Korean, European and other international markets.**

U.S. Equity Investors typically derive a significant portion of their economic returns through tax benefits when they finance an Energy Server. Equity Investors are generally entitled to substantially all of the project's tax benefits, such as those provided by the ITC and Modified Accelerated Cost Recovery System ("MACRS") or bonus depreciation. We expect that future Equity Investors will also be interested in taking the benefit of the PTC in connection with financing our Electrolyzers. The number of and available capital from potential Equity Investors is limited, we compete with other energy companies eligible for these tax benefits to access such investors, and the availability of capital from Equity Investors is subject to fluctuations based on factors outside of our control such as macroeconomic trends and changes in applicable taxation regimes. Concerns regarding our limited operating history **at a large scale, lack of profitability and that we are the only party who can perform operations and maintenance on our Energy Servers have made it difficult to attract investors in the past.** Our ability to obtain additional financing **in the future** depends on the continued confidence of banks and other financing sources in our business model, the market for our Energy Servers and Electrolyzers, and the continued availability of tax benefits applicable to our Energy Servers and Electrolyzers, regardless of whether we arrange the financing, or our customers finance the products themselves. In addition, conditions in the general economy and financial and credit markets may result in the contraction of available tax equity financing. Similarly, in international markets such as Korea and Europe, economic benefits applicable to fuel cells may include subsidies for deployment as well as exemptions or reductions from taxes and fees. If as a result of changes to these benefits we, or in some cases our customers, **as the case may be, are unable to enter into tax equity or other financing agreements with attractive pricing terms, or at all, neither we nor our customers, may be able to obtain the capital needed to finance the purchase of our Energy Servers or Electrolyzers.** **products.** Such circumstances could also require us to reduce the price at which we are able to sell our products in the applicable markets and therefore harm our business, **our financial condition, and our results of operations.**

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### **Risks Related to Legal Matters and Regulations**

**We are subject to various national, state and local laws and regulations that could impose substantial costs upon us and cause delays in the delivery and installation of our products.**

The construction, installation, and operation of our products at a particular site are generally subject to oversight and regulation in accordance with national, state, and local laws and ordinances relating to building codes, safety, environmental and climate protection, domestic content requirements and related matters, as well as national, regional and/or local energy market rules, regulations and tariffs, and typically require various local and other governmental approvals and permits, including environmental approvals and permits, that vary by jurisdiction. In some cases, these approvals and permits change or require periodic renewal. These laws and regulations can affect the markets for our products and the costs and time required for their installation and may give rise to liability for administrative oversight costs, compliance costs, clean-up costs, property damage, bodily injury, fines, and penalties. Capital and operating expenses needed to comply with the various these laws and regulations can be significant, and violations may result in substantial fines and penalties or third-party damages.

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It is difficult and costly to track the requirements of every individual authority having jurisdiction over our installations, to design our products to comply with these varying standards, and to obtain all applicable approvals and permits. We cannot predict whether or when all approvals or permits required for a given project will be granted or whether the conditions associated with the approvals or permits will be achievable. The denial of a permit or utility connection essential to a project or the imposition of impractical conditions or excessive costs, such as costs for upgrading utility interconnection equipment, would impair our ability to develop the project. In addition, we cannot predict whether the approval or permitting process will be lengthened due to complexities and appeals. Delay A delay in the review and approval or permitting process of permits for a project can impair or delay our and our customers' abilities to develop that project or may increase the cost so substantially that the project is no longer attractive to us or our customers. Furthermore, unforeseen delays in the review and permitting process could delay the timing of the installation of our products and could therefore adversely affect the timing of the recognition of revenue related to the installation, which could harm our operating results in a particular period. In many cases we contractually commit to performing all necessary installation work on a fixed-price basis, and unanticipated costs associated with approval, permitting and/or compliance expenses may cause the cost of performing such work to exceed our revenue. In addition, emerging federal and state emissions disclosure requirements may pose a burden to existing or potential customers. The costs of complying with all the various laws, regulations and customer requirements, and any claims concerning non-compliance, could have a material adverse effect on our financial condition or our operating results.

In addition, the rules and regulations regarding the production, transportation, storage, and storage use of hydrogen, including with respect to safety, environmental and market regulations and policies, are in flux and may limit the market for our Electrolyzers and Energy Servers that operate using hydrogen.

***The installation and operation of our products are subject to environmental laws and regulations in various jurisdictions, and there has been in the past and could continue to be uncertainty with respect to both how these laws and regulations may change over time and the interpretation of these environmental laws and regulations to our products, especially as they evolve. products.***

We are committed to compliance with applicable environmental laws and regulations including health and safety standards, and we continuously review the operation of our products for health, safety, and environmental compliance. Our Energy Servers, like other fuel cell technology-based products of which we are aware, produce small amounts of hazardous wastes and air pollutants, and we seek to address these in accordance with applicable regulatory standards. In addition, environmental laws and regulations in the United States, U.S., such as the Comprehensive Environmental Response and Compensation and Liability Act, impose liability on several grounds including for the investigation and clean-up of contaminated soil and ground water, impacts to human health and damages to natural resources. If contamination is discovered in the future at properties formerly owned currently or operated by us or currently formerly owned or operated by us, or properties to which hazardous substances were sent by us, it could result in our liability under environmental laws and regulations. Many of our customers who purchase our products have high sustainability standards, and any environmental non-compliance by us could harm our brand and reputation and impact a current or potential customer's customers' buying decision decisions.

Maintaining environmental compliance can be challenging given the changing patchwork of environmental laws and regulations that prevail at the U.S. federal, state, regional, and local level. level and internationally. Most existing environmental laws and regulations preceded the introduction of our innovative fuel cell technology and were adopted to apply to technologies existing at the time (i.e., large coal, oil, or gas-fired power plants). Guidance from these agencies on how certain environmental laws and regulations may or may not be applied to our technology can be inconsistent.

For example, natural gas, which is In most jurisdictions where air permits and various land use permits are required for installation of larger Energy Server installations, the primary fuel used in our Energy Servers, contains benzene, which is classified as a hazardous waste if it exceeds 0.5 milligrams per liter. A small amount length of benzene found in time to obtain these permits has increased. Moreover, the public natural gas supply (equivalent to what is present in one gallon level of gasoline in an automobile fuel tank, which are exempt from federal regulation) is collected by certainty around the gas cleaning units contained in our Energy Servers; these gas cleaning units are typically replaced at customers' sites once every 15 to 36 months. From 2010 to late 2016 and in the regular course of maintenance of the Energy Servers, we periodically replaced the units in our servers relying upon a federal environmental exemption that permitted the handling issuance of such units without manifesting permits has decreased and where issued, the contents as containing a hazardous waste. Although over the years cost of compliance has been and with the approval of two states, we believed that we operated appropriately under the exemption, the U.S. Environmental Protection Agency ("EPA") issued guidance for the first time in late 2016 that differed from our belief and conflicted with the state approvals we had obtained. can be prohibitive. We have complied with the new guidance and, given the comparatively small quantities of benzene produced, we do not anticipate significant additional costs or risks from our compliance with the revised 2016 guidance. In order to put this matter behind us and with no admission of law or fact, we agreed to experienced a consent agreement that was ratified and incorporated by reference into a final order that was entered by an Environmental Appeals Judge for EPA's Environmental Appeals Board in May of 2020. Consistent with the consent agreement and final order, a final payment of approximately \$1.2 million was made

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reluctance in the fourth quarter of 2020 certain areas to issue permits for natural gas Energy Servers and, EPA has confirmed the matter even when that reluctance is formally resolved. Additionally, overcome, we have seen conditions imposed, including a nominal penalty was paid requirement to a state agency under that state's environmental laws relating to the same issue.

Some states in which we operate, including New York, New Jersey and North Carolina, have specific permitting or environmental exemptions for fuel cells. Other states in which we currently operate, including California, have emissions-based requirements, most of which require permits blend costly renewable fuels or other notifications for quantities of emissions similar measures that are higher than those observed from might advance climate goals. The timing associated with these processes and the cost associated with related conditions have impacted our Energy Servers. For example, the Bay Area Air Quality Management District in California has an air permit and risk assessment exemption for emissions of chromium in the hexavalent form ("CR+6") that are less than 0.00051 lbs/year. Emissions above this level may trigger the need for a permit. Also, California's Proposition 65 requires notification of the presence of CR+6 unless public exposure is below 0.001 µg/day, the level determined to represent no significant health risk. Since the California standards are more stringent than those in any other state or foreign location in which we have installed Energy Servers to date, we are focused on California's standards. If stricter standards are adopted in other states or jurisdictions or our servers can't meet applicable standards, it could impact our ability to obtain regulatory approval and/or could result in us not being able to operate in a particular local jurisdiction. selling activities.

These examples illustrate that our Our technology is moving faster than the regulatory process in many instances and that there are inconsistencies between how we are regulated in different jurisdictions. It is possible that regulators could delay or prevent us from conducting our business in some way pending agreement on, and compliance with, shifting regulatory requirements. Such actions could delay the installation of our products, could result in penalties, could require modification or replacement or could trigger claims of performance warranties and defaults under customer contracts that could require us to repurchase equipment, any of which could adversely affect our business, our financial performance, and our brand and reputation. In addition, new energy or environmental laws or regulations or new interpretations of existing laws or regulations could present marketing, political or regulatory challenges and could require us to upgrade or retrofit existing equipment, which could result in materially increased capital and operating expenses.

As we expand into international markets, we may be subject to local content requirements or pressures which could increase cost costs or reduce demand for our products.

Certain countries Foreign jurisdictions where we conduct or wish to conduct our business may impose domestic content requirements (requiring goods, materials, components, services or labor to be supplied from or made in country). Domestic or local content requirements favor domestic industry over foreign competitors and there has been a significant increase in the use of these programs in recent years. For example, in the Republic of Korea, customers and prospective customers may be pressured to select domestic competitors over Bloom.

With respect to our products that run, in part, on fossil fuel, we may be subject to a heightened risk of regulation to a potential for the loss of certain incentives, and to changes in our customers' energy procurement policies.

The current generation of our Energy Servers that run on natural gas produces nearly 23% generally produce fewer carbon emissions than the average U.S. marginal power generation sources that our projects displace. However, the operation of our current Energy Servers does produce some carbon dioxide ("CO<sub>2</sub>"), which contributes to global climate change. As such, we may be negatively impacted by CO<sub>2</sub>-related changes in applicable laws, regulations, ordinances, rules, or the requirements of the incentive programs on which we and our customers currently rely, as well as potential scrutiny around voluntary or regulatory carbon emissions reporting by our existing or potential customers. Changes (or a lack of change to sufficiently recognize both the risks of climate change and the benefit of our technology as one means to maintain reliable and resilient electric service with a lower greenhouse gas emission profile) in any of the laws, regulations, ordinances, or rules that apply to our installations and new technology could make it more difficult or more costly for us or our customers to install and operate our Energy Servers, on particular sites, thereby negatively affecting our ability to deliver cost savings to our customers. Certain municipalities in the United States which we operate have banned or are considering banning new interconnections with gas utilities, while others have adopted bans that allow new interconnections for non-combustion resources, such as our Energy Servers. Some local municipalities have also banned or are considering banning the use of distributed generation products that utilize fossil fuel. We may face similar challenges in international markets in the future. Additionally, our customers' and potential customers' energy procurement policies may prohibit or limit their willingness to procure our natural gas-fueled Energy Servers. Our business prospects may be negatively impacted if we are prevented from completing new installations or our installations become more costly as a result of laws, regulations, ordinances, or rules applicable to our Energy Servers, or by our customers' and potential customers' energy procurement policies.

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Existing regulations and changes to such regulations impacting the electric power industry may create technical, regulatory, and economic barriers, which could significantly reduce demand for our Energy Servers products or affect the financial performance of current sites.

The market markets for electricity generation our products is are heavily influenced by U.S. federal, state, local, and foreign government laws, regulations and policies, including customers' voluntary procurement standards, as well as by tariffs, internal policies and practices of electric utility providers. These regulations, tariffs, standards, and policies often relate to electricity pricing and technical interconnection of customer-owned electricity generation. These regulations, tariffs, standards, and policies are often modified and could continue to change, which could result in a significant reduction in demand for our Energy Servers products. For example, utility companies commonly charge fees to industrial customers for disconnecting from the electric grid. These fees could change, thereby increasing the cost to our customers of using our Energy Servers products and making them less economically attractive.

For example, our project with Delmarva Power & Light Company (the "Delaware Project") is subject to laws and regulations relating to electricity generation, transmission, and sale in Delaware and at the regional and federal level. A law governing the sale of electricity from the Delaware Project was necessary to implement part of several incentives that Delaware offered to us to build our major manufacturing facility ("Manufacturing Center") in Delaware. Those incentives have proven controversial in Delaware, in part because our

Manufacturing Center, while a significant source of continuing manufacturing employment, has not expanded as quickly as projected. The opposition to the Delaware Project is an example of potentially material risks associated with electric power regulation.

At the federal level in the United States, FERC has authority to regulate under various federal energy regulatory laws, wholesale sales of electric energy, capacity, and ancillary services, and the delivery of natural gas in interstate commerce. Also, several of the tax equity partnerships in which we have an interest are involved with are subject to regulation under FERC with respect to market-based sales of electricity, which requires us to file notices and make other periodic filings with FERC, which increases our costs and subjects us to additional regulatory oversight.

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Although we generally are not regulated as a utility, U.S. federal, state and local government statutes and regulations concerning electricity and natural gas, as well as organized market rules such as the PJM tariffs affecting the Delaware Project, heavily influence the market for our product and services in the United States. These statutes, regulations, tariffs and market rules often relate to electricity and natural gas pricing, fuel cell net metering, incentives, taxation, and the rules surrounding the interconnection of customer-owned electricity generation for specific technologies. In the United States, governments and market operators frequently modify these statutes, regulations, tariffs and market rules. Governments, often acting through state utility or public service commissions, as well as market operators, change, adopt or approve different utility requirements and rates for commercial and industrial customers on a regular basis. Changes, or in some cases a lack of change, in any of the laws, regulations, tariffs ordinances, or other rules that apply to our installations and new technology could make it more costly for us or our customers to install and operate our products on particular sites and in turn, could negatively affect our ability to deliver cost savings to customers.

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

We may in the future become subject to product liability claims. Our Energy Servers are considered high energy systems because they consume or produce flammable fuels and may operate up to 480 volts. High-voltage electricity poses potential shock hazards, while natural gas and hydrogen, associated with both our Energy Servers and our Electrolyzers, are flammable gases and therefore a potentially dangerous fuel capable of causing fires and other harms. Although harm. There can be no assurance that our Energy Servers are products will continue to be certified to meet ANSI, IEEE, ASME, IEC and NFPA certain design and safety standards, and if our equipment is not properly handled in accordance with our servicing and handling standards and protocols or if there are unforeseen or undiscovered issues with our equipment, there could be a system failure and resulting damage, injury and/or liability.

In either case, these claims could require us to incur significant costs to defend. Furthermore, any successful product liability claim could require us to pay a substantial monetary award. Moreover, a product liability claim could generate substantial negative publicity about us and could materially impede widespread market acceptance and demand for our products, which could harm our brand, our business prospects, and our operating results. Our product liability insurance may 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 business and our financial condition.

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**Current or future litigation or administrative proceedings could have a material adverse effect on our business, our financial condition and our results of operations.**

We have been and continue to be involved in legal proceedings, administrative proceedings, claims, and other litigation that arise in the ordinary course of business. Purchases of our products have also been the subject of litigation. For information regarding pending legal proceedings, please see Part I, Item 3, Legal Proceedings and Note 13 - Commitments and Contingencies in Part II, Item 8, Financial Statements and Supplementary Data, Note 13 — Commitments and Contingencies. In addition, since our Energy Server and Electrolyzers are new types of products in nascent markets, we have in the past needed and may in the future need to seek the administrative guidance, the amendment of existing regulations, or in some cases the development of new regulations, in order to operate our business in some jurisdictions. Such regulatory processes may require public hearings concerning our business, which could expose us lead to subsequent litigation.

Unfavorable outcomes or developments relating to proceedings to which we are a party or transactions involving our products such as judgments for monetary damages, injunctions, or denial or revocation of permits, could have a material adverse effect on our business, our financial condition, and our results of operations. In addition, settlement of claims could adversely affect our financial condition and our results of operations.

#### Risks Related to Our Intellectual Property

**Our failure to effectively protect and enforce our intellectual property rights may undermine our competitive position, and litigation to protect our intellectual property rights may be costly.**

Policing unauthorized use of proprietary technology can be difficult and expensive, and the protective measures we have taken to protect our intellectual property rights, including our trade secrets, may not be sufficient to prevent such use. For example, many of our engineers reside in California where it is not legally permissible to prevent them from leaving employment with us and working for a competitor. Also, litigation may be necessary to enforce our intellectual property rights, including to protect our trade secrets, or

to determine the validity and scope of the proprietary rights of others. Such litigation may result in our intellectual property rights being challenged, limited in scope, or declared invalid or unenforceable. We cannot be certain that the outcome of any litigation will be in our favor, and an adverse determination in any such litigation could impair our intellectual property rights, our business, our prospects, and our brand, and reputation.

We rely primarily on patent, patents, trade secret, secrets, and trademark laws, trademarks, and non-disclosure, confidentiality, and other types of contractual restrictions to establish, maintain, and enforce our intellectual property and proprietary rights. However, our rights under these intellectual property laws and agreements afford us only limited protection and the actions we take to establish,

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maintain, and enforce our intellectual property rights may not be adequate. For example, our trade secrets and other confidential information could be discovered by or disclosed in an unauthorized manner to third parties. Additionally, our owned or licensed intellectual property rights could be challenged, invalidated, or declared unenforceable in judicial or administrative proceedings, or circumvented, designed around by our competitors, infringed, or misappropriated. Competitors could copy or reverse engineer our products or develop and market products that are substantially equivalent to or superior to our own. Any of these issues, including the unauthorized use of our intellectual property by others, could reduce our competitive advantage and have a material adverse effect on our business, financial condition, or operating results. In addition, the laws of some countries do not protect intellectual property rights as fully as do the laws of the United States, U.S. Many U.S.-based companies have encountered substantial intellectual property infringement in foreign countries, including countries where we sell products. Even if foreign patents are granted, effective enforcement in foreign countries may not be available. We may not be able to effectively protect our intellectual property rights in these markets or elsewhere. If an impermissible use of our intellectual property or trade secrets were to occur, our ability to sell our products at competitive prices may be adversely affected and our business, financial condition, operating results, and cash flows could be adversely affected.

In connection with our expansion into new markets, we may need to develop relationships with new partners, including project developers and/or financiers who may require access to certain of our intellectual property in order to mitigate perceived risks regarding our ability to service their projects over the contracted project duration. If we are unable to come to agreement regarding the terms of such access or find alternative means to address this perceived risk, such failure may negatively impact our ability to expand into new markets. Alternatively, we may be required to develop new strategies for the protection of our intellectual property, which may be less protective than our current strategies and could therefore erode our competitive position.

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***Our patent applications may not result in issued patents, and our issued patents may not provide adequate protection, be successfully challenged in litigation or post-grant proceedings, either of which may have a material adverse effect on our ability to prevent others from commercially exploiting products similar to ours.***

We cannot be certain that our pending patent applications will result in issued patents or that any of our issued patents will afford protection against a competitor. The status of patents involves complex legal and factual questions, and the breadth of claims allowed is uncertain, subject to disagreement. 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 in the future will afford protection against competitors with similar technology. In addition, patent applications filed in foreign countries are subject to laws, rules, and procedures that differ from those of the United States, U.S., and thus we cannot be certain that foreign patent applications related to issued U.S. patents will be issued in other regions. Furthermore, even if these patent applications are accepted and the associated patents issued, some foreign countries provide significantly less effective patent enforcement than the United States, U.S.

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, our prospects, and our operating results.

***We may need to defend ourselves against claims that we infringed, misappropriated, or otherwise violated the intellectual property rights of others, which may be time-consuming and would cause us to incur substantial costs.***

Companies, organizations, or individuals, including our competitors, may hold or obtain patents, trademarks, or other proprietary rights that they may in the future believe are infringed by our products or services. These companies holding patents or other intellectual property rights allegedly relating to our technologies could in the future, make claims or bring suits alleging infringement, misappropriation, or other violations of such rights, or otherwise assert their rights by seeking royalties or injunctions. Several of the proprietary components used in our Energy Servers products have been subjected to infringement challenges in the past. We generally indemnify our customers against claims that the products we supply don't infringe, misappropriate, or otherwise violate third party third-party intellectual property rights, and we therefore may be required to defend our customers against such claims. If a claim is successfully brought in the future and we or our products are determined to have infringed, misappropriated, or otherwise violated a third party's third-party's intellectual property rights, we may be required to do one or more of the following:

- cease selling or using our products that incorporate the challenged intellectual property;
- pay substantial damages (including treble damages and attorneys' fees if our infringement is determined to be willful);
- obtain a license from the holder of the intellectual property right, which may not be available on reasonable terms or at all; or
- redesign our products or means of production, which may not be possible or cost-effective. cost-effective; or
- in some instances, re-purchase products from our customers.

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Any of the foregoing could adversely affect our business, prospects, operating results, and financial condition. In addition, any litigation or claims, whether or not valid, could harm our brand and reputation, result in substantial costs and divert resources and management attention.

We also license technology from third parties and incorporate components supplied by third parties into our products. We may face claims that our use of such technology or components infringes or otherwise violates the rights of others, which would subject us to the risks described above. We may seek indemnification from our licensors or suppliers under our contracts with them, but our rights right to indemnification or our suppliers' resources may be unavailable or insufficient to cover our costs and losses.

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### **Risks Related to Our Financial Condition and Operating Results**

***We have incurred significant losses in the past and we may not be profitable for the foreseeable future. in future periods.***

Since our inception in 2001, we have incurred significant net losses and have used significant cash in our business. As of **December 31, 2022** December 31, 2023, we had an accumulated deficit of **\$3.6 billion** \$3.9 billion. We expect to continue to expand our operations domestically and internationally, including by investing in manufacturing, sales and marketing, research and development, staffing, and infrastructure to support our growth. We may continue to incur net losses **for the foreseeable future. in future periods.** Our ability to achieve profitability **in the future** will depend on a number of factors, including our ability to:

- grow our sales volume;
- increase sales to existing customers and attract new customers;
- expand into new geographical markets and industry market sectors;
- attract and retain financing partners who are willing to provide financing for sales on a timely basis, with attractive terms; partners;
- continue to improve the useful life of our fuel cell technology and reduce our warranty servicing costs;
- reduce the cost of producing our products;
- improve the efficiency and predictability of our installation process;
- introduce new products, including products for the hydrogen market;
- improve the effectiveness of our sales and marketing activities; and
- attract and retain key talent in a competitive labor marketplace.

Even if we do achieve profitability, we may be unable to sustain or increase our profitability in the future.

***Our financial condition and results of operations and other key metrics are likely to fluctuate, on a quarterly basis in future periods, which could cause our results for a particular period to fall below expectations, resulting in a severe decline in the price of our Class A common stock.***

Our financial condition and results of operations and other key metrics have fluctuated significantly in the past and may continue to fluctuate in the future due to a variety of factors, many of which are beyond our control. For example, the amount of product revenue we recognize in a given period is materially dependent on the volume of installations of our products in that period and the type of financing used by the customer.

In addition to the other risks described herein, the following factors could also cause subject us to quarterly fluctuations in our financial condition and results of operations to fluctuate on a quarterly basis: operations:

- the timing of installations, which may depend on many factors such as availability of inventory, product quality or performance issues, local permitting requirements, utility requirements, environmental, health, and safety requirements, weather, availability of labor, the COVID-19 pandemic or such other health emergency, emergencies, and customer facility construction schedules;
- size of particular installations and number of sites involved in any particular quarter;
- the mix in the type or availability of purchase or financing options used by customers, in a period, the geographical mix of customer sales, and the rates of return required by financing parties in such period; parties;
- disruptions in our supply chain;
- whether we are able to structure our sales agreements in a manner that would allow for the product and installation revenue to be recognized upfront;
- delays or cancellations of product installations;
- fluctuations in our service costs, particularly due to unexpected costs and rising labor costs;
- fluctuations in our research and development expense, including periodic increases associated with the pre-production qualification of additional tools as we expand our production capacity;
- the length of the sales and installation cycle for a particular customer;

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- the timing and level of additional purchases by new and existing customers, which may be impacted by macroeconomic factors including inflation, interest rates, the recessionary environment, and availability of capital;
- the timing of the development of the market for our new features and products, including our Electrolyzer;
- unanticipated expenses or installation delays associated with changes in governmental regulations, permitting requirements, **by local authorities at particular sites**, utility requirements and environmental, health and safety requirements;
- disruptions in our sales, production, service or other business activities resulting from disagreements with our labor force or our inability to attract and retain qualified personnel; and
- unanticipated changes in **federal, state, local, or foreign** government incentive programs available for us, our customers, and tax equity financing parties.

Fluctuations in our operating results and cash flow could, among other things, give rise to short-term liquidity issues. In addition, our revenue, key operating metrics, and other operating results in future quarters may fall short of our projections or the expectations of investors and financial analysts, which could have an adverse effect on the price of our **Class A** common stock.

### ***If we fail to manage our growth effectively, our business and operating results may suffer.***

Our current growth and future growth plans may make it difficult for us **In order** to grow effectively, we must efficiently operate our business, challenging us to effectively manage our capital expenditures and control our costs while we expand our operations to increase our revenue. **costs**. If we experience a significant growth in orders without improvements in automation and efficiency, we may not be able to meet the demands of our growth product demand in a timely manner. We may need additional manufacturing capacity and we and some of our suppliers may need additional capital-intensive equipment. Any growth in manufacturing must include a scaling of quality control as the increase in production increases the possible impact of manufacturing defects. In addition, any growth in the volume of sales of our products may outpace our ability to engage sufficient and experienced personnel to manage the higher number of installations and to engage contractors to complete installations on a timely basis and in accordance with our expectations and standards. Any failure to manage our growth effectively could materially and adversely affect our business, **our prospects, our operating results, and our financial condition**. Our future operating results depend to a large extent on our ability to manage this **expansion** and growth successfully.

### ***If we fail to maintain effective internal control over financial reporting in the future, the accuracy and timing of our financial reporting may be adversely affected.***

We are required to comply with Section 404 of the Sarbanes-Oxley Act of **2002 ("Sarbanes-Oxley Act")**, 2002. The provisions of the act require, among other things, that we maintain effective internal control over financial reporting and disclosure controls and procedures. Preparing our financial statements involves a number of complex processes, many of which are done manually and are dependent upon individual data input or review. These processes include **but are not limited to**, calculating revenue, deferred revenue and inventory costs. While we continue to automate our processes and enhance our review and put in place controls to reduce the likelihood for errors, we expect that for the foreseeable future many of our processes will remain manually intensive and thus subject to human **error** if we are unable to implement key operation controls around **pricing, spending and other financial processes**. For example, prior to our adoption of Section 404B of the Sarbanes-Oxley Act, we identified a material weakness in our internal control over financial reporting at December 31, 2019 related to the accounting for and disclosure of complex or non-routine transactions, which has been remediated. **error**. If we are unable to successfully maintain effective internal control over financial reporting, we may fail to prevent or detect material misstatements in our financial statements, in which case investors may lose confidence in the accuracy and completeness of our financial reports. Any failure to maintain effective disclosure controls and procedures or internal control over financial reporting could have a material adverse effect on our business and operating results and cause a decline in the price of our **Class A** common stock.

### ***Our ability to use our deferred tax assets to offset future taxable income may be subject to limitations that could subject our business to higher tax liability.***

We may be limited in the portion of **Our ability** to use net operating loss carryforwards ("NOLs") that we can use in the future to offset taxable income for U.S. federal and state income tax purposes. Our NOLs will expire, if unused, beginning in 2022 through 2028. A lack of future taxable income would adversely affect our ability to utilize these NOLs. In addition, under Section 382 of the Internal Revenue Code of 1986, as amended (the "Code"), a corporation that undergoes an "ownership change" is subject to limitations on its ability to utilize its NOLs to offset future taxable **income**. **Changes** income may be limited due to expiration, lack of taxable income in the future, changes in our stock ownership, as well as **and** other factors that may be outside of our control. Our deferred tax assets may also expire or be underutilized, which could prevent us from offsetting future taxable income.

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changes that may be outside of our control could result in ownership changes under Section 382 of the Code, which could cause our NOLs to be subject to certain limitations. Our NOLs may also be impaired under similar provisions of state law. Our deferred tax assets, which are currently fully reserved with a valuation allowance, may expire unutilized or underutilized, which could prevent us from offsetting future taxable income.

### **Risks Related to Our Liquidity**

**We must maintain the confidence of our customers in our liquidity, including in our ability to timely service our debt obligations and in our ability support and to grow our business over the long-term. long term.**

Currently, we are the only provider able to fully support and maintain our products. If potential customers believe we do not have sufficient capital or liquidity to operate our business over the long-term or that we will be unable to maintain the or support our products, acquired from us and provide satisfactory support, customers may be less likely to purchase or lease our products, particularly in light of the significant financial commitment required. In addition, financing sources may be unwilling to provide financing on reasonable terms. Similarly, suppliers, financing partners, and other third parties may be less likely to invest time and resources in developing business relationships with us if they have concerns about the success of our business.

Accordingly, in order to grow our business, we must maintain confidence in our liquidity and long-term business prospects among customers, suppliers, financing partners and other parties. This may be particularly complicated by factors such as:

- our limited operating history at a large scale;
- the size of our debt obligations;
- our lack of profitability; profitability concerns;
- unfamiliarity with or uncertainty about our products and the overall perception of the distributed generation market;
- prices for electricity or natural gas in particular markets; gas;
- competition from alternate sources of energy;
- warranty or unanticipated service issues we may experience;
- the environmental consciousness and perceived value of environmental programs to our customers;
- the size of our expansion plans in comparison to our existing capital base and the scope and history of operations;
- the availability and amount of tax incentives, credits, subsidies or other incentive programs; and
- the other factors set forth in this **"Risk Factors"** section.

Several of these factors are largely outside our control, and any negative perceptions about our liquidity or long-term business prospects even if unfounded, would likely harm our business.

*Our indebtedness, and restrictions imposed by the agreements governing our and our PPA Entities' outstanding indebtedness, may limit our financial and operating activities and may adversely affect our ability to incur additional debt to fund future needs.*

As of December 31, 2022, we and our subsidiaries had approximately \$411.6 million of total consolidated indebtedness, of which an aggregate of \$285.8 million represented indebtedness that is recourse to us, \$12.7 million of which is classified as current and \$273.1 million of which is classified as non-current. Of this \$285.8 million in debt, \$61.0 million represented debt under our 10.25% Senior Secured Notes due March 2027, and \$224.8 million represented debt under the \$230.0 million aggregate principal amount of our 2.50% Green Convertible Senior Notes due August 2025 (the "Green Notes"). In addition, our PPA Entities' (defined herein) outstanding indebtedness of \$125.8 million represented indebtedness that is non-recourse to us. For a description and definition of PPA Entities, please see Part II, Item 7, *Management's Discussion and Analysis – Purchase and Financing Options – Portfolio Financings*. As of December 31, 2022, we had \$26.0 million in short-term debt and \$385.6 million in long-term debt. Given our substantial level of indebtedness, it may be difficult for us to secure additional debt financing at an attractive cost, which may in turn impact our ability to expand or maintain our operations, and develop our product development activities products, and to remain competitive in the market. Our liquidity needs could vary significantly and may be affected by general economic conditions, industry trends, performance, and many other factors not within our control.

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The agreements governing our and our PPA Entities' outstanding indebtedness contain, and other future debt agreements may contain, covenants imposing operating and financial restrictions on our business that limit our flexibility including, among other things:

- borrow money;
- pay dividends or make other distributions;
- incur liens;
- make asset dispositions;
- make loans or investments;
- issue or sell share capital of our subsidiaries;
- issue guarantees;
- enter into transactions with affiliates;
- merge, consolidate or sell, lease or transfer all or substantially all of our assets;
- require us to dedicate a substantial portion of cash flow from operations to the payment of principal and interest on indebtedness, thereby reducing the funds available for other purposes such as working capital and capital expenditures;
- make it more difficult for us to satisfy and comply with our obligations with respect to our indebtedness;
- subject us to increased sensitivity to interest rate increases;
- make us more vulnerable to economic downturns, adverse industry conditions, or catastrophic external events;

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- limit our ability to withstand competitive pressures;
- limit our ability to invest in new business subsidiaries that are not PPA Entity-related;
- reduce our flexibility in planning for or responding to changing business, industry and economic conditions; and/or
- place us at a competitive disadvantage to competitors that have relatively less debt than we have.

Our PPA Entities' debt agreements require the maintenance of financial ratios or the satisfaction of financial tests such as debt service coverage ratios and consolidated leverage ratios. Our PPA Entities' ability to meet these financial ratios and tests may be affected by events beyond our control and, as a result, we cannot assure you that we will be able to meet these ratios and tests.

Upon the occurrence of certain events to us, including a change in control, a significant asset sale or merger or similar transaction, our liquidation or dissolution or the cessation of our stock exchange listing, each of which may constitute a fundamental change under the outstanding notes, holders of certain of the notes have the right to cause us to repurchase for cash any or all of such outstanding notes. We cannot provide assurance that we would have sufficient liquidity to repurchase such notes. Furthermore, our financing and debt agreements contain events of default. If an event of default were to occur, the trustee or the lenders could, among other things, terminate their commitments and declare outstanding amounts due and payable and our cash may become restricted. We cannot provide assurance that we would have sufficient liquidity to repay or refinance our indebtedness if such amounts were accelerated upon an event of default. Borrowings under other debt instruments that contain cross-acceleration or cross-default provisions may, as a result, be accelerated and become due and payable as a consequence. We may be unable to pay these debts in such circumstances. We cannot provide assurance that the operating and financial restrictions and covenants in these agreements will not adversely affect our ability to finance our future operations or capital needs, or our ability to engage in other business activities that may be in our interest or our ability to react to adverse market developments.

### **We may not be able to generate sufficient cash to meet our debt service obligations or our growth plans.**

Our ability to generate sufficient cash to make scheduled payments on meet our debt obligations will depend on our future financial performance and on our future cash flow performance, which will be affected by a range of economic, competitive, and business factors, many of which are outside of our control.

factors. If we do not generate sufficient cash to satisfy our debt obligations, including interest payments, or if we are unable to satisfy the requirement for the payment of principal at maturity or other payments that may be required from time to time under

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the terms of our debt instruments, we may have to undertake alternative financing plans such as refinancing or restructuring our debt, selling assets, reducing or delaying capital investments, or seeking to raise additional capital. We cannot provide assurance that any refinancing or restructuring would be possible, that any assets could be sold, or, if sold, of the timing of the sales and the amount of proceeds realized from those sales, that additional financing could be obtained on acceptable terms, if at all, or that additional financing these alternatives would be available or permitted under the terms of our various debt instruments then in effect. Furthermore, the ability to refinance indebtedness would depend upon the condition of the finance and credit markets at the time which have in the past been, and may in the future be, volatile. time. Our inability to generate sufficient cash to satisfy our debt obligations or to refinance our obligations on commercially reasonable terms or on a timely basis would have an adverse effect on our business, our results of operations and our financial condition.

### **Under some circumstances, we may be required to or elect to make additional payments to our PPA Entities or the Equity Investors.**

Our one remaining PPA Entity (PPA V) is structured in a manner such that, other than the amount of any equity investment we have made, we do not have any further primary liability for the debts or other obligations of the PPA Entities. PPA V, which operates Energy Servers for end customers, has significant restrictions on its ability to incur increased operating costs, or could face events of default under debt or other investment agreements if end customers are not able to meet their payment obligations under PPA V or if Energy Servers are not deployed in accordance with the project's schedule. If PPA V experiences unexpected, increased costs such as insurance costs, interest expense or taxes or as a result of the acceleration of repayment of outstanding indebtedness, or if end customers are unable or unwilling to continue to purchase power under this PPA, there could be insufficient cash generated from the project to meet the debt service obligations or to meet any targeted rates of return of Equity Investors. If PPA V fails to make required debt service payments, this could constitute an event of default and entitle the lender to foreclose on the collateral securing the debt or could trigger other payment obligations of the PPA. To avoid this, we could choose to contribute additional capital to PPA V to enable such PPA Entity to make payments to avoid an event of default, which could adversely affect our business or our financial condition.

## **Risks Related to Our Operations**

### **Expanding operations internationally could expose us to additional risks.**

Although we currently operate primarily operate in the United States, U.S., we continue to expand our business internationally. We currently have operations in the Asia Pacific region and in Ireland, Europe. Any expansion internationally could subject our business to risks associated with international operations, including:

- increased complexity and costs of managing international operations;
- conformity with applicable business customs, including translation into foreign languages and associated expenses;
- lack of availability of government incentives and subsidies;

- financing challenges in arranging, and availability of, financing for our customers;
- potential changes to our established business model, including installation and/or service challenges that we may have not encountered before;
- cost of alternative power sources, which could be meaningfully lower outside the United States; U.S.;
- availability and cost of natural gas;
- variability in gas specifications from jurisdiction to jurisdiction;
- effects of adverse changes in currency exchange rates and rising interest rates;
- difficulties in staffing and managing foreign operations in an environment of diverse culture, laws and regulations, and customers, and the increased travel, infrastructure, and legal and compliance costs associated with international operations;
- our ability to develop and maintain relationships with suppliers and other local businesses;
- compliance with product safety requirements and standards;
- our ability to obtain business licenses that may be needed in international locations to support expanded operations;

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- compliance with local laws and regulations and unanticipated changes in local laws and regulations, including tax laws and regulations;
- challenges in managing taxation in cross-border transactions;

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- greater difficulties in securing or enforcing our intellectual property rights in certain jurisdictions;
- difficulties in enforcing contracts in certain jurisdictions;
- risk of nationalization or other expropriation of private enterprises;
- trade barriers such as export requirements, tariffs, taxes, local content requirements, anti-dumping regulations and requirements, and other restrictions and expenses, which could increase the effective price of our products and make us less competitive in some countries or increase the costs to perform under our existing contracts;
- difficulties in collecting payments in foreign currencies and associated foreign currency exposure;
- restrictions on repatriation of earnings;
- natural disasters (including as a result of climate change), acts of war or terrorism, regional conflict (including the ongoing war in Ukraine and tensions between China and Taiwan), conflicts, and public health emergencies, including the COVID-19 pandemic; emergencies; and
- adverse social, political and economic conditions, including inflation, a recessionary environment, and disruptions in capital markets.

We utilize a sourcing strategy that emphasizes global procurement of materials that has direct or indirect dependencies upon a number of vendors with operations in the Asia Pacific region. Physical, regulatory, technological, market, reputational, and legal risks related to climate change in these regions and globally are increasing in impact and diversity and the magnitude of any short-term or long-term adverse impact on our business or results of operations remains unknown. The physical impacts of climate change, including as a result of certain types of natural disasters occurring more frequently or with more intensity or changing weather patterns, could disrupt our supply chain, result in damage to or closures of our facilities, and could otherwise have an adverse impact on our business, operating results and financial condition. In addition, the war in Ukraine resulted in increased sanctions that affected the price of raw materials used in our products, which had and could continue to have an adverse impact on our operating results.

Our cross-border transactions and international operations are subject to complex foreign and U.S. laws and regulations, including anti-bribery and corruption laws, antitrust or competition laws, data privacy laws, such as the GDPR, and environmental regulations, among others. In particular, recent years have seen a substantial increase in anti-bribery law enforcement activity by U.S. regulators, and we currently operate and seek to operate in many parts of the world that are recognized as having greater potential for corruption. Violations of any of these laws and regulations could result in fines and penalties, criminal sanctions against us or our employees, prohibitions on the conduct of our business and on our ability to offer our products and services in certain geographies, and significant harm to our business reputation. Our policies and procedures to promote compliance with these laws and regulations and to mitigate these risks may not protect us from all acts committed by our employees or third-party vendors, including contractors, agents and services partners. Additionally, the costs of complying with these laws (including the costs of investigations, auditing and monitoring) could adversely affect our current or future business.

The success of our international sales and operations will depend, in large part, on our ability to anticipate and manage these risks effectively. Our failure to manage any of these risks could harm our international operations, reduce our international sales, and could give rise to liabilities, costs or other business difficulties that could adversely affect our operations and financial results.

***Data security breaches and cyberattacks could compromise our intellectual property or other confidential information and cause significant damage to our business, the product performance, of our fleet of Energy Servers, our brand, and our reputation.***

We maintain information that is confidential, proprietary or otherwise sensitive in nature on our information technology systems, and on the systems of our third-party providers. This information includes intellectual property, financial information and other confidential information related to us and our employees, prospects, customers, suppliers and other business partners. Additionally, our information technology provides us with the ability to remotely control some variables of our Energy Servers products; they are connected to, and controlled and monitored by our centralized remote monitoring service. We rely on our internal software

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applications for many of the functions we use to operate our business generally. Cyberattacks are increasing in frequency and evolving in nature. We and our third-party providers are at risk of attack through the use of increasingly sophisticated methods, including malware, phishing and the deployment of artificial intelligence to find and exploit vulnerabilities.

Our information technology systems, and those maintained by our third-party providers, have been in the past, and may be in the future, subjected to attempts to gain unauthorized access, disable, destroy, maliciously control or cause other system disruptions. In some cases, it is difficult to anticipate or to detect immediately such incidents and the damage they caused. While these types of incidents have not had a material effect on our business to date, future incidents involving access to our

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network or improper use of our systems, or those of our third-parties, third parties, could compromise confidential, proprietary or otherwise sensitive information, as well as the operation of our Energy Servers products.

While There is no assurance that any measures we maintain reasonable and appropriate administrative, technical, and physical safeguards and may take preventive and proactive measures to combat known and unknown cybersecurity risks there is no assurance that such actions will be sufficient to prevent future security breaches and cyberattacks. The security of our infrastructure, including the network that connects our Energy Servers products to our remote monitoring service, may be vulnerable to breaches, unauthorized access, misuse, computer viruses, or other malicious code and cyberattacks that could have a material adverse impact on our business and our Energy Servers products in the field, and the protective measures we have taken may be insufficient to prevent such events. A breach or failure of our networks or computer or data management systems due to intentional actions such as cyberattacks, including but not limited to ransomware attacks, phishing or denial-of-service attacks, negligence, or other reasons, whether as a result of actions by third-parties or our employees, could seriously disrupt our operations or could affect our ability to control or to assess the performance in the field of our Energy Servers products and could result in disruption to our business and potentially legal liability.

In addition, security breaches and cyberattacks could negatively impact our brand and reputation and our competitive position and could result in litigation with third parties, regulatory action and increased remediation costs, any of which could adversely impact our business, our financial condition, and our operating results. Although we maintain insurance coverage that may cover certain liabilities in connection with some security breaches and cyberattacks, we cannot be certain it will be adequate for liabilities actually incurred or that any insurer will not deny coverage of future claims.

**If we are unable to attract and retain key employees and hire qualified management, technical, engineering, finance and sales personnel, our ability to compete and successfully grow our business could be harmed.**

We believe that our success and our ability to reach our strategic objectives are highly dependent on the contributions of our key management, technical, engineering, finance and sales personnel. The loss of the services of any of our key employees could disrupt our operations, delay the development and introduction of our products and services and negatively impact our business, prospects and operating results. In particular, we are highly dependent on the services of Dr. Sridhar, our Founder, President, Chief Executive Officer and Director, and other certain key employees. None of our key employees are bound by employment agreements for any specific term and we cannot assure you that we will be able to successfully attract and retain the senior leadership necessary to grow our business. In addition, many of the accounting rules related to our financing transactions are complex and require experienced and highly skilled personnel to review and interpret the proper accounting treatment with respect these transactions, and if we are unable to recruit and retain personnel with the required level of expertise to evaluate and accurately classify our revenue-producing transactions, our ability to accurately report our financial results may be harmed. There is increasing intense competition for talented individuals in our industry, and competition for qualified personnel is especially intense particularly in the San Francisco Bay Area where our principal offices are located. Our failure to attract and retain our executive officers and other key management, technical, engineering, finance and sales personnel, could adversely impact our business, our financial condition and our operating results.

**Competition for manufacturing employees is intense, and we may not be able to attract and retain the qualified and skilled employees needed to support our business.**

We believe part of our success depends on the efforts and talent of our manufacturing employees and our ability to attract, develop, motivate and retain such employees. Competition for manufacturing employees is extremely intense. We may not be able to hire and retain these personnel at compensation levels consistent with our existing compensation and salary structure. Some of the companies with which we compete for experienced employees have greater resources than we have and may be able to offer more attractive terms of employment.

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### **Risks Related to Ownership of Our Common Stock**

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

The market price of our Class A common stock has been and may continue to be volatile. In addition to factors discussed in this Risk Factors section, the market price of our Class A common stock may fluctuate significantly in response to numerous variables, many of which are beyond our control, including:

- overall performance of the equity markets;
- actual or anticipated fluctuations in our revenue and other operating results;
- changes in the financial projections we may provide to the public or our failure to meet these projections;
- changing market and economic conditions, including a recessionary environment, rising interest rates and inflationary pressures, such as those pressures the market is currently experiencing, which could make our products more expensive or could increase our costs for materials, supplies, and labor; pressures;
- failure of securities analysts to initiate or maintain coverage of us, changes in financial estimates by any securities analysts who follow us or our failure to meet these estimates or the expectations of investors;
- the issuance of negative reports from short sellers;

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- recruitment or departure of key personnel;
- new laws, regulations, subsidies or credits, or new interpretations of them, applicable to our business;
- negative publicity related to problems in our manufacturing or the real or perceived quality of our products;
- rumors and market speculation involving us or other companies in our industry;
- the failure or distress of competitors in our industry;
- announcements by us or our competitors of significant technical innovations, acquisitions, strategic partnerships or capital commitments;
- lawsuits threatened or filed against us; and
- other events or factors including those resulting from war, natural disasters (including as result of climate change), incidents of terrorism or responses to these events.

In addition, the stock markets have experienced extreme price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many companies. Stock prices of many companies have fluctuated in a manner unrelated or disproportionate to the operating performance of those companies. In the past, stockholders have instituted securities class action litigation following periods of market volatility. We are currently involved in securities litigation, which may subject us to substantial costs, divert resources and the attention of management from our business, and adversely affect our business.

***We may issue additional shares of our Class A common stock in connection with any future conversion conversions of the Green Notes, or in connection with our transaction with SK ecoplant, which may dilute our existing stockholders and potentially adversely affect the market price of our Class A common stock.***

In the event that some or all of the Green Notes are converted, and we elect to deliver shares of common stock, the ownership interests of existing stockholders will be diluted, and any sales in the public market of any shares of our Class A common stock issuable upon such conversion could adversely affect the prevailing market price of our Class A common stock. If we were not able to pay cash upon conversion of the Green Notes, the issuance of shares of Class A common stock upon conversion of the Green Notes could depress the market price of our Class A common stock.

***In addition, we entered into a Securities Purchase Agreement (the "SPA") with SK ecoplant in October 2021 that allows SK ecoplant to purchase additional shares of Class A common stock. For additional details on this transaction, see Note 18 - SK ecoplant Strategic Investment. The exercise of this option to purchase additional shares may dilute our existing stockholders and potentially adversely affect the market price of our Class A common stock.***

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***The dual class structure of our common stock and the voting agreements among certain stockholders have the effect of concentrating voting control of our Company with KR Sridhar, our Chairman and Chief Executive Officer, and also with those stockholders who held our capital stock prior to the completion of our initial public offering, which limits or precludes your ability to influence corporate matters and may adversely affect the trading price of our Class A common stock.***

Our Class B common stock has ten votes per share, and our Class A common stock has one vote per share. As of December 31, 2022, and after giving effect to the voting agreements between KR Sridhar, our Chairman and Chief Executive Officer, and certain holders of Class B common stock, our directors, executive officers, significant stockholders of our common stock, and their respective affiliates collectively held approximately 45% of the voting power of our capital stock. Because of the ten-to-one voting ratio between our Class B and Class A common stock, the holders of our Class B common stock collectively will continue to have the ability to significantly influence the vote on all matters submitted to our stockholders for approval until the earliest to occur of (i) immediately prior to the close of business on July 27, 2023, (ii) immediately prior to the close of business on the date on which the outstanding shares of Class B common stock represent less than five percent (5%) of the aggregate number of shares of Class A common stock and Class B common stock then outstanding, (iii) the date and time or the occurrence of an event specified in a written conversion election delivered by KR Sridhar to our Secretary or Chairman of the Board to so convert all shares of Class B common stock, or (iv) immediately following the date of the death of KR Sridhar. This concentrated control limits or precludes Class A stockholders' ability to influence corporate matters while the dual class structure remains in effect, including the election of directors, amendments of our organizational documents, and any merger, consolidation, sale of all or substantially all of our assets, or other major corporate transaction requiring stockholder approval. In addition, this may prevent or discourage unsolicited acquisition proposals or offers for our capital stock that Class A stockholders may feel are in their best interest as one of our stockholders.

Future transfers by holders of Class B common stock will generally result in those shares converting to Class A common stock, subject to limited exceptions such as certain transfers effected for estate planning purposes. The conversion of Class B common stock to Class A common stock will have the effect, over time, of increasing the relative voting power of those remaining holders of Class B common stock who retain their shares in the long-term.

The S&P Dow Jones and FTSE Russell have implemented changes to their eligibility criteria for inclusion of shares of public companies on certain indices, including the S&P 500, namely, to exclude companies with multiple classes of shares of common stock from being added to such indices. In addition, several shareholder advisory firms have announced their opposition to the use of multiple class structures. As a result, the dual class structure of our common stock may prevent the inclusion of our Class A common stock in such indices and has caused shareholder advisory firms to publish negative commentary about our corporate governance practices or otherwise seek to cause us to change our capital structure. Any such exclusion from indices could result in a less active trading market for our Class A common stock. Any actions or publications by shareholder advisory firms critical of our corporate governance practices or capital structure could also adversely affect the value of our Class A common stock.

***We do not intend to pay dividends for the foreseeable future.***

We have never declared or paid any cash dividends on our capital stock and do not intend to pay any cash dividends in the foreseeable future. We anticipate that we will retain all of our future earnings for use in the development of our business and for general corporate purposes. Any determination to pay dividends in the future will be at the discretion of our board of directors. Accordingly, investors must rely on sales of their Class A common stock after price appreciation, which may never occur, as the only way to realize any future gains on their investments.

***Provisions in our charter documents and under Delaware law could make an acquisition of us more difficult, may limit attempts by our stockholders to replace or remove our current management, may limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, or employees, rights, and may limit the market price of our Class A common stock.***

Provisions in our restated certificate of incorporation and amended and restated bylaws may have the effect of delaying or preventing a change of control or changes in our management. Our restated certificate of incorporation and amended and restated bylaws include provisions that:

- require that our board of directors is classified into three classes of directors with staggered three year terms;
- permit the board of directors to establish the number of directors and fill any vacancies and newly created directorships;

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- require super-majority voting to amend some provisions in our restated certificate of incorporation and amended and restated bylaws;
- authorize the issuance of "blank check" preferred stock that our board of directors could use to implement a shareholder stockholder rights plan;
- authorize only the chairman of our board of directors, our chief executive officer, or a majority of our board of directors to call a special meeting of stockholders;
- prohibit stockholder action by written consent, which thereby requires all stockholder actions be taken at a meeting of our stockholders;
- establish a dual class common stock structure in which holders of our Class B common stock may have the ability to control the outcome of matters requiring stockholder approval even if they own significantly less than a majority of the outstanding shares of our common stock, including the election of directors and significant corporate transactions such as a merger or other sale of our Company or substantially all of our assets; consent;
- expressly authorize the board of directors to make, alter, or repeal our bylaws; and
- establish advance notice requirements for nominations for election to our board of directors or for proposing matters that can be acted upon by stockholders at annual stockholder meetings.

In addition, our restated certificate of incorporation and our amended and restated bylaws provide that the Court of Chancery of the State of Delaware will be the exclusive forum for: any derivative action or proceeding brought on our behalf; any action asserting a breach of fiduciary duty; any action asserting a claim against us arising pursuant to the Delaware General

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Corporation Law, our restated certificate of incorporation or our amended and restated bylaws; or any action asserting a claim against us that is governed by the internal affairs doctrine. Our restated certificate of incorporation and our amended and restated bylaws provide that unless we consent in writing to the selection of an alternative forum, the federal district courts of the **United States** U.S. shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. These choice of 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 any of our directors, officers, or other employees, which thereby may discourage lawsuits with respect to such claims. Alternatively, if a court were to find the choice of forum provision contained in our restated certificate of incorporation and our amended and restated bylaws to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business, our operating results, and our financial condition.

Moreover, Section 203 of the Delaware General Corporation Law may discourage, delay, or prevent a change in control of our Company. Section 203 imposes certain restrictions on mergers, business combinations, and other transactions between us and holders of 15% or more of our common stock.

### ***Increased scrutiny regarding ESG practices and disclosures could result in additional costs and adversely impact our business, brand and reputation.***

Companies across all industries are facing increasing Like many companies, we face increased scrutiny relating to their **our** Environmental, Social and Governance ("ESG") practices and disclosures and institutional and individual investors disclosures. Investors are increasingly using ESG screening criteria in making investment decisions. Our disclosures on these matters or a failure to satisfy evolving stakeholder expectations for ESG practices and reporting may potentially harm our brand and reputation and impact employee retention and **our** access to capital. In addition, our failure, or perceived failure, to pursue or fulfill our goals, targets, and objectives or to satisfy various reporting standards, **within the timelines we announce, or at all**, could expose us to government enforcement actions and private litigation.

Our ability to achieve any ESG goal, target, or objective, **including with respect to environmental and diversity initiatives and compliance with ESG reporting standards**, is subject to numerous risks, many of which are outside of our control. Examples of such risks include the availability and cost of technologies and products, evolving regulatory requirements affecting ESG standards or disclosures, our ability to recruit, develop, and retain diverse talent in our labor markets, and our ability to develop and maintain reporting processes and controls that comply with evolving standards for identifying, measuring and reporting ESG metrics. As ESG stakeholder expectations, reporting standards, and disclosure requirements continue to develop, we may incur increasing costs related to ESG monitoring and reporting.

## ITEM 1B — UNRESOLVED STAFF COMMENTS

None.

## ITEM 1C — CYBERSECURITY

### ***Cybersecurity Risk Management and Strategy***

We have developed and implemented a cybersecurity risk management program designed to assess, identify, and manage risks from potential unauthorized occurrences on or through our information technology systems that may result in adverse effects on the confidentiality, integrity, or availability of our information technology systems or any information residing therein. Our cybersecurity risk management program includes a cybersecurity incident response plan.

We design and assess our program based on the Center for Internet Security ("CIS") 18 Framework. This does not imply that we meet any particular technical standards, specifications, or requirements, only that we use the CIS 18 Framework as a guide to help us identify, assess, and manage cybersecurity risks relevant to our business.

Our cybersecurity risk management program is integrated into our overall enterprise risk management program, and shares common methodologies, reporting channels and governance processes that apply across the enterprise risk management program to other legal, compliance, strategic, operational, and financial risk areas.

Our cybersecurity risk management program includes:

- Periodic risk assessments are designed to help identify material cybersecurity risks to our critical systems, information, products, services, and our broader enterprise IT environment.

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- A security team principally responsible for managing our cybersecurity risk assessment processes, security controls, and response to cybersecurity incidents.
- The use of external service providers, where appropriate, to assess, test, or otherwise assist with aspects of our security controls.
- Our Internal Audit department which monitors certain IT systems controls that are integrated into our larger Sarbanes-Oxley control environment.
- Periodic cybersecurity awareness training for our employees and contractors with access to our information technology systems.
- A cybersecurity incident response plan that includes procedures for responding to cybersecurity incidents, including incidents that could be indicators of attack against availability, integrity and confidentiality of information systems.
- A third-party risk management process for service providers, suppliers, and vendors that includes examining their security postures and assessing their data and system protection controls.

Our business has not been materially affected by cybersecurity incidents to date. For a discussion of how cybersecurity risks could materially affect us in the future, please see the risk factors set forth under the caption Part I, Item 1A, *Risk Factors — Risks Related to our Operations*.

## Cybersecurity Governance

Our Board considers cybersecurity risk as part of its risk oversight function and has delegated to the Audit and Risk Committee (the "Audit Committee") oversight of cybersecurity and other information technology risks. The Audit Committee oversees management's implementation of our cybersecurity risk management program. The Board receives periodic reports from the Audit Committee on these and other activities. The Audit Committee receives periodic reports from management on our cybersecurity risks, including presentations from our Chief Information Officer, internal security staff, and external experts. This includes updates to the Audit Committee, as appropriate, regarding any significant cybersecurity incidents, or multiple incidents that could be significant in the aggregate. These updates may occur in between regularly scheduled Audit Committee meetings.

At the management level, the Enterprise and Risk Management Committee (the "ERM Committee") discusses cybersecurity topics, including any potentially material cybersecurity incidents, as part of its oversight of the company's significant risks. Our management team, including the Chief Information Officer, is responsible for assessing and managing our material risks from cybersecurity threats. The team has primary responsibility for our overall cybersecurity risk management program and supervises both our internal cybersecurity personnel and our retained external cybersecurity consultants.

Our management team supervises efforts to prevent, detect, mitigate, and remediate cybersecurity risks and incidents through various means, including:

- periodic briefings from internal security personnel;
- periodic reviews of risk management measures implemented to prevent, detect, mitigate, and remediate cybersecurity risks and incidents, including our incident response plan;
- threat intelligence and other information obtained from governmental, public or private sources, including external consultants engaged by us; and
- alerts and periodic reports produced by security tools deployed in our IT environment.

Our Chief Information Officer has more than 20 years of cybersecurity and information technology experience and she has served as the Chief Information Officer for multiple technology companies. Similarly, the members of the ERM Committee possess significant risk management experience obtained by their collective years of experience at Bloom and other companies of similar or greater complexity.

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### ITEM 1B - UNRESOLVED STAFF COMMENTS

None.

### ITEM 2 - PROPERTIES

The table below presents details for our principal properties:

Facility	Facility	Location	Approximate Square Footage			Facility	Location	Approximate Square Footage			Lease Held	Lease Term
			Footage	Held	Lease Term			Footage	Held	Lease Term		
Corporate headquarters <sup>1</sup>	Corporate headquarters <sup>1</sup>	San Jose, CA	183,000	Leased	2031	San Jose, CA		183,000	Leased	2031		
Manufacturing, warehousing, research and development <sup>2</sup>	Manufacturing, warehousing, research and development <sup>2</sup>	Sunnyvale, CA	110,000	Leased	2023	Manufacturing, warehousing, research and development <sup>2</sup>	Sunnyvale, CA	110,000	Leased	2024		
Research and development	Research and development	Mountain View, CA	44,000	Leased	2023	Research and development	Mountain View, CA	44,000	Leased	2024		
Manufacturing, research and development <sup>3</sup>	Manufacturing, research and development <sup>3</sup>	Fremont, CA	326,000	Leased	*	Manufacturing, research and development	Fremont, CA	326,000	Leased	*		
Manufacturing and warehousing	Manufacturing and warehousing	Newark, DE	172,000	Leased	**	Manufacturing and warehousing	Newark, DE	377,000	Leased	**		
Manufacturing and warehousing <sup>3</sup>	Manufacturing and warehousing <sup>3</sup>	Newark, DE	178,000***	Owned	n/a	Manufacturing and warehousing <sup>3</sup>	Newark, DE	178,000	Owned	n/a		

<sup>1</sup>Lease terms expire in December 2027, January 2028 February 2036 and February 2036 November 2037.

.. Lease terms expire in February 2026, December 2026, April 2027, June 2028 and April 2027.

.. After expansion the square footage increased from 76,000 sq. ft to 178,000 sq. ft. October 2028.

<sup>1</sup> Our corporate headquarters is used for administration, research and development, and sales and marketing.

<sup>2</sup> As of December 31, 2023, we were in the process of vacating the 50,000 sq. ft. relate to manufacturing, warehousing and R&D facility and 60,000 sq. ft. represent which was closed per the warehouse. Restructuring Plan (for additional information, please see Part II, Item 8, Note 12 — Restructuring).

<sup>3</sup> Our first purpose-built Bloom Energy manufacturing center for the fuel cells and Energy Servers assembly and was designed specifically for copy-exact duplication as we expand, which we believe will help us scale more efficiently.

We lease additional office space as field offices in the United States U.S. and office and manufacturing space around the world including in China, India, the Republic of Korea, Taiwan, Japan, and the United Arab Emirates. To support our growth expectations, we have invested in additional manufacturing capacity at a new facility in Fremont, California. In July 2022 we announced the grand opening of this multi-gigawatt manufacturing facility, representing a \$200 million investment. It followed recent the expansion of the company's global headquarters in San Jose in June 2021 as well as the opening of a new research and technical center and a global hydrogen development facility in Fremont. This facility is expected to help us address current capacity constraints and provide for provides additional capacity necessary for future growth.

#### ITEM 3 ■ LEGAL PROCEEDINGS

We are, and from time to time we may become, involved in legal proceedings or subject to claims arising in the ordinary course of our business. For a discussion of legal proceedings, see Note 13 - Commitments and Contingencies in Part II, Item 8, Note 13 — Financial Statements Commitments and Supplementary Data Contingencies. We are not presently a party to any other legal proceedings that, in the opinion of our management and if determined adversely to us, would individually or taken together have a material adverse effect on our business, operating results, financial condition or cash flows.

#### ITEM 4 ■ MINE SAFETY DISCLOSURES

Not applicable.

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## Part II

#### ITEM 5 ■ MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDERS MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our Class A common stock is listed on The New York Stock Exchange ("NYSE") under the symbol "BE." There is no public trading market for our Class B common stock. On February 14, 2023 February 12, 2024, there were 404,567 registered holders of record of our Class A common stock, 199 registered holders of record of our Class B common stock and zero registered holders of record of Series A Preferred Stock, stock.

We have not declared or paid any cash dividends on our capital stock and do not intend to pay any cash dividends in the foreseeable future.

#### STOCK PERFORMANCE GRAPH

The following graph compares the cumulative total return since our initial public offering of our common stock relative to the cumulative total returns of the NYSE Composite Index and the Nasdaq Clean Edge Green Energy Total Return Index. An investment of \$100 (with reinvestment of all dividends, if any) is assumed to have been made in our common stock and in each of the indexes on July 25, 2018 (the date our Class A common stock began trading on the NYSE) December 31, 2018 and its relative performance is tracked through December 31, 2022 December 31, 2023.

This graph shall not be deemed to be "filed" with the SEC or subject to the liabilities of Section 18 of the Exchange Act, and the graph shall not be deemed to be incorporated by reference into any prior or subsequent filing by us under the Securities Act. Note that past stock price performance is not necessarily indicative of future stock price performance.

 Performance Graph 2023.jpg

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	(in	(in	March	June	March	June	(in	March	June	March	June
cumulative	cumulative	July 25, 2018	September 30, 2018	December 31, 2018	2019	March 2019	September 30, 2019	December 31, 2019	2020	March 2020	September 30, 2020
\$)	\$)	2018	30.2018	31.2018	2019	2019	30.2019	31.2019	2020	2020	31.2020

Bloom	Bloom											Bloom										
Energy	Energy											Energy	\$100.00	\$129.45	\$122.94	\$32.56	\$74.84	\$52.40	\$109.00	\$180.02	\$287.10	
Corporation	Corporation	\$100.00	\$136.32	\$39.92	\$51.68	\$49.07	\$13.00	\$29.87	\$20.92	\$43.51	\$71.86	Corporation										
NYSE	NYSE											NYSE										
Composite	Composite											Composite	\$100.00	\$112.36	\$116.29	\$116.63	\$125.50	\$93.57	\$108.73	\$116.79	\$134.28	
Index	Index	\$100.00	\$101.64	\$88.91	\$99.90	\$103.40	\$103.70	\$111.59	\$83.19	\$96.68	\$103.84	Index										
NASDAQ	NASDAQ											NASDAQ										
Clean Edge	Clean Edge											Clean Edge										
Green	Green											Green										
Energy	Energy											Energy	\$100.00	\$114.10	\$120.51	\$122.34	\$142.66	\$115.55	\$170.89	\$255.64	\$406.35	
Total	Total											Total										
Return	Return											Return										
Index	Index	\$100.00	\$98.59	\$88.81	\$101.33	\$107.02	\$108.65	\$126.69	\$102.62	\$151.76	\$227.03	Index										
(in	(in	March	June	March	June	March	June	March	June	March	June	(in	March	June	March	June	March	June	March	June	(in	March
cumulative	cumulative	December	31,	30,	September	December	31,	30,	September	December	31,	cumulative	September	December	31,	30,	September	December	31,	30,	September	December
\$)	\$)	31.2020	2021	2021	30.2021	31.2021	2022	2022	30.2022	31.2022	2022	\$)	30.2021	31.2021	2022	2022	30.2022	31.2022	2023	2023	30.2023	31.2023
Bloom	Bloom											Bloom										
Energy	Energy											Energy	\$187.51	\$219.65	\$241.88	\$165.26	\$200.20	\$191.48	\$199.59	\$163.73	\$132.78	\$148.20
Corporation	Corporation	\$114.60	\$108.16	\$107.44	\$74.85	\$87.68	\$96.55	\$65.97	\$79.92	\$76.44	Corporation											
NYSE	NYSE											NYSE										
Composite	Composite											Composite	\$151.70	\$162.04	\$158.30	\$138.45	\$129.58	\$146.89	\$149.67	\$155.57	\$151.79	\$167.12
Index	Index	\$119.39	\$129.00	\$137.52	\$134.88	\$144.07	\$140.75	\$123.10	\$115.21	\$130.60	Index											
NASDAQ	NASDAQ											NASDAQ										
Clean Edge	Clean Edge											Clean Edge										
Green	Green											Green										
Energy	Energy											Energy	\$363.73	\$395.61	\$376.27	\$304.70	\$332.41	\$276.34	\$305.95	\$301.25	\$251.14	\$248.97
Total	Total											Total										
Return	Return											Return										
Index	Index	\$360.87	\$352.89	\$356.75	\$323.02	\$351.33	\$334.15	\$270.59	\$295.21	\$245.41	Index											

#### Unregistered Sales of Equity Securities

None.

#### Issuer's Purchases of Equity Securities

None.

#### ITEM 6 ■ [RESERVED]

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ITEM 7 ■ MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

##### Overview

###### Description of Bloom Energy

Our mission is to make clean, reliable energy affordable for everyone in the world. We created the first large-scale, commercially viable solid oxide fuel-cell based power generation platform that empowers businesses, essential services, critical infrastructure and communities to responsibly take charge of their energy.

Our technology, invented in the **United States, U.S.**, is one of the most advanced electricity and hydrogen producing technologies on the market today. Our fuel-flexible Bloom Energy Servers can use biogas, hydrogen, natural gas, or a blend of fuels to create resilient, sustainable and cost-predictable power at typically significantly higher efficiencies than traditional, combustion-based resources. In addition, our same solid oxide platform that powers our fuel cells can be used to create hydrogen **which with our Bloom Electrolyzer**. **Hydrogen** is increasingly recognized as a critically important tool for the decarbonization of the energy economy. Our enterprise customers include some of the largest multinational corporations in the world. We also have strong relationships with some of the largest utility companies in the **United States U.S.** and the **Republic of Korea, Korea**, with a growing presence in various international markets.

At Bloom Energy, we look forward to a net-zero future. Our technology is designed to help enable this future by delivering reliable, low-carbon electricity in a world facing unacceptable levels of power disruptions. Our resilient platform has kept electricity available for our customers through hurricanes, earthquakes, typhoons, forest fires, extreme heat and grid failures. Unlike traditional combustion power generation, our platform is community-friendly and designed to significantly reduce emissions of criteria air pollutants. We have made tremendous progress towards renewable fuel production through our biogas, hydrogen and electrolyzer programs, and we believe that we are well-positioned as a core platform and fixture in the new energy paradigm to help organizations and communities achieve their net-zero objectives.

We market and sell our Energy Servers primarily through our direct sales organization in the **United States, U.S.**, and we also have direct and indirect sales channels internationally. Recognizing that deploying our solutions requires a **material significant** financial commitment, we have developed a number of financing options to support sales of our Energy Servers to customers who lack the financial capability to purchase our Energy Servers directly, and **who may** prefer to finance the acquisition using third-party financing or **who prefer** to contract for our services on a pay-as-you-go model.

Our typical target commercial or industrial customer has historically been either an investment-grade entity or a customer with investment-grade attributes such as size, assets and revenue, liquidity, geographically diverse operations and general financial stability. We have also expanded our product and financing options to below-investment-grade customers and have also expanded internationally, **to target customers with including** deployments on a wholesale grid. Given that our customers are typically large institutions with multi-level **decision making** decision-making processes, we generally experience a lengthy sales process. **Once the sale is completed, we have a large multi-disciplined team to facilitate the deployment of our projects in a wide variety of locations under a myriad of regulatory environments.**

#### **Strategic Investment**

On October 23, 2021, we entered into a Securities Purchase Agreement (the "SPA") with SK ecoplant Co., Ltd. ("SK ecoplant," formerly known as SK Engineering & Construction Co., Ltd.) in connection with our strategic partnership. Pursuant to the SPA, on December 29, 2021, we sold to SK ecoplant **10 million** 10,000,000 shares of our zero coupon, non-voting redeemable convertible Series A preferred stock, par value \$0.0001 per share (the "RCPS" "Series A RCPS"), at a purchase price of \$25.50 per share for an aggregate purchase price of **\$255 million** \$255.0 million (the "Initial Investment"). On November 8, 2022, each share of Series A Preferred Stock RCPS was converted into 10,000,000 shares of Class A **Common Stock** common stock.

Simultaneous with the execution of the SPA, we and SK ecoplant executed an amendment to the Joint Venture Agreement (the "JVA"), an amendment and restatement to our Preferred Distribution Agreement ("PDA Restatement"), and a new Commercial Cooperation Agreement regarding initiatives pertaining to the hydrogen market and general market expansion for the Bloom Energy Server and Bloom Energy Electrolyzer.

On March 20, 2023, SK ecoplant entered into an amendment of the SPA (the "Amended SPA") with us, pursuant to which on March 23, 2023, we issued and sold to SK ecoplant 13,491,701 shares of non-voting Series B redeemable convertible preferred stock, par value \$0.0001 per share (the "Series B RCPS"), at a purchase price of \$23.05 per share for cash proceeds of \$311.0 million, excluding issuance cost of \$0.5 million.

On March 20, 2023, in connection with the Amended SPA, we also entered into a Shareholders' Loan Agreement with SK ecoplant (the "Loan Agreement"), pursuant to which we had the option to draw on a loan from SK ecoplant with a

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maximum principal amount of \$311.0 million, a maturity of five years and an interest rate of 4.6%, should SK ecoplant have sent a redemption notice to us under the Amended SPA.

On September 15, 2023, we entered into the Amended and Restated JVA and the Share Purchase Agreement (together, the "Amended JV Agreements") with SK ecoplant which changed the share of our voting rights in the Korean joint venture to 40% and increased the scope of assembly done by the joint venture facility in the Republic of Korea to full assembly.

On September 23, 2023, all 13,491,701 shares of the Series B RCPS were automatically converted into shares of our Class A common stock pursuant to the Certificate of Designation, dated as of March 20, 2023, setting forth the rights, preferences, privileges, and restrictions of the Series B RCPS, as amended by the Certificate of Amendment to the Certificate of Designation, dated as of April 18, 2023. Upon conversion of all the Series B RCPS into shares of our Class A common stock, SK ecoplant became a related party to us with the beneficial ownership of 10.5% of our outstanding Class A common stock.

For additional details about the transaction with SK ecoplant, please see **Part II, Item 8, Note 17 — SK ecoplant Strategic Investment**, and for more information about our joint venture with SK ecoplant, please see **Note 12 - Related Party Transactions** in Part II, Item 8, **Note 11 — Financial Statements and Supplementary Data Related Party Transactions.**

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#### **Certain Factors Affecting our Performance**

##### **Global Macroeconomic Energy Market Conditions**

We generally The global energy transition to a zero-carbon environment has created new challenges and opportunities for utilities, suppliers of energy solutions and customers. Shifts and uncertainty in market and regulatory dynamics and corporate and governmental policies are seeing worsening global macroeconomic conditions, including **rising** currently impacting the selling process and extending sales cycles and timelines for our natural gas-, biogas- and hydrogen-related products. Increasing electricity rates, decreasing energy reliability, and delays in the development of transmission infrastructure and grid interconnection have led to increased customer interest rates, recession fears, foreign exchange rate volatility in our power solutions. At the same time, natural gas supply and **inflationary pressures**, pricing concerns due to geopolitical stresses and resulting

market changes as well as increasing geopolitical instability. These conditions focus on sustainability targets have led to increased caution from potential customers. The increased use of renewable power generation and the weather effects of climate change have exacerbated aging grid fragilities, increased the occurrence of power outages, created grid transmission shortages, and lengthened already extensively delayed interconnection cycles. Low- and zero-carbon sources of baseload energy have also been curtailed and even banned in some locations, forcing utilities, states and countries to revisit less clean sources of baseload and intermediate power in an attempt to ensure energy reliability. This supply and demand mismatch globally has threatened energy security reliability, reduced the availability of energy, and increased the cost of energy.

Bloom's power solutions enable customers to address these energy market challenges by offering fuel flexible solutions that are designed to provide cost predictable, resilient, and reliable energy in a timely fashion. As customers and utilities navigate the energy transition and evolving landscape, the ability of our power solutions to fit their economic, regulatory, and policy needs depends on a number of factors, including natural gas availability and pricing, electrical interconnection needs and availability, redundant back up power requirements, cost requirements, and sustainability profile. Even in those situations where the time to power from the utility is years away in light of the need to build out energy transmission infrastructure, these factors still may impact our business in several ways, a customer's buying decision. For example, although our power generation solutions can operate as microgrids, independent from the strengthening grid, if a customer desires back up power or a "grid parallel" solution in combination with the Bloom microgrid, required interconnection studies and lengthy interconnection queues remain, eroding the time to power value proposition. According to the Lawrence Berkeley National Lab, U.S. dollar has caused our Energy Servers interconnection queue delays are growing, with a forty percent year over year increase in 2022. The typical project interconnection process for large scale projects grew to become five years in 2022 compared to three years in 2015 and two years in 2008. In addition, many data center customers and other large power users have signed exclusivity arrangements with their utilities, and this often creates a more expensive in several markets outside complicated dynamic for them to move to a behind the United States, which, coupled with worsening global macroeconomic conditions, has meter solution. To add to this, the potential to adversely impact demand for our Energy Servers. Our Energy Servers run on a variety of fuels, including natural gas. The rising cost of natural gas, increases in gas distribution rates, limited availability of natural gas supply, as well as disruptions to the world gas markets, has increased the cost of our power solutions for customers and, in certain cases where there is a lack of fuel supply, a complete inability to operate the systems. In the U.S., the lack or slow development of pipeline infrastructure is impacting the timing of customers being able to take advantage of our power solution opportunities. In certain jurisdictions in the U.S. and Europe, natural gas bans have been enacted that prevent the use of our power solutions unless alternative fuels are available. In addition, there is a growing hesitancy among potential customers to purchase our power solutions to run on natural gas. Increasingly, customers want a zero-carbon solution for power, and, although our power solutions are designed to run on biofuels or hydrogen (in addition to natural gas) and help our customers achieve their sustainability goals, these fuels continue to have very limited availability and, for most customers, are not yet economical. This impetus by customers to use zero-carbon solutions today, combined with the current lack of availability of zero-carbon fuels, is adversely impacting our power solution selling opportunities. In addition, many of our

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potential data center and industrial customers are pursuing greenfield opportunities where the development cycle is long and laden with permitting requirements and the uncertainty of these factors is leading to a more difficult customer decision-making process and longer sales cycles. For example, in the fourth quarter of 2022, we entered into a PPA contract for the sale of electricity to a customer for three greenfield sites that were at various stages of development (the "Project"). The first site was expected to be operational with power by the third quarter of 2024. We sold 73 megawatts of the Energy Servers to a Distributor with the expectation that the Distributor would support installation on the Project and install the Energy Servers at the three Project sites. The Project is currently delayed, and we are in discussions with the end customer regarding if and how to move forward. If the Project continues to be delayed or is terminated we may work with the Distributor to deploy the Energy Servers at our future installation sites with a different customer or customers or the Distributor may decide to reduce future orders or cancel existing orders until the Energy Servers are deployed, and either action could materially and adversely affect our product revenue and the timing of the associated cash flows in 2024.

Corporate procurement policies are also undergoing change that creates uncertainty; while some customers are increasingly focused on decarbonizing their own direct energy supply, including aligning the timing of their zero-carbon power generation with their energy consumption, others are shifting to prioritize overall carbon emissions from the energy system, both of which are impacting our sales.

The regulatory environment for energy solutions continues to shift. In South Korea, the government recently moved to a new, government-run bidding process for fuel cell purchases, which has impacted and may continue to impact demand for our power solutions. In the U.S., the ITC for fuel cells running on a non-zero carbon fuel currently expires at the end of 2024. In Ireland, which is a large data center market, a directive from the Minister of the Department of the Environment, Climate and Communications to restrict grid connections to data centers and other large power users, along with a halt in high-pressure gas installations has delayed our selling activities in Ireland. Delays in adoption of Renewable Fuel Standard regulations in the U.S. for the end customers. These conditions also impact use of biogas to generate electricity for electric vehicles, and minimal governmental focus on utilization of biogas outside of its direct use by methane-fueled vehicles, have created uncertainty in prospects for broader biogas availability for industrial uses, including our manufacturing power solutions. In addition, in most jurisdictions, air permits and supply chain, as discussed below, various land use permits are required for installation of our solutions over a certain amount of mega-watts, and generally the length of time to obtain these permits increased, while the level of certainty of issuance has decreased and if issued, the cost of compliance requirements can be cost prohibitive. We have experienced a reluctance in certain states to issue permits for gas generation equipment. Even if issued, states may require a blend of costly renewable fuels or other measures to advance climate goals. This has adversely impacted our selling activities.

Significant governmental interest, investment and stimulation of clean hydrogen in the U.S., Europe and in many other regions across the globe have not yet had significant impacts on demand for hydrogen. To date, while the potential impact number of proposed hydrogen production projects has grown rapidly, only a small fraction has reached the final investment decision (FID) stage, and an even smaller fraction have been deployed. In addition, the infrastructure needed to transport hydrogen, whether through pipelines or maritime or land-based tankers, is currently only sufficient for existing uses, and has not begun to be extended for anticipated future uses, with hydrogen blending and other approaches remaining at pilot stages. It remains unclear whether regulators in some jurisdictions will allow hydrogen to be introduced into gas distribution systems, which could effectively preclude or severely limit our ability to transport hydrogen from the point of production to the point of consumption.

All of these conditions factors have lengthened the selling cycles for our electrolyzer product and power solutions, and we have experienced delays in our anticipated bookings. Our revenue, margins, and cash flow in any given year are largely dependent on customer demand largely has been offset by bookings during the customers' need for resiliency prior year. Historically, the majority of our bookings have occurred in the second half of the year, with a significant portion occurring in the fourth quarter. That trend did not continue to the same degree in 2023. If a substantial portion of our anticipated bookings continue to be delayed, our future revenue, margins and a quick time to power that our Energy Server provides as well as the sustainability that both our Energy Servers and Electrolyzers provide, cash flow could be materially adversely impacted.

#### *Supply Chain Constraints*

We continue to see effects from global supply chain disruptions tightness due to the current inflationary environment, war in Ukraine, and trade tensions between the U.S. and China. We are experiencing not aware of, and do not expect any significant direct impact on our business or supply chain challenges and logistics constraints. from the Israel-Gaza Strip armed conflict. While we have not experienced any significant component shortages to date, we are facing pressures from longer lead times, shipping and freight delays, and increased costs of raw materials. inflation. These dynamics could worsen as a result of continued increase in geopolitical instability. In addition, the current inflationary environment and war in Ukraine has led to an increase in the price of components and raw materials. In the event we are unable to mitigate the impacts of delays and/or price increases in raw materials components and freight, components, it could delay the manufacturing and installation, of our Energy Servers and increase the costs of, our Energy Servers, products, which would adversely impact our cash flows and results of operations, including our revenues and gross margin. We expect these supply chain challenges and logistics constraints to continue in the short term.

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### *Customer Financing Constraints*

Our ability to obtain financing for our Energy Servers depends partially on the foreseeable future. creditworthiness of our customers, and deterioration of our customers' credit ratings can impact the financing for their use of our Energy Servers. Regional banking and financial institution instability, such as the failure of Silicon Valley Bank in the first quarter of 2023, may make it more difficult for our customers to obtain financing. Rising interest rates have also increased the cost of financing for our customers. As interest rates rise, the financiers of our installations demand a higher rate of return, which puts pressure on our margins. We continue to work on obtaining the financing required for our 2024 installations, but if we are unable to secure such financing, our revenue, cash flow, and liquidity could be materially impacted. We expect that in the U.S., the IRA and the transferability of tax credits, should make the financing market more robust in 2024, thereby easing some of these customer financing constraints, but this cannot be assured.

### *Manufacturing and Labor Market Constraints*

We are experiencing As recently as 2022, we experienced impacts from the ongoing labor shortage shortages and continue to face challenges in hiring for our manufacturing facilities. While these constraints abated in 2023 and we continue to dedicate resources to supporting our capacity expansion efforts, reduced headcount as part of the Restructuring Plan adopted in September 2023, we are experiencing may still experience difficulties with hiring and retention, particularly for and may face additional labor shortages in the future. The Restructuring Plan included (i) an optimization of our new workforce across multiple functions, (ii) a relocation of a portion of our R&O department of our manufacturing and warehousing facility in Fremont, Newark, Delaware, to Mexico, and (iii) a closure of a manufacturing, warehousing, R&D facility in Sunnyvale, California. According to the Restructuring Plan, 74 full-time employees and 48 contractors separated from the Company in September 2023. An additional 71 full-time employees and 8 contractors separated from the Company in October 2023. Also, in October 2023 we communicated to 61 full-time manufacturing employees about their forthcoming separation from the Company. These employees were sent on paid leave and left the Company in January 2024. For additional information, please see Part II, Item 8, Note 12 — Restructuring. In addition, the current inflationary environment has led to rising wages and labor rates costs as well as increased competition for labor. To date, we have been able to mitigate any significant impact to production through a contingent workforce and other measures. In the event these constraints return, and we are unable to continue to mitigate the impacts of these challenges, it could delay the manufacturing and installation of our Energy Servers or Electrolyzers, and we may be unable to meet customer demand, which could adversely impact our cash flows and results of operations, including our revenues and gross margin. We expect the hiring and retention challenges arising from the labor shortages to continue for the foreseeable future.

### *Customer Financing Constraints*

Our ability to obtain financing for our Energy Servers partly depends on the creditworthiness of our customers, and deterioration of our customers' credit ratings can impact the financing for their use of an Energy Server. We continue to work on obtaining the financing required for our 2023 installations, but if we are unable to secure such financing our revenue, cash flow and liquidity could be materially impacted. We expect that in the United States, the Inflation Reduction Act of 2022 (the "IRA") and the transferability of tax credits, should make the financing market more robust.

### *Installations and Maintenance of Energy Servers*

In 2022, 2023, our installation projects have experienced some delays relating to, among other things, shortages in available parts permitting, utility delays, and labor for design, installation and other work, and the inability or delay in access to customer facilities. However, these delays did not significantly impact our ability to access customer facilities due to shutdowns or other restrictions. Despite the impact on installations during the year ending December 31, 2022 and given our mitigation strategies, we only had a couple instances of a significant delay in the installation of our Energy Servers as a result of supply chain issues that pushed installations out a quarter. revenue.

If we are delayed in or unable to perform scheduled or unscheduled maintenance, our previously installed Energy Servers would likely experience adverse performance impacts, including reduced output and/or efficiency, which could result in warranty and/or guaranty claims by our customers. Further, due to the nature of our Energy Servers, if we are unable to replace worn parts in accordance with our standard maintenance schedule, we may be subject to increased incur higher costs in the future. During the year ended December 31, 2022 December 31, 2023, we experienced no significant delays in servicing our Energy Servers.

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### *COVID-19 Pandemic*

We continue to monitor and adjust, as appropriate, our operations in response to the COVID-19 pandemic. We maintain protocols to minimize the risk of COVID-19 transmission within our facilities. We will continue to follow CDC and local guidelines. For more information regarding the risks posed to our Company by the COVID-19 pandemic, refer to Part I, Item 1A, Risk Factors – Risks Related to Our Products and Manufacturing – Our business has been and continues to be adversely affected by the COVID-19 pandemic.

#### **Environmental, Social and Governance (“ESG”)**

We are committed to a goal of providing consistent returns to our **shareholders** stockholders while maintaining a strong sense of good corporate citizenship that places a high value on the environment, welfare of our employees, the communities in which we operate, the customers we serve, and the world as a whole. We believe that prioritizing, improving, and managing our **Environmental, Social, and Governance (“ESG”)** ESG related risks, opportunities, and programs **will allow** help us to better create long-term value for our investors.

We In April 2023, we released our **2021 2022** Sustainability Report, **Solutions for a Decarbonized Future, Advancing the Mission of Decarbonization** (the **“Report”** “Sustainability Report”) during the first quarter of 2022, using generally accepted ESG frameworks and standards, including alignment with Sustainability Accounting Standards Board standards and the Task Force on Climate-related Financial Disclosures recommendations. In addition, the **Sustainability** Report also utilized certain Global Reporting Initiative standards and was mapped against the United Nations Sustainable Development Goals. We plan to issue the Report a sustainability report on an annual basis.

Our mission is to make clean, reliable energy affordable for everyone in the world. To that end, we strive to empower businesses and communities to responsibly take charge of their energy while addressing both the causes and consequences of climate change. We aim to serve our customers with products that are resilient, providing uninterrupted power with predictable pricing over the long-term, while addressing sustainability issues by developing an increasingly broad portfolio of **decarbonized solutions**, **solutions for decarbonization**.

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The **Sustainability** Report can be found on our website at <https://www.bloomenergy.com/sustainability>. Website references throughout this document are provided for convenience only, and the content on the referenced websites is not incorporated by reference into this report.

#### **Inflation Reduction Act of 2022 – New and Expanded Production and Tax Credits for Manufacturers and Projects to Support Clean Energy**

On August 16, 2022, President Biden signed into law the **Inflation Reduction Act of 2022** (the “IRA”). The **IRA** It contains provisions which **we expect will** have a significant impact on the development and financing of clean energy projects in the **United States**. **U.S.** The IRA includes the extension and expansion of the **Investment Tax Credit (“ITC”)** ITC and the **Production Tax Credit (“PTC”** (the “PTC”) and the addition of expanded tax credits for other technologies and for manufacturing of clean energy equipment as well as terms allowing parties to more easily monetize the tax credits. The IRA also includes some targeted bonus credit incentives intended to encourage development in low-income communities, the use of domestically produced materials, and compliance with certain labor-related requirements.

The IRA contains several credits and incentive provisions that may be relevant to us, which we have summarized below:

- Section 48 – **the ITC**, which provides a tax credit based on capital investment in a variety of renewable and conventional energy technologies to incentivize investment in new energy resources and more efficient use of fuel, including fuel cell technology;
- Section 48C – Qualified Advanced Energy Project (reenacted), which provides **an the ITC** through a competitive application process administered through the Department of Energy equal to 6% or 30% of the investment with respect to advanced energy projects;
- Section 45V – Clean Hydrogen, which provides a PTC of up to \$3 per kg of qualified clean hydrogen over a 10-year credit period for the production of qualified clean hydrogen at a qualified facility in the **US**; **U.S.**; and
- Section 45Q – Carbon Capture Sequestration, which provides a credit ranging from \$12-\$17 or \$60-\$85 per metric ton based on the amount of carbon oxides captured from a qualified facility over a 12-year **period** period.

We believe that the programs and credits included in the IRA align well with our business model and could provide significant benefits with respect to incentivizing the purchase of our current product offerings and technologies. In particular, the **IRA authorized a competitive process to apply for credits to expand or enhance manufacturing capacity under IRC 48C**, and we have applied for a credit under this provision; at this time, we cannot be assured our application will ultimately be accepted or result in our receipt of credits. Also, the new PTC

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for qualified clean hydrogen and credit for carbon capture could result in increased demand for commercial solutions to hydrogen production technology and carbon capture, including our solid oxide fuel-cell based **electrolyzer** **Electrolyzer** and **energy server**. As Treasury has not yet issued **Energy Servers**.

#### **New Foreign Tax Rules**

In 2021 the OECD announced an Inclusive Framework on Base Erosion and Profit Shifting including Pillar Two Model Rules defining the global minimum tax, which calls for the taxation of large multinational corporations at a minimum rate of 15%. Subsequently multiple sets of administrative guidance on several have been issued. Many non-US tax jurisdictions have either recently enacted legislation to adopt certain components of the provisions that applicable Pillar Two Model Rules beginning in 2024 (including the European Union Member States) with the adoption of additional components in later years or announced their plans to enact legislation in future years. We are continuing to evaluate the impacts of enacted legislation and pending legislation to enact Pillar Two Model Rules in the non-US tax jurisdictions we operate in. However, no material impact to our business, we continue financial statements is expected due to assess the impact. relatively small operations outside the U.S.

#### **Liquidity and Capital Resources**

We improved our raised cash and supplemented liquidity through financing activities with SK ecoplant in 2022 the first quarter of 2023 and at issuing the 3% Green Convertible Senior Notes due June 2028 (the "3% Green Notes") in the second quarter of 2023. At the same time, we increased our working capital spend. We have entered into new leases intended to maintain sufficient manufacturing facilities to meet anticipated demand in 2023 and beyond, including new product line expansion, spent. In addition, we have also increased expanded our warehouse space in Delaware and California to store more inventory to meet the amount spent on working capital to enhance our marketing efforts and to expand into new geographies both domestically and internationally.

On August 10, 2022, pursuant anticipated increase in demand. If this increase in demand does not materialize to the degree we anticipated, our liquidity and financial condition may be adversely impacted.

On March 20, 2023, we entered into the Amended SPA, with SK ecoplant, notified us of its intent to exercise its option to purchase additional shares of our Class A common stock, pursuant to a Second Tranche Exercise Notice (as defined in the SPA). It elected to purchase 13,491,701 shares (the "Second Tranche Shares") at a purchase price of \$23.05 per share, calculated as a 15% premium to the volume-weighted average closing price of the 20 consecutive trading day period immediately preceding the exercise of the option. The aggregate purchase price approximates cash proceeds to be received by us of \$311.0 million, net of related incremental direct costs of \$0.1 million. The closing of this purchase (the "Second Closing Date") was expected to be the later of the parties receiving clearance from the U.S. Department of Justice and the Federal Trade Commission of the purchase under the Hart-Scott-Rodino Antitrust Improvements Act of 1974 (the "HSR"), as amended (which was October 7, 2022), and December 6, 2022.

On December 6, 2022, SK ecoplant and Bloom mutually agreed to delay the Second Closing Date until March 31, 2023, unless an earlier date is mutually agreed upon, and subject to and assuming the satisfaction of applicable regulatory clearance.

On August 19, 2022, we completed an underwritten public offering, pursuant to which we issued and sold 13,000,000 to SK ecoplant 13,491,701 shares of Series B RCPS for cash proceeds of \$311.0 million, excluding issuance cost of \$0.5 million.

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On March 20, 2023, in connection with the Amended SPA, we also entered into the Loan Agreement, pursuant to which we were entitled to draw down on a loan from SK ecoplant with a maximum principal amount of \$311.0 million, if SK ecoplant sent a redemption notice to us under the Amended SPA or otherwise had reduced any portion of its current holdings of our Class A common stock at a price of \$26.00 per share (the "Offering"). As a part stock. On September 23, 2023, all 13,491,701 shares of the Offering, the underwriters Series B RCPS were provided a 30-day option to purchase an additional 1,950,000 automatically converted into shares of our Class A common stock at stock. For further information on the same price, less underwriting discounts and commissions, which was exercised contemporaneously strategic investment with SK ecoplant, see Part II, Item 8, Note 17 — SK ecoplant Strategic Investment.

On May 16, 2023, we issued the Offering. The 3% Green Notes with an aggregate principal amount of \$632.5 million due June 2028, unless earlier repurchased, redeemed, or converted, resulting in net cash proceeds of \$612.8 million. On June 1, 2023, we used approximately \$60.9 million of the net proceeds received by us from this offering to redeem all of the outstanding principal amount of our 10.25% Senior Secured Notes due March 2027. The redemption price equaled 104% of the principal amount redeemed plus accrued and unpaid interest. We also used approximately \$54.5 million of the net proceeds from the Offering were \$371.5 million offering to purchase the privately negotiated capped call options (the "Capped Calls"). The remaining portion of the 3% Green Notes was planned to be used for working capital investment and general corporate purposes.

On August 24, 2023, after deducting underwriting discounts as part of the PPA V Upgrade, we paid off the outstanding balance and commissions related accrued interest of \$16.5 million \$118.5 million and incremental costs directly attributable to the Offering \$0.5 million, respectively, of \$0.7 million our 3.04% Senior Secured Notes due June 30, 2031.

For further information on issuance of 3% Green Notes, redemption of our 10.25% Senior Secured Notes, and repayment of 3.04% Senior Secured Notes, please see Part II, Item 8, Note 7 — Outstanding Loans and Security Agreements.

As of December 31, 2022 December 31, 2023, we had cash and cash equivalents of \$348.5 million \$664.6 million. Our cash and cash equivalents consist of highly liquid investments with maturities of three months or less, including money market funds, funds of \$601.1 million. We maintain these balances with high credit quality counterparties, continually regularly monitor the amount of credit exposure to any one issuer and diversify our investments in order to minimize our credit risk.

As of December 31, 2022 December 31, 2023, we had \$285.8 million \$842.0 million of total outstanding recourse debt, \$125.8 million \$4.6 million of non-recourse debt and \$9.5 million \$9.0 million of other long-term liabilities. As of December 31, 2023, all of our debt was classified as long-term liabilities. For a complete description of our outstanding debt, please see Part II, Item 8, Note 7 - O — Outstanding Outstanding Loans and Security Agreements in Part II, Item 8, Financial Statements and Supplementary Data.

The combination of our existing cash and cash equivalents and cash flow to be generated by our operations is expected to be sufficient to meet our anticipated cash flow needs for at least the next 12 months. If these sources of cash are insufficient or are not received in a timely manner to satisfy our near-term or future cash needs, we may require additional capital from equity or debt financings to fund our operations, in particular, our manufacturing capacity, product development, and market expansion requirements and to timely respond to competitive market pressures or strategic opportunities, or otherwise, among other things. We may, from time to time, engage in a variety of financing transactions for such purposes, including factoring our accounts receivable. We During the year ended December 31, 2023, we factored \$291.4 million of accounts receivable. However, we may not be able to secure timely additional financing on favorable terms, or at all. The terms of any additional financing may place limits on our financial and operating flexibility. Although currently we do not have any floating-rate notes on the balance sheet, rising interest rates may increase our overall cost of capital, if and when we refinance our fixed-rate

**convertible notes.** If we raise additional funds through further issuances of equity or equity-linked securities, our existing stockholders could suffer dilution in their percentage ownership of us, and any new securities we issue could have rights, preferences, and privileges senior to those of holders of our common stock.

Our future capital requirements **will depend** depends on many factors, including our rate of revenue growth, the timing and extent of spending on research and development efforts and other business initiatives, the rate of growth in the volume of system builds **and** the need for additional manufacturing space, the expansion of sales and marketing activities both in domestic and international markets, market acceptance of our products, our ability to secure financing for customer use of our Energy Servers, the timing of installations and of **inventory build in anticipation of future sales and installations**, and overall economic conditions. In order to support and achieve our future growth plans, we may need or seek advantageously to obtain additional funding through **an** equity or debt financing. Failure to obtain this **financing or** financing in future quarters may affect our results of operations, including our revenues and cash flows.

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As of December 31, 2022, the current portion of our total debt was \$26.0 million, of which \$13.3 million was outstanding non-recourse debt.

A summary of our consolidated sources and uses of cash, cash equivalents, and restricted cash was as follows (in thousands):

		Years Ended December 31,	
		2022	2021
Net cash (used in) provided by:	Net cash (used in) provided by:		
Net cash (used in) provided by:			
Net cash (used in) provided by:			
Operating activities			
Operating activities	Operating activities	\$ (191,723)	\$ (60,681)
Investing activities	Investing activities	(116,823)	(46,696)
Investing activities			
Investing activities			
Financing activities			
Financing activities	Financing activities	211,364	306,375

Net cash provided by (used in) our PPA Entities **(as defined below)**, which are incorporated into the consolidated statements of cash flows, was as follows (in thousands):

		Years Ended December 31,	
		2022	2021
PPA Entities <sup>1</sup>			
Net cash provided by PPA operating activities		\$ 245,557	\$ 3,188
Net cash (used in) provided by PPA financing activities		(259,854)	3,231

		Years Ended December 31,	
		2023	2022
PPA Entities <sup>1</sup>			
Net cash provided by PPA operating activities		\$ 10,036	\$ 245,557
Net cash used in PPA financing activities		(23,594)	(259,854)

<sup>1</sup> The PPA Entities' operating and financing cash flows are a subset of our consolidated cash flows and represent the stand-alone cash flows prepared in accordance with U.S. GAAP. Operating activities consist principally of cash used to run the operations of the PPA Entities, the purchase of Energy Servers from us, and principal reductions in loan balances. Financing activities consist primarily of changes in debt carried by our PPAs, and payments from and distributions to noncontrolling partnership interests. We believe this presentation of net cash provided by (used in) PPA activities is useful to provide the reader with the impact **to** on consolidated cash flows of the PPA Entities in which we **have had** only a minority interest. **In fiscal 2022 we sold PPA IIIa and PPA IV entities. In August 2023, we sold our last consolidated PPA entity — PPA V. For more details, please see Part II, Item 8, Note 10 — *Portfolio Financings*.**

### *Operating Activities*

Our operating activities consisted of net loss adjusted for certain non-cash items plus changes in our operating assets and liabilities or working capital. Net cash used in operating activities during the year ended December 31, 2023, was \$372.5 million, an increase of \$180.8 million compared to the prior year period. The increase in cash used in operating activities during the year ended December 31, 2022 December 31, 2023, as compared to the prior year period, of \$60.7 million, was primarily due to the increase in our net loss a result of \$121.7 million and the an increase in working capital of \$141.8 million during the year ended December 31, 2022 \$379.4 million due to (1) an increase in inventory levels of \$231.7 million to support future demand, (2) an increase in accounts receivable of \$89.8 million, which was primarily due to the timing of revenue transactions and corresponding collections, the increase in accounts receivable triggered by the increase in sales compounded by the decision not to sell our receivables in the fourth quarter of 2022, the increase in inventory levels to support future demand, and (3) the timing of payments to vendors.

#### Investing Activities

Our investing activities have consisted of capital expenditures, including investments to increase our production capacity. We expect to continue such investing activities as our business grows. Cash used in investing activities of \$116.8 million during the year ended December 31, 2022 December 31, 2023, an increase was \$83.7 million, a decrease of \$70.1 million \$33.1 million compared to the prior year period and was primarily due to the decrease in expenditures on tenant improvements for a newly leased engineering and manufacturing building in Fremont, California, which opened in July 2022. We expect to continue to make capital expenditures over the next few quarters to prepare expand production capacity at our new manufacturing facility in Fremont, California, for production, which includes the purchase of new equipment and other tenant improvements. We intend to fund these capital expenditures from cash on hand as well as cash flow to be generated from operations. We may also evaluate and arrange equipment lease financing to fund these capital expenditures.

#### Financing Activities

Historically, our financing activities have consisted of borrowings and repayments of debt, proceeds and repayments of financing obligations, distributions paid to noncontrolling interests, contributions from noncontrolling interests, and the proceeds from the issuance of our common stock. Net cash provided by financing activities during the year ended December 31, 2022 December 31, 2023, was \$211.4 million \$683.3 million, a decrease an increase of \$95.0 million \$472.0 million compared to the prior year period, and period. The increase was comprised primarily due to (1) proceeds from the issuance of the repayment 3% Green Notes of debt related to PPA IIIa and PPA IV \$612.8 million, net of \$100.7 million and other debt paid issuance costs of \$19.9 million \$19.7 million, repayment (2) proceeds from the issuance of financing redeemable convertible preferred stock of \$310.6 million, net of paid issuance costs of \$0.4 million, as a

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obligations result of \$35.5 million, purchase of noncontrolling interest of PPA IV and PPA V of \$12.0 million, and distributions and payments to noncontrolling interests of \$6.9 million, partially offset by the SK ecoplant Second Tranche Closing, (3) proceeds from our public share offering of \$371.6 million and the proceeds from our issuance of common stock of \$15.3 million \$16.9 million, (4) a contribution from noncontrolling interest of \$7.0 million, (5) proceeds from financing obligations of \$5.0 million, and (6) proceeds from issuance of non-recourse debt of \$4.6 million. This was partially offset by (1) a settlement of the 3.04% Senior Secured Notes due June 30, 2031 of \$127.4 million, (2) repayment of 10.25% Senior Secured Notes due March 2027 of \$64.0 million, (3) purchases of Capped Calls of \$54.5 million, (4) repayment of financing obligations of \$18.4 million, and (5) the acquisition of all interest in the PPA V for \$6.9 million net of distributions to Intel's noncontrolling interest of \$2.3 million.

We believe we have sufficient capital to operate our business over the next 12 months, including the completion of the build out of our manufacturing facilities. months. Our working capital was strengthened with the initial investment by supplemented liquidity through financing activities with SK ecoplant in the first quarter of 2023 and our public offering, issuing the 3% Green Notes in the second quarter of 2023. In addition, we may still enter the equity or debt market as needed to support the expansion of our business. Please refer to Part II, Item 8, Note 7 — Outstanding Loans and Security Agreements, in Part II, Item 8, Financial Statements and Supplementary Data, and Part I, Item 1A, Risk Factors — Risks Related to Our Liquidity — Our substantial indebtedness, and restrictions imposed by the agreements governing our and our PPA Entities' outstanding indebtedness, may limit our financial and operating activities and may adversely affect our ability to incur additional debt to fund future needs and We may not be able to generate sufficient cash to meet our debt service obligations, for more information regarding the terms of and risks associated with our debt.

#### Purchase and Financing Options

##### Overview

In order to appeal to the largest variety of customers, we make available several options to our customers, them. Both in the United States U.S. and abroad, we sell the Energy Servers directly to customers. In the United States, U.S., we also enable customers' use of the Energy Servers through a power purchase arrangement or a managed services financing (whereby we sell and lease option, back the Energy Servers in order to supply energy to our customers), both made possible through third-party ownership financing arrangements.

Often our offerings take advantage of local incentives. In the United States, U.S., our financing arrangements are structured to optimize both federal and local incentives, including the ITC and accelerated depreciation. Internationally, our sales are made primarily to distributors who on-sell sell to, and install for, customers; these deals are also structured to use local incentives applicable to our Energy Servers. Increasingly, we use trusted installers and other sourcing collaborations in the United States U.S. to generate transactions.

Whichever option is selected by a customer in the United States U.S. or internationally, the contract structure will include obligations ("O&M Obligations") on our part to operate and maintain the Energy Server ("O&M Agreement"). The O&M Agreement may either be (i) for a one-year period, subject to annual renewal at the customer's option, which historically are almost always renewed year over year, year-over-year, or (ii) for a fixed term. In the United States, U.S., the contract structure often includes obligations on our part to install the Energy Servers ("Installation Obligations"). Consequently, our transactions may generate revenue from the sale of the Energy Servers and electricity, performance of the O&M Obligations, and performance of the Installation Obligations.

In addition to customary workmanship and materials warranties as part offered with the sale of the O&M Agreement, Energy Servers, we provide warranties and guarantees regarding the efficiency and output of our Energy Servers to the customer and, in certain financing structures, to the financing parties as well. We refer to a "performance warranty" as an obligation to repair or replace the Energy Servers as necessary to return performance of an the Energy Server Servers to the warranted performance level. We refer to a "performance guaranty" as an obligation to make a payment to compensate for the failure of the Energy Server Servers to meet the guaranteed performance level. Our obligation to make payments under a performance guaranty is always contractually capped.

#### **Energy Server Sales**

There are customers who purchase our Energy Servers directly from us pursuant to customary equipment sales contracts. In connection with the purchase of the Energy Servers, the customers also enter into a contract with us for the O&M Obligations. The customer may elect to engage us to provide the Installation Obligations or engage a third-party provider. Internationally, sales often occur through distribution arrangements pursuant to which local construction service providers perform the Installation Obligations, as is the case in the Republic of Korea, and we contract directly with the customer to provide the O&M Obligations.

In the past, a customer could enter into a contract for the sale of our Energy Servers and finance that acquisition through a sale-leaseback with a financial institution. In most cases, the financial institution completed its purchase from us immediately after commissioning. We both (i) facilitated this financing arrangement between the financial institution and the customer and (ii) provided ongoing operations and maintenance services for the Energy Servers (such arrangement, a "Traditional Lease"). Our current practices no longer contemplate these types of transactions.

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#### **Customer Financing Options**

With respect to the third-party financing options in the United States, U.S., a customer may choose to contract for the use of our Energy Servers in exchange for a capacity-based payment and, in some cases, an output-based payment based on kw/hour (each, a "Managed Services Agreement"), or for the purchase of electricity generated by the Energy Servers in exchange for a scheduled dollars per kilowatt hour rate (a "Power Purchase Agreement" or "PPA"), or the use of our Energy Servers owned by a financing party in exchange for a capacity-based payment and, in some cases, an output-based payment based on kw/hour (each, a "Managed Services Agreement").

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PPAs are typically financed on a portfolio basis. In the past, we have financed portfolios through tax equity partnerships, acquisition financings and direct sales to investors (each, a "Portfolio Financing"). Capacity-based payments in a Managed Services Agreement are required regardless of the level of performance of the Energy Server. Managed Services Agreements are then financed pursuant to a sale-leaseback with a financial institution (a "Managed Services Financing").

PPAs are typically financed on a portfolio basis. We have financed portfolios through tax equity partnerships, acquisition financings and direct sales to investors (each, a "Portfolio Financing").

In the United States, U.S., our capacity to offer our Energy Servers through either of these financed arrangements depends in large part on the ability of financing parties to optimize the tax benefits associated with an the Energy Server, Servers, such as the ITC or accelerated depreciation. Interest rate fluctuations, and internationally, currency exchanges exchange rate fluctuations, may also impact the attractiveness of any financing offerings for our customers. Our ability to finance a PPA or a Managed Services Agreement or a PPA is also related to, and may be limited by, the creditworthiness of the customer. Additionally, the a Managed Services Financing option is limited by a customer's willingness to commit to making the capacity-based payment to a financing party regardless of performance.

In each of our financing options, we typically perform the functions of a project developer, including identifying end customers and financiers, leading the negotiations of the customer agreements and financing agreements, securing all necessary permitting and interconnections approvals, and overseeing the design and construction of the project up to and including commissioning the Energy Servers. Increasingly, however, we are making sales to third-party developers.

Each of our financing transaction structures is described in further detail below.

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#### **Managed Services Financing**



Under our Managed Services Financing option, we enter into a Managed Services Agreement with a customer for a certain term. The fixed capacity-based payments made by the customer under the Managed Services Agreement are applied toward our obligation to pay down our periodic lease liability under a sale-leaseback transaction with a financier. We assign all our rights to such fixed payments made by the customer to the financier, as lessor.

Once we enter into a Managed Services Agreement with the customer, and a financier is identified, we sell the Energy Server to the financier, as lessor, who then leases it back to us, as lessee, pursuant to a sale-leaseback transaction. Certain of our sale-leaseback transactions failed to achieve all of the criteria for sale accounting and consequently were re-characterized for accounting purposes. For such re-characterized transactions, the proceeds from the transaction were recognized as a financing obligation within our consolidated balance sheet. For successful sale-and-leaseback transactions, the financier of a Managed Services Agreement typically pays the purchase price for an Energy Server at or around acceptance, and we recognize the fair market value of the Energy Servers sold within product and install revenue and recognize a right-of-use ("ROU") asset and a lease liability on our consolidated balance sheet. Any proceeds in excess of the fair value of the Energy Servers are recognized as a financing obligation.

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The duration of our current Managed Services Agreement offerings is between five and ten years.

Our Managed Services Agreements typically provide for performance warranties of both the efficiency and output of the Energy Server and may include other warranties depending on the type of deployment. We often structure payments from the customer as a dollars per kilowatt flat payment. In some cases, the structure may also include a variable payment based on the Energy Server's performance or a performance-related set-off. As of December 31, 2022, we had incurred no liabilities due to failure to repair or replace our Energy Servers pursuant to these performance warranties.

### **Portfolio Financings**

In the past, we financed the Energy Servers subject to our PPAs through two types of Portfolio Financings. In one type of transaction, we sold a portfolio of PPAs to a tax equity partnership in which we held a managing member interest (such partnership in which we hold an interest, a "PPA Entity"). In these transactions, we sold the portfolio of the Energy Servers to a limited liability project company (such portfolio owner, a "Portfolio Company") of which the PPA Entity was the sole member (such portfolio owner, a "Portfolio Company"). Whether an investor, a tax equity partnership, or a single member limited liability company, the Portfolio Company was the entity that directly owned the portfolio. The Portfolio Company sold the electricity generated by the Energy Servers contemplated by the PPAs to the customers. We recognized revenue as the electricity was produced. Our current practices no longer contemplate these types of transactions, and transactions. In fiscal 2023 we are in completed the process of restructuring existing our PPA Entities by (i) acquiring the outstanding equity interests of our previous investors and tax equity partners, (ii) selling 100% of the equity interests in the PPA Entity Entities or the Portfolio Company Companies to a new investor investors or tax equity partnership partnerships in which we do not have an equity interest, and (iii) entering into a new equipment supply and installation agreement agreements and related agreements to upgrade and/or replace the Energy Servers owned by the Portfolio Company. As of December 31, 2022, Servers. In August 2023, we only had one sold our last consolidated PPA Entity, remaining known as 2015 ESA Project Company, LLC ("PPA V. Bloom does not have active and formal plans V"), in connection with the repowering of its portfolio of Energy Servers. For further discussion, see Part II, Item 8, Note 10 — *Portfolio Financings*.

Moving forward, we plan to sell this entity.

We also finance PPAs through a second type of Portfolio Financing pursuant to which we (i) directly sell by selling a portfolio of PPAs and the Energy Servers to an investor or tax equity partnership or (ii) sell a Portfolio Company in each case to an investor or tax equity partnership (in either case, an "Equity Investor") in which we do not have an equity interest (a "Third-Party PPA"). Like the other Portfolio Financing structure, the The Equity Investor owns the Portfolio Company or the Energy Servers directly, and in each case, sells the electricity generated by the Energy Servers contemplated by the PPAs to the customers. For further discussion, see Note 11 - *Portfolio Financings* in Part II, Item 8, *Financial Statements and Supplementary Data*.

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When we finance a portfolio of the Energy Servers and the PPAs through a Portfolio Financing, we typically enter into, with the Portfolio Company or directly with the Equity Investor, as the case may be, a sale, engineering, procurement, and construction agreement ("EPC Agreement") and a multi-year an O&M Agreement, including the provision of performance warranties and guarantees. As owner of the portfolio of the PPAs and related Energy Servers, the portfolio owner receives all customer payments generated under the PPAs, the benefits of the ITC and accelerated tax depreciation, and any other available state or local benefits arising out of the ownership or operation of the Energy Servers, to the extent not already allocated to the customer under the PPA.

The sales of our Energy Servers in connection with a Portfolio Financing have many of the same terms and conditions as a direct sale. Payment of the purchase price is generally broken down into multiple installments, which may include payments prior to shipment, upon shipment, delivery, or when the Energy Servers are shipped and delivered and are physically ready for startup and commissioning (i.e., "Mechanical Completion"), and upon acceptance substantial completion (i.e., "Commencement of the Energy Server Operations", "COO").

### **Obligations to Portfolio Companies**

Our Portfolio Financings involve many obligations on our part to the Portfolio Company or Equity Investor, as applicable. These obligations are set forth in the applicable EPC Agreements and O&M Agreement Agreements, and may include some or all of the following obligations:

- designing, manufacturing, and installing the Energy Servers, and selling such Energy Servers to the Portfolio Company or Equity Investor;
- obtaining all necessary permits and other governmental approvals necessary for the installation and operation of the Energy Servers, and maintaining such permits and approvals throughout the term of the EPC Agreements and O&M Agreements;
- operating and maintaining the Energy Servers in compliance with all applicable laws, permits and regulations;
- satisfying the performance warranties and guarantees set forth in the applicable O&M Agreements; and
- complying with any other specific requirements contained in the PPAs with customers.

In some cases, the EPC Agreement obligates us to repurchase the Energy Server in the event of certain IP infringement claims. In others, a repurchase of the Energy Server is only one optional remedy we have to cure an IP infringement claim. The O&M Agreement grants the Equity Investor the right to obligate us to repurchase the Energy Servers in the event the Energy

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Servers fail to comply with the performance warranties and guarantees in the O&M Agreement and we do not cure such failure in the applicable warranty cure period, or that a PPA terminates as a result of any failure by us to perform the obligations in the O&M Agreement. In some of our Portfolio Financings, our obligation to repurchase Energy Servers under the O&M Agreement extends to the entire fleet of Energy Servers sold in the event a systemic failure that affects more than a specified number of Energy Servers.

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In some Portfolio Financings, we have also agreed to pay liquidated damages to the applicable Portfolio Company or Equity Investor, as the case may be, in the event of delays in the manufacture, installation, and commissioning of our Energy Servers, either in the form of a cash payment or a reduction in the purchase price for the applicable Energy Servers.

#### **Administration of Portfolio Companies**

In each of August 2023, we sold our Portfolio Financings in which we hold an equity interest in the last consolidated PPA Entity, PPA V. Before the sale, as we perform certain administrative services as managing member, including invoicing the end customers for amounts owed under the PPAs, administering the cash receipts of the Portfolio Company in accordance with the requirements of the financing arrangements, interfacing with applicable regulatory agencies, and other similar obligations. We are compensated for these services on a fixed dollar-per-kilowatt basis.

For those Portfolio Financings with project debt, the Portfolio Company owned by each of our PPA Entities (with the exception of one PPA Entity) incurred debt in order to finance the acquisition of the Energy Servers. The lenders for these transactions are a combination of banks and/or institutional investors. In each case, the debt is secured by all of the assets of the applicable Portfolio Company, such assets being primarily comprised of the Energy Servers and a collateral assignment of each of the contracts to which the Portfolio Company is a party, including the O&M Agreement and the PPAs. As further collateral, the lenders receive a security interest in 100% of the membership interest of the Portfolio Company. The lenders have no recourse to us or to any of the other equity investors in the Portfolio Company for liabilities arising out of the portfolio.

We have had determined that we are were the primary beneficiary in the remaining PPA V Entity, subject to reassessments performed as a result of upgrade transactions. Accordingly, this VIE, we consolidate consolidated 100% of the assets, liabilities, and operating results of the PPA V Entity, including the Energy Servers and lease income, in our consolidated financial statements. We recognize recognized the Equity Investors' share of the net assets of the investment entity as noncontrolling interests in the subsidiary in our consolidated balance sheet sheets. We recognize recognized the amounts that are contractually payable to these investors in each period as distributions to noncontrolling interests in our consolidated statements of changes in stockholders' equity (deficit). PPA V contained debt that was non-recourse to us.

Our consolidated statements of cash flows reflect cash received from the Equity Investors in the PPA V Entity as proceeds from investments by noncontrolling interests in the subsidiary. Our consolidated statements of cash flows also reflect cash paid to these investors as distributions paid to noncontrolling interests in the subsidiary. We reflect any unpaid distributions to these Equity Investors in the PPA V Entity as distributions payable to noncontrolling interests in the subsidiary on our consolidated balance sheets. However, the PPA V Entity is a separate and distinct legal entity, and we may not receive cash or other distributions from the PPA V Entity except in certain limited circumstances and upon the satisfaction of certain conditions, such as compliance with applicable debt service coverage ratios and the achievement of a targeted internal rates of return to the Equity Investors, or otherwise.

For further information about our Portfolio Financings, see Note 11 - Portfolio Financings in Part II, Item 8, Note 11 — Financial Statements and Supplementary Data, Portfolio Financings.

#### **Delivery and Installation**

The transfer of control of our product to our customer based on its delivery and installation has a significant impact on the timing of the recognition of our product and installation revenue. Many factors can cause a lag between the time that a customer signs a contract and our recognition of product revenue. These factors include the number of Energy Servers installed per site, local permitting and utility requirements, environmental, health and safety requirements, weather, customer facility construction schedules, customers' operational considerations and the timing of financing. Many of these factors are unpredictable and their resolution is often outside of our or our customers' control. Customers may also ask us to delay an installation for reasons unrelated to the foregoing, such as, for sales contracts, delays in their financing arrangements. Further, due to unexpected delays, deployments may require unanticipated expenses to expedite delivery of materials or labor to ensure the installation meets the timing objectives. These unexpected delays and expenses can be exacerbated in periods in which we deliver and install a larger number of smaller projects. In addition, if even relatively short delays occur, there may be a significant shortfall between the revenue we expect to generate in a particular period and the revenue that we are able to recognize.

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### **Managed Services Financing**



Under our Managed Services Financing option, we enter into a Managed Services Agreement with a customer for a certain term. We sell the Energy Servers to the financier who then leases it back to us pursuant to a sale-leaseback transaction. In the past, certain sale-leaseback transactions failed to achieve all of the criteria for sale accounting and consequently the proceeds from the transaction were recognized as financing obligations within our consolidated balance sheets. For successful sale-and-leaseback transactions, the financier of the Managed Services Agreement typically pays the purchase price for the Energy Servers at or around acceptance, and we recognize the fair market value of the Energy Servers sold and respective installation services provided to the financier within product and install revenue, respectively, and recognize an operating lease right-of-use ("ROU") asset and an operating lease liability on our consolidated balance sheets. Any proceeds in excess of the fair value of the Energy Servers are recognized as financing obligations.

The duration of our current Managed Services Agreement offerings is between five and ten years. Under some Managed Services Agreements, we agree to provide remarketing assistance in the event a customer does not renew its agreement. Our Managed Services Agreements typically provide for performance warranties of both the efficiency and output of the Energy Servers and may include other warranties depending on the type of deployment. We often structure payments from the

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customer as a dollar per kilowatt flat payment. In some cases, the structure may also include a variable payment based on the Energy Servers' performance or a performance related set-off. As of December 31, 2023, we had incurred no liabilities due to failure to repair or replace our Energy Servers pursuant to these performance warranties.

### **Delivery and Installation**

Installation is required in order for our Energy Servers to reach full power. Our role in the installation process varies based on the terms of the contract and/or the country of installation which can include, but is not limited to, design, engineering, permitting, procurement, construction, installation, start-up, performance testing, and commissioning of the systems. Bloom may contract with subcontractors to provide all or any part of the work. Depending on the acceptance milestones, we recognize installation revenue once the project has reached full power, or mechanical completion or on a percentage of completion basis.

### **Performance Guarantees**

As of December 31, 2022 December 31, 2023, we had incurred no liabilities due to failure to repair or replace the Energy Servers pursuant to any performance warranties made under the O&M Agreement.

For the O&M Agreements that are subject to renewal, our future service revenue from such agreements are subject to our obligations to make payments for underperformance against the performance guarantees, which are capped at an aggregate total of approximately \$524.5 \$564.0 million (including \$416.6 \$438.3 million related to portfolio financing entities and \$107.9 \$125.7 million related to all other transactions, and include payments for both low output and low efficiency) and our aggregate remaining potential liability under this cap payment related to these underperformance obligations was approximately \$477.9 \$491.9 million against future O&M Agreements subject to renewal as of December 31, 2023. For the year ended December 31, 2022 December 31, 2023, we made performance guarantee payments of \$12.1 \$25.9 million.

### **International Channel Partners**

**India.** In India, sales activities are currently conducted by Bloom Energy (India) Pvt. Ltd., our wholly owned subsidiary; however, we continue to evaluate the Indian market to determine whether the use of channel partners would be a beneficial go-to-market strategy to grow our India market sales.

**Japan.** In Japan, sales were previously activities are currently conducted pursuant to a Japanese joint venture established between us and subsidiaries of SoftBank Corp., called by Bloom Energy Japan Limited, ("Bloom Energy Japan"). Under this arrangement, we sold Energy Servers to Bloom Energy Japan and we recognized revenue once the Energy Servers left the port in the United States. Bloom Energy Japan then entered into the contract with the end customer and performed all installation work as well as some of the operations and maintenance work. As of July 1, 2021, we acquired Softbank Corp's interest in Bloom Energy Japan for a cash payment and are now the sole owner of Bloom Energy Japan, our wholly owned subsidiary.

*The Republic of Korea.* In 2018, Bloom Energy Japan consummated a sale of Energy Servers in the Republic of Korea to Korea South-East Power Company. Following this sale, we entered into a Preferred Distributor Agreement ("PDA") in November 2018 with SK ecoplant for the marketing and sale of Bloom Energy Servers for the stationary utility and commercial and industrial South Korean power market.

As part of our expanded strategic partnership with SK ecoplant, the parties executed the PDA Restatement in October 2021, which incorporates previously amended terms and establishes: (i) SK ecoplant's purchase commitments of at least 500MW 500 megawatts of power for our Energy Servers between 2022 and 2025 2024 on a take or pay basis; (ii) rollover procedures; (iii) premium pricing for product and services; (iv) termination procedures for material breaches; and (v) procedures if there are material changes to the Republic of Korea Hydrogen Portfolio Standard. For additional details about the transaction in December 2023, we further expanded our business partnership with SK ecoplant through the increase of SK ecoplant's purchase commitments for Bloom Energy products of 250 megawatts through 2027 and extended the timing of delivery of the remaining take-or-pay commitment under the original agreement. For additional information, please see Part II, Item 8, Note 17 — SK ecoplant Strategic Investment.

Under the terms of the PDA Restatement, we (or our subsidiary) contract directly with the customer to provide operations and maintenance services for the Energy Servers. We have established a subsidiary in the Republic of Korea, Bloom Energy Korea, LLC, to which we subcontract such operations and maintenance services. The terms of the operations and maintenance are negotiated on a case-by-case basis with each customer but are generally expected to provide the customer with the option to receive services for at least 10 years, and for up to the life of the Energy Servers.

*SK ecoplant Joint Venture Agreement.* In September 2019, we entered into a joint venture agreement with SK ecoplant to establish a light-assembly facility in the Republic of Korea for sales of certain portions of our Energy Server for the stationary utility and commercial and industrial market in the Republic of Korea. The joint venture is a variable interest entity ("VIE") of Bloom, and we consolidate it in our financial statements as we are the primary beneficiary and therefore have the power to direct activities which are most significant to the joint venture. The joint venture facility became operational in July 2020. Other than a nominal initial capital contribution by Bloom Energy, the joint venture is funded by SK ecoplant. SK ecoplant who currently acts as a distributor for our Energy Servers for the stationary utility and commercial and industrial market in the Republic of Korea, is our primary customer for the products assembled by the joint venture. In October 2021, as part of our expanded strategic

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partnership with SK ecoplant, the parties agreed to amend the JVA joint venture agreement ("JVA") to increase the scope of assembly work done in the joint venture facility. The joint venture was further developed in 2022 2022 and 2023.

On September 15, 2023, we entered into the Amended and Restated JVA and the Share Purchase Agreement (together, the "Amended JV Agreements") with SK ecoplant which changed the share of our voting rights in the Korean joint venture to 40% and increased the scope of assembly done by the joint venture facility in the Republic of Korea to full assembly. Neither the Amended JV Agreements, nor the fact that SK ecoplant is considered to be our related party after the conversion of Series B RCPS into shares of our Class A common stock (for additional information, please see Part II, Item 8, Note 11 — Related Party Transactions) changed our status as the primary beneficiary of the Korean joint venture. Therefore, we continue to consolidate this VIE in our financial statements as of December 31, 2023.

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#### **Comparison of the Years Ended December 31, 2022 December 31, 2023 and 2021 2022**

A discussion regarding our results of operations for 2022 2023 compared to 2021 2022 is presented in this section. A discussion of our results of operations for 2021 2022 compared to 2020 2021 can be found under Item 7 of Part II of our Annual Report on Form 10-K for the year ended December 31, 2021 December 31, 2022.

#### **Key Operating Metrics**

In addition to the measures presented in the consolidated financial statements, we use certain key operating metrics below to evaluate business activity, to measure performance, to develop financial forecasts, and to make strategic decisions:

- **Product accepted** — the number of customer acceptances of our Energy Servers in any period. We recognize revenue when an acceptance is achieved. We use this metric to measure the volume of deployment activity. We measure each Energy Server manufactured, shipped, and accepted in terms of 100 kilowatt equivalents.
- **Product costs of product accepted in the period (per kilowatt)** — the average unit product cost for the Energy Servers that are accepted in a period. We use this metric to provide insight into the trajectory of product costs and, in particular, the effectiveness of cost reduction activities.
- **Period costs of manufacturing related expenses not included in product costs** — the manufacturing and related operating costs that are incurred to procure parts and manufacture the Energy Servers that are not included as part of product costs. We use this metric to measure any costs incurred to run our manufacturing operations that are not capitalized (i.e., absorbed, such as stock-based compensation) into inventory and therefore, expensed to our consolidated statement statements of operations in the period that they are incurred.

- **Installation costs on product accepted in the period (per kilowatt)** — the average unit installation cost for the Energy Servers that are accepted in a given period. This metric is used to provide insight into the trajectory of installation costs and, in particular, to evaluate whether our installation costs are in line with our installation billings.

We no longer consider billings related to our products to be a key operating metric. Billings as a metric was introduced to provide insight into our customer contract billings as differentiated from revenue when a significant portion of those customer contracts had product and installation billings recognized as electricity revenue over the term of the contract instead of at the time of delivery or acceptance. Today, a very small portion of our customer contracts has revenue recognized over the term of the contract, and thus it is no longer a meaningful metric for us.

#### Product Acceptances

We use acceptances as a key operating metric to measure the volume of our completed Energy Server installation activity from period to period. Acceptance typically occurs upon transfer of control to our customers, which depending on the contract terms is when the system is shipped and delivered to our customer, when the system is shipped and delivered and is physically ready for startup and commissioning (i.e., "Mechanical Completion"), or when the system is shipped and delivered and is turned on and producing power (i.e., "Commencement of Operations", "COO").

The product acceptances in the years ended December 31, 2022 December 31, 2023 and 2021 2022 were as follows:

	Years Ended		Change	
	December 31,		Amount	%
	2022	2021		
Product accepted during the period (in 100 kilowatt systems)	2,281	1,879	402	21.4 %

Product accepted for the year ended December 31, 2022 compared to the same period in 2021 increased by 402 systems, or 21.4%. Acceptance volume increased as demand increased for the Energy Servers.

	Years Ended		Change	
	December 31,		Amount	%
	2022	2021		
Megawatts accepted, net	228	188	40	21.3 %

	Years Ended		Change	
	December 31,		Amount	%
	2023	2022		
Product accepted	2,682	2,281	401	17.6 %
Megawatts accepted, net	268	228	40	17.6 %

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**Megawatts** Product accepted net, increased approximately 40 megawatts, by 401 systems, or 21.3% 17.6%, for the year ended December 31, 2022 December 31, 2023, as compared to the prior year ended December 31, 2021. period, which is the equivalent of 40 megawatts. Acceptance volume increased as demand increased for the Energy Servers.

The increase in acceptances of 268 megawatts achieved from December 31, 2021 to December 31, 2022 for the year ended December 31, 2023 was added to our installed base and, therefore, increased our total megawatts accepted, net, from 188 973 megawatts to 228 1,241 megawatts.

#### **Purchase Options Alternatives**

Our customers have several purchase options alternatives for our Energy Servers. The portion of acceptances attributable to each purchase option alternative in the years ended December 31, 2022 December 31, 2023 and 2021 2022 was as follows:

	Years Ended	
	December 31,	
	2022	2021

Direct Purchase (including Third-Party PPAs and International Channels)	98 %	96 %
Managed Services	2 %	4 %
	<u>100 %</u>	<u>100 %</u>

	Years Ended December 31,	
	2023	2022
Direct purchase (including third-party PPAs and international channels)	98 %	98 %
Managed services	2 %	2 %
	<u>100 %</u>	<u>100 %</u>

The portion of total revenue attributable to each purchase option in the years ended December 31, 2022 December 31, 2023 and 2021 2022 was as follows:

	Years Ended December 31,	
	2022	2021
Direct Purchase (including Third-Party PPAs and International Channels)	91 %	84 %
Traditional Lease	1 %	1 %
Managed Services	5 %	10 %
Portfolio Financings	3 %	5 %
	<u>100 %</u>	<u>100 %</u>

	Years Ended December 31,	
	2023	2022
Direct purchase (including third-party PPAs and international channels)	90 %	91 %
Traditional lease	1 %	1 %
Managed services	7 %	5 %
Portfolio financings	2 %	3 %
	<u>100 %</u>	<u>100 %</u>

#### Costs Related to Our Products

Total product related costs for the years ended December 31, 2022 December 31, 2023 and 2021 2022 was as follows:

	Years Ended December 31,		Years Ended December 31, Change
	2022	2021	
	Amount	%	
2023			2023
Product costs of product accepted in the period	\$2,453/kW \$2,346/kW \$107/kW	4.6 %	Product costs of product accepted in the period
Product costs of product accepted in the period	\$2,453/kW	\$2,108/kW	(\$345)/kW
			(14.1) %

Period costs of manufacturing related expenses not included in product costs (in thousands)	Period costs of manufacturing related expenses not included in product costs (in thousands)	\$ 64,892	\$ 56,630	\$ 8,262	14.6	14.6 %
Installation costs on product accepted in the period	Installation costs on product accepted in the period	\$456/kW	\$587/kW	-\$131/kW (22.3)%	\$394/kW	\$456/kW (\$62/kW) (13.6) %

Product costs related to products of product accepted decreased by \$345 per kilowatt, or 14.1%, for the year ended December 31, 2022 December 31, 2023, as compared to the same period in 2021 increased by approximately \$107 per kilowatt, driven by some of the cost pressures seen in the external inflationary environment with commodity pricing and logistics costs increasing significantly from the prior year period. Our ongoing cost reduction The decrease in costs was primarily driven by our continued efforts to reduce material costs, labor and overhead through improved automation of our manufacturing facilities, our increased facility utilization and our ongoing material implement cost reduction programs with our vendors, continued but were offset by the temporary increases in product and reduce our labor and overhead costs that we experienced through increased volume, improved processes, and automation at our manufacturing facilities.

Period costs of manufacturing related expenses increased by \$8.3 million, or 14.6%, for the year ended December 31, 2022 December 31, 2023, as compared to the same prior year period. Our period in 2021 costs of manufacturing related expenses increased by approximately \$25.9 million, primarily as a result

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of costs incurred to support capacity expansion efforts, which are expected to be brought online in future periods.

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Economic Development Authority.

periods, partially offset by a \$5.3 million release from one-time benefit related to a grant from the Delaware

Installation costs on product accepted decreased by \$62 per kilowatt, or 13.6%, for the year ended December 31, 2022 December 31, 2023, as compared to the same period in 2021 decreased by approximately \$131 per kilowatt. For the prior year ended December 31, 2022, the decrease in installation costs was driven by the change in the mix of sites requiring Bloom installation period. Each customer site is different unique and installation costs can vary due to a number of factors, including site complexity, size, and location of gas, among other factors. As such, installation on a per kilowatt basis can vary significantly from period to period. In addition, some customers handle their own installation for which we have little to no installation costs. For the year ended December 31, 2023, this decrease in cost was primarily driven by the change in the mix of sites requiring Bloom installation.

#### Results of Operations

A discussion regarding the comparison of our financial condition and results of operations for the years ended December 31, 2022 December 31, 2023 and 2021 2022 is presented below.

Revenue	Years Ended December 31,				Years Ended December 31,	Change		
	2022		2021					
	Amount	%	Amount	%				
(dollars in thousands)				(dollars in thousands)				
Product					2023	2022	Amount %	
Product								

Product	Product	\$ 880,664	\$ 663,512	\$ 217,152	32.7 %		\$ 975,245	\$ 880,664	\$ 94,581	10.7	%
Installation	Installation	92,120	96,059	(3,939)	(4.1) %	Installation	92,796	92,120	676	0.7	%
Service	Service	150,954	144,184	6,770	4.7 %	Service	183,065	150,954	32,111	21.3	%
Electricity	Electricity	75,387	68,421	6,966	10.2 %	Electricity	82,364	75,387	6,977	9.3	%
Total revenue	Total revenue	\$ 1,199,125	\$ 972,176	\$ 226,949	23.3 %	Total revenue	\$ 1,333,470	\$ 1,199,125	\$ 134,345	11.2	%

#### Total Revenue

Total revenue increased by \$226.9 million \$134.3 million, or 23.3% 11.2%, for the year ended December 31, 2022 December 31, 2023, as compared to the prior year period. This increase was primarily driven by a \$217.2 million \$94.6 million increase in product revenue, a \$7.0 million \$32.1 million increase in service revenue, a \$7.0 million increase in electricity revenue, and a \$6.8 million \$0.7 million increase in service revenue, offset by a \$3.9 million decrease in installation revenue.

#### Product Revenue

Product revenue increased by \$217.2 million, \$94.6 million, or 32.7% 10.7%, for the year ended December 31, 2022 as compared to the prior year period. The product revenue increase was driven primarily by a 21.4% increase in product acceptances resulting from higher demand in existing markets, increase in product volume and improved pricing driven by the PPA IV Upgrade and PPA IIIa Upgrade (with revenue recognized of \$102.3 million and \$49.8 million December 31, 2023, respectively).

#### Installation Revenue

Installation revenue decreased by \$3.9 million, or (4.1)%, for the year ended December 31, 2022 as compared to the prior year period. This decrease in installation revenue was driven by the change in mix of product acceptances requiring installations by us, as fewer sites had installation costs in fiscal year 2022, offset by the revenue recognized from the PPA IIIa Upgrade of \$4.6 million.

#### Service Revenue

Service revenue increased by \$6.8 million, or 4.7%, for the year ended December 31, 2022 as compared to the prior year period. This increase was primarily due to higher product acceptances of 17.6%, offset by the lower average selling price. Upgrades of our PPA portfolios contributed \$20.7 million net increase in revenue recognized compared to the 21.4% prior year.

#### Electricity Revenue

Electricity revenue increased by \$0.7 million, or 0.7%, for the year ended December 31, 2023, as compared to the prior year period. This increase was primarily driven by the timing of key project milestones on sites requiring installations by us in the year ended December 31, 2023.

#### Service Revenue

Service revenue increased by \$32.1 million, or 21.3%, for the year ended December 31, 2023, as compared to the prior year period. This increase was primarily driven by 223 megawatts of the Energy Servers reaching full power in fiscal 2023, which contributed to a \$42.5 million increase in acceptances plus the revenue from maintenance contract renewals contracts associated with the increase in our fleet of the Energy Servers, partially offset by the impact of product performance guarantees. We expect our service revenue to grow guarantees of \$8.5 million and a \$0.7 million decrease in future periods. state incentives.

#### Electricity Revenue

Electricity revenue includes both revenue from contracts with customers and revenue from contracts that contain leases.

Electricity revenue increased by \$7.0 million, \$7.0 million, or 10.2% 9.3%, for the year ended December 31, 2022 December 31, 2023, as compared to the prior year period, primarily due to an accelerated amortization of incentive related deferred revenue of \$5.0 million resulting from the increase in installed units as a result of the increase of \$7.1 million in Managed Services transactions recorded in the second half of fiscal year 2021. PPA V Upgrade.

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#### Cost of Revenue

	Years Ended			Years Ended	Change					
	December 31,		Amount							
	2022	2021								
(dollars in thousands)										
Product										

Product	Product	\$ 616,178	\$ 471,654	\$ 144,524	30.6 %	\$ 630,105	\$	\$ 616,178	\$	\$ 13,927	2.3
Installation	Installation	104,111	110,214	(6,103)	(5.5)%	105,735	104,111	104,111	1,624	1,624	
Service	Service	168,491	148,286	20,205	13.6 %	220,927	168,491	168,491	52,436	52,436	
Electricity	Electricity	162,057	44,441	117,616	264.7 %	178,909	162,057	162,057	16,852	16,852	
Total cost of revenue	Total cost of revenue	\$1,050,837	\$774,595	\$276,242	35.7 %	Total cost of revenue	\$1,135,676	\$1,050,837	\$	\$84,839	8.2

#### Total Cost of Revenue

Total cost of revenue increased by \$276.2 million, \$84.8 million, or 35.7% 8.1%, for the year ended December 31, 2022 December 31, 2023, as compared to the prior year period primarily period. The increase was driven by a \$144.5 million \$52.4 million increase in cost of service revenue, a \$16.9 million increase in cost of electricity revenue, a \$13.9 million increase in cost of product revenue, and a \$117.6 million \$1.6 million increase in cost of electricity revenue, and a \$20.2 million increase in cost of service revenue, offset by a \$6.1 million decrease in cost of installation revenue. The total cost of revenue increase was primarily driven by the write-off of old Energy Servers of \$44.8 million and \$64.0 million as a result of the PPA IIIa Upgrade and PPA IV Upgrade, respectively, increased freight charges and other supply chain-related pricing pressures and costs incurred to support capacity expansion efforts which are expected to be brought online in future periods. This increase was partially offset by our ongoing cost reduction efforts to reduce material costs in conjunction with our suppliers and our reduction in labor and overhead costs through increased volume, improved processes and automation at our manufacturing facilities.

#### Cost of Product Revenue

Cost of product revenue increased by \$144.5 million, \$13.9 million, or 30.6% 2.3%, for the year ended December 31, 2022 December 31, 2023, as compared to the prior year period. The increase in cost of product revenue increase was primarily driven primarily by a 21.4% 17.6% increase in product acceptances, including the sale net effect of new Energy Servers \$16.2 million from the upgrades of \$21.8 million and \$37.4 million as a result of the our PPA IIIa Upgrade and PPA IV Upgrade, respectively, increased freight charges and other supply chain-related pricing pressures and costs incurred in support of upcoming capacity expansion efforts, portfolios. This increase was partially offset by (1) a lower cost per unit attributable to our ongoing cost reduction efforts to reduce material costs, in conjunction (2) cost reduction programs with our suppliers vendors and our a reduction in labor and overhead costs through due to increased volume, (3) improved processes and automation at our manufacturing facilities, facilities, and (4) one-time benefit of \$5.3 million related to a grant from the Delaware Economic Development Authority recognized against payroll related costs in the third quarter of fiscal 2023.

#### Cost of Installation Revenue

Cost of installation revenue decreased increased by \$6.1 million, \$1.6 million, or (5.5)% 1.6%, for the year ended December 31, 2022 December 31, 2023, as compared to the prior year period. This decrease increase was primarily driven by the change in mix timing of product acceptances key project milestones on sites requiring Bloom Energy installations as fewer sites had installation costs by us in the year ended December 31, 2022, partially offset by installation of the new Energy Servers as a result of the PPA IIIa Upgrade of \$3.2 million December 31, 2023.

#### Cost of Service Revenue

Cost of service revenue increased by \$20.2 million, \$52.4 million, or 13.6% 31.1%, for the year ended December 31, 2022 December 31, 2023, as compared to the prior year period. This increase was primarily due to the deployment of field replacement units, contributing an increase of \$43.6 million, and an increase in maintenance material costs of \$6.6 million. This increase was partially offset by cost reductions and our actions to proactively manage fleet optimizations, optimizations and a portion of released grant liability of \$2.9 million recognized against payroll related costs incurred in the third quarter of fiscal 2023.

#### Cost of Electricity Revenue

Cost of electricity revenue includes both cost of revenue from contracts with customers and cost of revenue from contracts that contain leases.

Cost of electricity revenue increased by \$117.6 million, \$16.9 million, or 264.7% 10.4%, for the year ended December 31, 2022 December 31, 2023, as compared to the prior year period, period. This increase was primarily due to driven by a \$14.9 million net increase in the write-off impairment of old the Energy Servers of \$44.8 million and \$64.0 million as a result of the upgrades of our PPA IIIa Upgrade and PPA IV Upgrade, respectively, and an increase in installed units driven by Managed Services transactions recorded in the second half of fiscal year 2021, portfolios.

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#### Gross Profit (Loss) and Gross Margin

	Years Ended December 31,			Years Ended December 31,	Change	
	2022	2021	Change			
	(dollars in thousands)					
Gross profit:						

										(dollars in thousands)		
Gross profit (loss):												
Product												
Product												
Product	Product	\$ 264,486	\$ 191,858	\$ 72,628		\$ 345,140	\$ 264,486		\$ 80,654			
Installation	Installation	(11,991)	(14,155)	\$ 2,164		Installation	(12,939)		(11,991)		\$	(948)
Service	Service	(17,537)	(4,102)	\$ (13,435)		Service	(37,862)		(17,537)		\$	(20,325)
Electricity	Electricity	(86,670)	23,980	\$ (110,650)		Electricity	(96,545)		(86,670)		\$	(9,875)
Total gross profit	Total gross profit					Total gross profit						49,506
Gross margin:	Gross margin:											
Gross margin:												
Gross margin:												
Product												
Product	Product	30	% 29	%								
Installation	Installation	(13)	% (15)	%								
Installation												
Installation												
Service												
Service	Service	(12)	% (3)	%								
Electricity	Electricity	(115)	% 35	%								
Electricity												
Electricity												
Total gross margin	Total gross margin	12	% 20	%								
Total gross margin												
Total gross margin												

#### Total Gross Profit

Gross profit decreased increased by \$49.3 million \$49.5 million in the year ended December 31, 2022 December 31, 2023, as compared to the prior year period, period. This change was mostly due to an \$80.7 million increase in product gross profit, primarily driven by the \$110.7 million decrease a 17.6% increase in electricity product acceptances resulting from higher demand, lower cost per unit attributable to our ongoing efforts to reduce product costs. This increase was offset by a \$20.3 million increase in service gross profit loss, primarily due to the write-off deployment of field replacement units, and a \$9.9 million increase in electricity gross loss, predominantly driven by a \$14.9 million net increase in impairment charges of the old Energy Servers resulting from the upgrades of \$44.8 million and \$64.0 million as a result of the our PPA IIIa Upgrade and the PPA IV Upgrade, respectively; the \$13.4 million decrease in service gross profit due to a 21.4% increase in acceptances in addition to maintenance contract renewals associated with the increase in our fleet of Energy Servers. This decrease was partially offset by our ongoing cost reduction efforts to reduce material costs in conjunction with our suppliers and our reduction in labor and overhead costs through increased volume, improved processes and automation at our manufacturing facilities, as well as increase in product gross of profit of \$28.0 million and \$64.9 million as a result of the PPA IIIa Upgrade and the PPA IV Upgrade, respectively, portfolios.

#### Product Gross Profit

Product gross profit increased by \$72.6 million \$80.7 million in the year ended December 31, 2022 December 31, 2023, as compared to the prior year period. The improvement is increase was primarily driven by the 21.4% a 17.6% increase in product acceptances gross profit due to higher demand for our products, one-time benefit of \$5.3 million related to a grant from the PPA IIIa Upgrade and PPA IV Upgrade Delaware Economic Development Authority recognized against payroll related costs in the third quarter of \$28.0 million and \$64.9 million, respectively, fiscal 2023, and our ongoing cost reduction efforts to reduce material costs in conjunction with our suppliers and our reduction in labor and overhead costs through unit cost due to increased volume, improved processes and automation at our manufacturing facilities, partially offset by increased freight charges and other supply chain-related pricing pressures and costs incurred to support capacity expansion efforts which are expected to be brought online in future periods, facilities.

#### Installation Gross Loss

Installation gross loss decreased worsened by \$2.2 million \$0.9 million in the year ended December 31, 2022 December 31, 2023, as compared to the prior year period, period. This change was primarily driven by the change timing of key project milestones on sites requiring installations by us in site mix the year ended December 31, 2023 and other site related factors such as site complexity, size, local ordinance requirements, and location of the utility interconnect.

#### Service Gross Loss

Service gross loss increased worsened by \$13.4 million \$20.3 million in the year ended December 31, 2022 December 31, 2023, as compared to the prior year period. This was primarily due to deployments of field replacement units contributing to an increase in service gross loss of \$43.6 million, an increase in maintenance material costs of \$6.6 million, and the impact of product performance guarantees of \$8.5 million, partially offset by 223 megawatts of the Energy Servers reaching full power in fiscal 2023, which contributed to a \$42.5 million increase in revenue from maintenance contracts associated with our fleet of the Energy Servers, the release of \$2.9 million of grant liability recognized against payroll related costs incurred in the third quarter of fiscal 2023, and cost reductions and our actions to proactively manage fleet optimizations.

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### **Electricity Gross (Loss) Profit Loss**

Electricity gross profit decreased loss worsened by \$110.7 million \$9.9 million in the year ended December 31, 2022 December 31, 2023, as compared to the prior year period, mainly due to period. The change was primarily driven by a \$14.9 million increase in the impairment charges of the old Energy Servers resulting from the upgrades of \$44.8 million and \$64.0 million our PPA portfolios, partially offset by a \$5.0 million accelerated amortization of incentive related deferred revenue as a result of the PPA IIIa Upgrade and the PPA IV Upgrade, respectively, partially offset by the increase of \$7.1 million in Managed Services transactions recorded in the second half of fiscal year 2021. V Upgrade.

### **Operating Expenses**

	Years Ended				Years Ended December 31,	Change				2023		
	December 31,		Change			(dollars in thousands)	2022	2021	Amount			
	2022	2021	Amount	%								
<b>Research and development</b>												
Research and development	\$150,606	\$103,396	\$47,210	45.7 %		\$155,865	\$	\$150,606	\$	\$5,259		
Sales and marketing	90,934	86,499	4,435	5.1 %		89,961	90,934	90,934	(973)	3.5		
General and administrative	167,740	122,188	45,552	37.3 %		160,875	167,740	167,740	(6,865)	(1.1)		
Total operating expenses	\$409,280	\$312,083	\$97,197	31.1 %		\$406,701	\$	\$409,280	\$	(\$2,579)		
<b>Total Operating Expenses</b>										(0.6)		

### **Research and Development**

Total operating expenses increased decreased by \$97.2 million \$2.6 million in the year ended December 31, 2022 December 31, 2023, as compared to the prior year period. This decrease was primarily attributable to (1) a decrease in employee compensation and benefits expenses of \$17.5 million, predominantly related to a decrease in stock-based compensation expenses, (2) a decrease in professional services and consulting and advisory costs of \$2.3 million, and (3) a decrease in other operating expenses of \$4.3 million. The decrease was partially offset by (i) our continued investment in R&D capabilities to support our technology roadmap, (ii) our investment in business development, as well as (iii) increases in facility costs, depreciation costs, office expenses, and travel expenses of \$10.7 million, \$5.1 million, \$3.4 million, and \$1.7 million, respectively.

### **Research and Development**

Research and development expenses increased by \$5.3 million in the year ended December 31, 2023, as compared to the prior year period. This increase was primarily attributable to our investment in business development and front-end sales both in the United States and internationally, investment in brand and product management, and our continued investment in our R&D capabilities to support our technology roadmap.

### **Research and Development**

Research and development expenses increased driven by \$47.2 million in the year ended December 31, 2022 as compared to the prior year period. This (1) an increase was primarily due to increases in employee compensation and benefits of \$30.2 million to expand our employee base \$2.0 million, (2) an increase in order to support our technology roadmap, including our hydrogen, electrolyzer, marine travel expenses of \$0.5 million, (3) an increase in professional services costs of \$0.6 million, (4) an increase in depreciation expenses of \$0.5 million, and biogas solutions. (5) an increase in other research and development costs of \$3.7 million, partially offset by a decrease in consumable laboratory supplies and other laboratory related costs of \$2.2 million.

### **Sales and Marketing**

Sales and marketing expenses increased decreased by \$4.4 million \$1.0 million in the year ended December 31, 2022 December 31, 2023, as compared to the prior year period. This increase decrease was primarily driven by increases a decrease in employee compensation and benefits of \$14.2 million to expand our U.S. and international sales force, increased investment in brand and product management, \$5.6 million, partially offset by a decrease an increase in consulting, advisory, and outside services, professional services expenses of \$4.5 million, and an increase in travel expenses of \$0.3 million.

### *General and Administrative*

General and administrative expenses increased decreased by \$45.6 million \$6.9 million in the year ended December 31, 2022 December 31, 2023, as compared to the prior year period. This increase decrease was primarily driven by increases (1) a decrease in employee compensation and benefits of \$29.7 million \$13.9 million, predominantly related to a decrease in stock-based compensation expenses, (2) a decrease in professional services costs of \$7.4 million, and (3) a decrease in other general and administrative expenses of \$7.8 million. The increase was partially offset by (i) an increase in facility costs of \$4.7 million related \$10.7 million, primarily due to rent expenses and utility costs, (ii) an increase in office and other expenses of \$3.5 million, primarily driven by the impairment of non-recoverable production insurance of \$6.4 million as a result of the PPA V Upgrade, offset by \$4.5 million of prepaid insurance impairment per the PPA IV Upgrade due to the write-off in fiscal 2022, and factoring and financing fees of prepaid insurance, \$2.1 million, (iii) an increase in professional services depreciation expenses of \$3.9 million \$4.6 million, (iv) an increase in factoring fees computer equipment expenses of \$3.3 million \$2.3 million, and (v) an increase in rent expense travel expenses of \$3.3 million \$1.0 million.

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## **Stock-Based Compensation**

	Years Ended		Change			Years Ended December 31,	Change							
	December 31,		Amount											
	2022	2021	Amount	%										
(dollars in thousands)														
Cost of revenue														
Cost of revenue														
Cost of revenue	Cost of revenue	\$ 18,955	\$ 13,811	\$ 5,144	37.2 %		\$ 17,504	\$	\$ 18,955	\$	\$ (1,451)		(7.7)	
Research and development	Research and development	33,956	20,274	\$ 13,682	67.5 %	Research and development	27,620	33,956		33,956	\$	\$	(6,336)	(18.7)
Sales and marketing	Sales and marketing	18,651	17,085	\$ 1,566	9.2 %	Sales and marketing	16,415	18,651		18,651	\$	\$	(2,236)	(12.0)
General and administrative	General and administrative	42,404	24,962	\$ 17,442	69.9 %	General and administrative	25,556	42,404		42,404	\$	\$	(16,848)	(39.7)
Total stock-based compensation	Total stock-based compensation	\$ 113,966	\$ 76,132	\$ 37,834	49.7 %	Total stock-based compensation	\$ 87,095	\$	\$ 113,966	\$	\$ (26,871)		(23.6)	

Total stock-based compensation increased by \$37.8 million for the year ended December 31, 2022 December 31, 2023 compared to the prior year period decreased by \$26.9 million. The decrease was primarily driven by (1) a decrease in compensation expense for stock awards of \$18.2 million, (2) a decrease in option expense of \$6.7 million compared to the efforts to expand our employee base across all year ended December 31, 2023, as existing options were either exercised, expired, or cancelled, (3) the separation of full-time employees holding equity awards as a result of the Company's functions restructuring, (4) the voluntary resignation of our Executive Vice President and Chief Business Development and Marketing Officer on September 1, 2023, and (5) a decrease in ESPP expense of \$0.7 million.

### *Other Income and Expense*

	Years Ended December 31,			Change	
	2022	2021	Change		
	(dollars in thousands)			(dollars in thousands)	
Interest income	\$ 3,887	\$ 262	\$ 3,625		

Interest expense	Interest expense	(53,493)	(69,025)	15,532
Other income (expense), net		4,998	(8,139)	13,137
Other (expense) income, net				
Loss on extinguishment of debt	Loss on extinguishment of debt	(8,955)	—	(8,955)
Gain (loss) on revaluation of embedded derivatives		566	(919)	1,485
(Loss) gain on revaluation of embedded derivatives				
Total	Total	<u><u>\$52,997</u></u>	<u><u>\$77,821</u></u>	<u><u>\$24,824</u></u>

#### *Interest Income*

Interest income is derived from investment earnings on our cash balances primarily from money market funds. The increase in interest income increased by \$3.6 million of \$16.0 million was due to a \$309.2 million increase in cash balance in our money market funds for the year ended December 31, 2022 December 31, 2023, as compared to the prior year period, primarily due to an increase in the rates of interest earned on our cash balances period.

#### *Interest Expense*

Interest expense is from primarily due to our debt held by third parties.

Interest expense decreased by \$15.5 million for the year ended December 31, 2022 December 31, 2023, as compared to the prior year period. This decrease period, increased by \$54.8 million. The increase was primarily driven by the expensing of loan commitment assets of \$52.8 million immediately upon the automatic conversion on September 23, 2023, of Series B RCPS to Class A common stock as a result of repayments the Second Tranche Closing with SK ecoplant, and an increase in interest expense related to the 3% Green Convertible Senior Notes due June 2028, issued on May 16, 2023. The increase was offset by a decrease in interest expense as a result of the redemption on June 1, 2023 of 10.25% Senior Secured Notes due March 2027, and the repayment of the 7.5% Term Loan due September 2028, and the 6.07% Senior Secured Notes due March 2030, as well as refinancing our notes at a lower interest rate, and the 3.04% Senior Secured Notes due June 2031 on June 14, 2022, November 22, 2022, and August 24, 2023, respectively.

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

Other (expense) income, (expense), net is primarily derived from investments in joint ventures, plus the impact of foreign currency translation, transactions, and adjustments to fair value for derivatives.

Other income, (expense), net increased by \$13.1 million for the year ended December 31, 2022 December 31, 2023, as compared to the prior year period, due to decreased by \$7.8 million primarily as a result of the gain on the revaluation of the option Option to purchase Class A common stock of \$9.0 million upon receipt of the notice of exercise from SK ecoplant on August 10, 2022 for the year ended December 31, 2022, and an increase in unrealized and realized foreign exchange loss of \$9.0 million, \$1.3 million. The decrease was partially offset by a the loss on remeasurement of \$3.5 million of our equity investment in investments of \$3.5 million recorded for the Bloom Energy Japan joint venture and the joint venture in China, an increase in loss on foreign currency translation of \$0.7 million, as well as loss recognized on interest rate swaps of \$10.9 million in 2021 which were settled as of December 31, 2021 year ended December 31, 2022.

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#### *Loss on Extinguishment of Debt*

Loss on extinguishment of debt increased by \$9.0 million for the year ended December 31, 2022 December 31, 2023 was \$4.3 million, which was recognized as compared to a result of the prior year period, due to redemption on June 1, 2023 of the repayment of 7.5% Term Loan due September 2028 and 6.07% 10.25% Senior Secured Notes due March 2030 2027, and the repayment on August 24, 2023 of the 3.04% Senior Secured Notes due June 2031 as part of the PPA IIIa V Upgrade, and PPA IV Upgrade, respectively, included the repayment of the 4% premium upon redemption of the 10.25% Senior Secured Notes due March 2027 of \$2.3 million and derecognition of debt issuance costs of \$2.0 million.

**(Loss) Gain (Loss) on Revaluation of Embedded Derivatives**

**Gain (loss) (Loss) gain** on revaluation of embedded derivatives is derived from the change in fair value of our sales contracts of embedded EPP derivatives valued using historical grid prices and available forecasts of future electricity prices to estimate future electricity prices.

Gain (loss) on revaluation of embedded derivatives **increased by \$1.5 million** for the year ended **December 31, 2022 December 31, 2023**, as compared to the prior year period, decreased by **\$2.2 million** due to an increase in the change in fair value of our embedded EPP derivatives in our sales contracts, contracts, offset by a payment of **\$3.2 million** to one of our customers in the second quarter of fiscal 2023.

**Provision for Income Taxes**

	Years Ended		Change	
	December 31,			
	2022	2021	Amount	%
(dollars in thousands)				
Income tax provision	\$ 1,097	\$ 1,046	\$ 51	4.9 %

	Years Ended		Change	
	December 31,			
	2023	2022	Amount	%
(dollars in thousands)				
Income tax provision	\$ 1,894	\$ 1,097	\$ 797	72.7 %

Income tax provision consists primarily of income taxes in foreign jurisdictions in which we conduct business. We maintain a full valuation allowance for domestic deferred tax assets, including net operating loss and certain tax credit carryforwards. The income tax provision increased for the year ended **December 31, 2022 December 31, 2023** as compared to the prior year period. The increase was primarily due to fluctuations in the effective tax rates on income earned by international entities.

**Net Loss Attributable to Noncontrolling Interests and Redeemable Noncontrolling Interests**

	Years Ended		Years Ended December 31,	Change		
	December 31,			Change		
	2022	2021		Amount	%	
(dollars in thousands)						
Net loss attributable to noncontrolling interests	Net loss attributable to noncontrolling interests	\$ (13,378)	Net loss attributable to noncontrolling interests	\$ (28,896)	\$ 15,518	
	Net loss attributable to redeemable noncontrolling interests	(53.7)%				
Net loss attributable to redeemable noncontrolling interests	Net loss attributable to redeemable noncontrolling interests	(300)	Net loss attributable to redeemable noncontrolling interests	(28)	(272)	
	971.4 %	interests				

	Years Ended		Years Ended December 31,	Change		
	December 31,			Change		
	2023	2022		Amount	%	
(dollars in thousands)						
Net loss attributable to noncontrolling interests	Net loss attributable to noncontrolling interests	\$ (5,821)	Net loss attributable to noncontrolling interests	\$ (13,378)	\$ 7,557	
	(56.5)%	(56.5)%				
Net loss attributable to redeemable noncontrolling interests	Net loss attributable to redeemable noncontrolling interests	—	Net loss attributable to redeemable noncontrolling interests	(300)	300	
	(100.0)%	(100.0)%				

Net loss attributable to noncontrolling interests is the result of allocating profits and losses to noncontrolling interests under the hypothetical liquidation at book value ("HLBV") method. HLBV is a balance sheet-oriented approach for applying the equity method of accounting when there is a complex structure, such as the flip structure of the PPA Entities.

Net loss attributable to noncontrolling interests **improved by \$15.2 million** for the year ended **December 31, 2022 December 31, 2023**, as compared to the prior year period, improved by **\$7.9 million** primarily due to **decreased losses changes in our loss in PPA Entities**, which are allocated to our noncontrolling interests, as well as **V, PPA IV Upgrade, and PPA IIIa** of **\$4.9 million, \$2.5 million, and \$0.3 million**, respectively, partly offset by a decrease in gain in the joint venture in the Republic of Korea of **\$0.1 million**.

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**Critical Accounting Policies and Estimates**

The consolidated financial statements have been prepared in accordance with generally accepted accounting principles as applied in the **United States U.S.** ("U.S. GAAP"). The preparation of the consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, costs and expenses and related disclosures. Our discussion and analysis of our financial results under *Results of Operations* above are based on our audited results of operations, which we have prepared in accordance with U.S. GAAP. In preparing these consolidated financial statements, we make assumptions, judgments and estimates that can affect the reported amounts of assets, liabilities, revenues and expenses, and net income. On an ongoing basis, we base our estimates on historical experience, as appropriate, and on various other assumptions that we believe to be reasonable under the circumstances. Changes in the accounting estimates are representative of estimation uncertainty and are reasonably likely to occur from period to period. Accordingly, actual results could differ significantly from the estimates made by our management. We evaluate our estimates and assumptions on an ongoing basis. To the extent that there are material differences between these estimates and actual results, our future financial

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statement presentation, financial condition, results of operations and cash flows will be affected. We believe that the following critical accounting policies involve a greater degree of judgment and complexity than our other accounting policies. Accordingly, these are the policies we believe are the most critical to understanding and evaluating the consolidated financial condition and results of operations.

The accounting policies that most frequently require us to make assumptions, judgments and estimates, and therefore are critical to understanding our results of operations, include:

### **Revenue Recognition**

We apply Accounting Standards Codification ("ASC") Topic 606, *Revenue from Contracts with Customers* ("ASC 606"). We identify our contracts with customers, determine our performance obligations and the transaction price, and after allocating the transaction price to the performance obligations, we recognize revenue as we satisfy our performance obligations and transfer control of our products and services to our customers. Most of our contracts with customers contain performance obligations with a combination of our Energy Server product, installation and maintenance services. For these performance obligations, we allocate the total transaction price to each performance obligation based on the relative standalone selling price using a cost-plus margin approach.

We generally recognize product revenue from contracts with customers at the point that control is transferred to the customers. This occurs when we achieve customer acceptance and typically occurs upon transfer of control to our customers, which depending on the contract terms is when the system is shipped and delivered to our customers, when the system is shipped and delivered and is physically ready for startup and commissioning ("Mechanical Completion"), or when the system is shipped and delivered and is turned on and producing power ("COO").

For certain installations, control of installations transfers to the customer over time, and the related revenue is recognized over time as the performance obligation is satisfied using the cost-to-total cost (percentage-of-completion) method. We use an input measure of progress to determine the amount of revenue to recognize during each reporting period when such revenue is recognized over time, based on the costs incurred to satisfy the performance obligation.

Service revenue is recognized ratably over the term of the first or renewed one-year service period. Given our customers' renewal history, we anticipate that most of them will continue to renew their maintenance services agreements each year for the period of their expected use of the Energy Server. Servers. The contractual renewal price may be less than the standalone selling price of the maintenance services and consequently the contract renewal option may provide the customer with a material right. We estimate the standalone selling price for customer renewal options that give rise to material rights using the practical alternative by reference to optional maintenance services renewal periods expected to be provided and the corresponding expected consideration for these services. This reflects the fact that our additional performance obligations in any contractual renewal period are consistent with the services provided under the standard first-year warranty. Where we have determined that a customer has a material right as a result of their contract renewal option, we recognize that portion of the transaction price allocated to the material right over the period in which such rights are exercised.

Given that we typically sell **an** the Energy Server. Servers with a maintenance service agreement and have not provided maintenance services to a customer who does not have use of **an** the Energy Server. Servers, standalone selling prices are estimated using a cost-plus approach. Costs relating to the Energy Servers include all direct and indirect manufacturing costs, applicable overhead costs and costs for normal production inefficiencies (i.e., variances). We then apply a margin to the Energy Servers which may vary with the size of the customer, geographic region and the scale of the Energy Server. Servers deployment. Costs relating to installation include all direct and indirect installation costs. The margin we apply reflects our profit objectives relating to

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installation. Costs for maintenance service arrangements are estimated over the life of the maintenance contracts and include estimated future service costs and future material costs. Material costs over the period of the service arrangement are impacted significantly by the longevity of the fuel cells themselves. After considering the total service costs, we apply a lower margin to our service costs than to our Energy Servers as it best reflects our long-term service margin expectations and comparable historical industry service margins. As a result, our estimate of our selling price is driven primarily by our expected margin on both the Energy Server. Servers and the maintenance service agreements based on their respective costs or, in the case of maintenance service agreements, the estimated costs to be incurred.

The total transaction price is determined based on the total consideration specified in the contract, including variable consideration in the form of a performance guaranty payment that represents potential amounts payable to customers. The expected value method is generally used when estimating variable consideration, which typically reduces the

total transaction price due to the nature of the performance obligations to which the variable consideration relates. These estimates reflect our historical experience and current contractual requirements which cap the maximum amount that may be paid. The expected

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value method requires judgment and considers multiple factors that may vary over time depending upon the unique facts and circumstances related to each performance obligation. Depending on the facts and circumstances, a change in variable consideration estimate will either be accounted for at the contract level or using the portfolio method.

For successful sales-leaseback arrangements, we recognize product and installation revenue upon meeting criteria, demonstrating we have transferred control to the customer (the Buyer-Lessor). When control of the Energy ~~Servers~~ Servers is transferred to the financier, and we determine the leaseback qualifies as an operating lease in accordance with ASC 842, Leases ("ASC 842"), we record ~~a~~ an operating lease ROU asset and ~~a~~ an operating lease liability, and recognize revenue based on the fair value of the Energy Servers with an allocation to product revenue and installations revenue based on the relative standalone selling prices. We recognize as financing obligations any proceeds received to finance our ongoing costs to operate the Energy Servers.

### **Valuation of Assets and Liabilities of the SK ecoplant Strategic Investment**

In October 2021, we entered into an agreement On March 20, 2023, the Company amended its SPA (the "Amended SPA") with SK ecoplant that provides and simultaneously entered into the opportunity, but does not require, an additional investment from Loan Agreement (collectively "the Agreements.") On March 23, 2023, pursuant to the Amended SPA, we issued and sold to SK ecoplant ~~in our~~ shares of non-voting Series B RCPS. The Amended SPA triggered the modification of the equity-classified forward contract on Class A common stock, subject to a cap on the total potential share purchase, and as a component of transaction, includes a purchase commitment by the investor for future product purchases. On August 10, 2022, we obtained notice from SK ecoplant of its desire to exercise its option to purchase additional Class A common stock (the "Second Tranche Shares"), which led to a final mark-to-market valuation of respective liability with subsequent reclassification of this previously liability-classified financial instrument to additional paid-in capital as a forward contract.

On December 6, 2022, we and SK ecoplant mutually agreed to delay the date of the payment for the Second Tranche Shares from December 6, 2022 to March 31, 2023, which resulted in the modification ~~derecognition~~ of the forward contract and triggered the fair value remeasurement of the freestanding equity-classified instrument that continued to qualify for equity classification under the guidance of ASC 815 *Derivatives and Hedging*. Since the change in fair value calculated as the difference between the fair value of the instrument immediately before the modification and the fair value of the instrument immediately after the modification was favorable to us, we did not recognize this change in pre-modified fair value of the forward contract on the modification date or given to SK ecoplant. The Series B RCPS was accounted for as of December 31, 2022.

Until our receipt a stock award with liability and equity components. The liability component of the notice from Series B RCPS was recognized at the redemption value net of issuance costs, and the equity component was recognized at its fair value on March 20, 2023 and represented the option of SK ecoplant of its intent to exercise its option convert the Series B RCPS to purchase additional Class A common stock (the "Conversion Option"). Pursuant to the Loan Agreement we were required had the option to determine draw on a loan from SK ecoplant, should SK ecoplant have sent a redemption notice to us under the fair value Amended SPA. The Agreements provided us with a loan commitment asset from SK ecoplant.

The liability component of the assets or liabilities Series B RCPS, the Conversion Option, and the loan commitment asset were accounted for financial reporting purposes under ASC 820, and as applicable, under the guidance of Topic 718, *Compensation – Stock Compensation* ("ASC 815 718"), and applicable subsections of ASC Topic 480, *Distinguishing Liabilities from Equity* ("ASC 480"). We used third party third-party valuation experts that were recognized as financial instrument accounting specialists to provide us with (i) the initial Level 3 pre-modified fair value measurement that estimated of the forward contract given to SK ecoplant, (ii) the fair value of the subject assets or liabilities issued Series B RCPS equity component, and (iii) the fair value of the loan commitment asset from SK ecoplant.

**Pre-modified forward contract.** We valued the forward contract as the difference between (i) our Class A common stock trading price adjusted by a discount for lack of marketability ("DLOM") as of the date of Amended SPA (the "Valuation Date") and (ii) the present value of the strike price, with further reduction associated with the expected outcome of the Second Tranche Closing.

**Series B RCPS equity component (the Conversion Option).** We valued the conversion feature of the Series B RCPS as a European-type call option under the guidance of ASC 718 by applying the Black-Scholes valuation model using inputs of the number of shares, underlying prices of Bloom Energy strike price, maturity, risk-free rate, and volatility. In addition, DLOM was applied to the Class A common stock rights and obligations price.

**Loan commitment asset from SK ecoplant.** We concluded that the loan commitment was a freestanding financial instrument as of the counterparties, valuation assumptions related to options, Valuation Date. We valued the loan commitment asset based on the difference between the present value of cash flows associated with a loan with a market-participant based interest rate (i.e., the rate for which the value of the hypothetical loan agreement equals the face value of the Loan Agreement) and the assessed cash flows associated with the loan committed to by SK ecoplant, and applied a redemption probability to the difference. The Series B RCPS redemption probability was obtained from a lattice model used to value the Series B preferred stock. As of December 31, 2023, the loan

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commitment asset from SK ecoplant was derecognized as a result of automatic conversion of all shares of the Series B RCPS into shares of our product revenue streams and the timing of expected revenue recognition. Class A common stock.

We determined our final estimate estimates of fair value values based on internal reviews and in consideration of the estimates received. The objective of the fair value measurement of our estimate was to represent the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. We determined the reasonableness of our valuation methodology and underlying assumptions on the timing and probability of a redemption event, and the expected number of shares to be exercised with the Option, and review reviewed the mathematical accuracy of the calculations before recording in our consolidated statement statements of operations and consolidated balance sheets. See

For additional details about the transaction with SK ecoplant, please refer to Part II, Item 8, Note 17 — SK ecoplant Strategic Investment.

#### **Incremental Borrowing Rate ("IBR") by Lease Class**

We adopted ASC 842, *Leases* on January 1, 2020 on a modified retrospective basis. This guidance requires that, for all our leases, we recognize ROU assets representing our right to use the underlying asset for the lease term, and lease liabilities related to the rights and obligations created by those leases, on the balance sheet regardless of whether they are classified as financing or operating leases, with classification affecting the pattern and presentation of expenses and cash flows on the consolidated financial statements. Lease liabilities are measured at the lease commencement date as the present value of future minimum lease payments over the reasonably certain lease term. Lease ROU assets are measured as the lease liability plus unamortized initial direct costs and prepaid (accrued) lease payments less unamortized balance of lease incentives received. In measuring the present value of the future minimum lease payments, we used our collateralized incremental borrowing rate as our leases do not generally provide an implicit rate. The determination of the incremental borrowing rate considers qualitative and quantitative factors as well as the estimated impact that the collateral has on the rate. We determine our incremental borrowing rate based on the lease class of assets which relates to those supporting of manufacturing and general operations, and those supporting electricity revenue transactions.

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For successful sale-leasebacks, as Seller-Lessee, we determine the collateralized IBR on our leased equipment based on a fair value assessment provided by third-party valuation experts.

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

We account for stock options and other equity awards, such as restricted stock units and performance-based stock units, to employees and non-employee directors under the provisions of ASC 718, *Compensation-Stock Compensation*. Accordingly, the stock-based compensation expense for these awards is measured based on the fair value on the date of grant. For stock options, we recognize the expense, net of estimated forfeitures, under the straight-line attribution over the requisite service period which is generally the vesting term. The fair value of the stock options is estimated using the Black-Scholes valuation model. For options with a vesting condition tied to the attainment of service and market conditions, stock-based compensation costs are recognized using Monte Carlo simulations. In addition, we use the Black-Scholes valuation model to estimate the fair value of stock purchase rights under the Bloom Energy Corporation 2018 Employee Stock Purchase Plan (the "2018 ESPP"). The fair value of the 2018 ESPP purchase rights is recognized as expense under the multiple options approach.

The Black-Scholes valuation model uses as inputs the fair value of our common stock and assumptions we make for the volatility of our common stock, the expected term of the award, the risk-free interest rate for a period that approximates the expected term of the stock options and the expected dividend yield. In developing estimates used to calculate assumptions, we established the expected term for employee options as well as expected forfeiture rates based on the historical settlement experience and after giving consideration to vesting schedules.

#### **Income Taxes**

We account for income taxes using the liability method under ASC 740, *Income Taxes* ("ASC 740"). Under this method, deferred tax assets and liabilities are determined based on net operating loss carryforwards, research and development credit carryforwards and temporary differences resulting from the different treatment of items for tax and financial reporting purposes. Deferred items are measured using the enacted tax rates and laws that are expected to be in effect when the differences reverse. We must assess the likelihood that deferred tax assets will be recovered as deductions from future taxable income. This determination is based on expected future results and the future reversals of existing taxable temporary differences. Furthermore, uncertain tax positions are evaluated by management and amounts are recorded when it is more likely than not that the position will be sustained upon examination, including resolution of any related appeals or litigation processes, based on the technical merits. Significant judgement is required throughout management's process in evaluating each uncertain tax position including future taxable income expectations and tax-planning strategies to determine whether the more likely than not recognition threshold has been met. We have provided a full valuation allowance on our domestic deferred tax assets because we believe it is more likely than not that our deferred tax assets will not be realized.

#### **Principles of Consolidation**

Our consolidated financial statements include the operations of our subsidiaries in which we have a controlling financial interest. We use a qualitative approach in assessing the consolidation requirements for our PPA Entity that is a variable interest entity ("VIE"). VIEs. This approach focuses on determining whether we have the power to direct those activities that significantly affect its their economic performance and whether we have the obligation to absorb losses, or the right to receive benefits that could potentially be significant to the PPA Entity. The considerations consideration for VIE consolidation is a complex analysis that requires us to determine whether we are the primary beneficiary and therefore have the power to direct activities which are most significant to the PPA Entity.

#### **Allocation of Profits and Losses of Consolidated Entities to Noncontrolling Interests and Redeemable Noncontrolling Interests**

We generally allocate profits and losses to noncontrolling interests under the HLBV method. The HLBV method is a balance sheet-oriented approach for applying the equity method of accounting when there is a complex structure, such as the flip structure of the PPA Entity.

The determination of equity in earnings under the HLBV method requires management to determine how proceeds, upon a hypothetical liquidation of the entity at book value, would be allocated between our investors. The noncontrolling interest balance is presented as a component of permanent equity in the consolidated balance sheets.

Noncontrolling interests with redemption features, such as put options, that are not solely within our control are considered redeemable noncontrolling interests. Exercisability of put options are solely dependent upon the passage of time.

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and hence, such put options are considered to be probable of becoming exercisable. We elected to accrete changes in the redemption value over the period from the date it becomes probable that the instrument will become redeemable to the earliest redemption date of the instrument by using an interest method. The balance of redeemable noncontrolling interests on the balance sheets is reported at the greater of its carrying value or its maximum redemption value at each reporting date. The redeemable noncontrolling interests are classified as temporary equity and therefore are reported in the mezzanine section of the consolidated balance sheets as redeemable noncontrolling interests. VIEs.

## ITEM 7A QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to market risks as part of our ongoing business operations, primarily by from exposure to changes in interest rates, in commodity fuel prices and in foreign currency.

### *Interest Rate Risk*

Our cash is maintained and cash equivalents are primarily invested in interest-bearing accounts and our cash equivalents are invested in money market funds. Lower The risk associated with fluctuating interest rates could have an adverse impact is primarily limited to the yield we make on our interest income or we could potentially incur other expenses if a negative interest rate environment were to exist. these investments. Due to the short-term investment nature of our cash and cash equivalents, we believe that we do not have material financial statement exposure to changes in fair value as a result of changes in interest rates. Since we believe we have the ability to can liquidate substantially all of our short-term investment portfolio, we do not expect our operating results or cash flows to be materially affected to any significant degree by a sudden change in market interest rates on our investment portfolio.

To provide a meaningful assessment of the interest rate risk associated with our cash and cash equivalents, we performed a sensitivity analysis to determine the impact a change in interest rates would have on our income statement and in investment fair values, assuming a 1% decline in yield. Based on our investment positions on both December 31, 2022 December 31, 2023 and 2021, 2022, a hypothetical 1% decrease in interest rates across all maturities would result in \$4.4 million \$7.3 million and \$5.8 million \$4.4 million declines in interest income and/or an increase in other expenses on an annualized basis, respectively. As these investments have maturities of less than twelve months, changes with respect to the portfolio fair value would be limited to these amounts and only be realized if we were to terminate the investments prior to maturity.

We refinanced our only LIBOR-based floating-rate loan with a fixed-rate loan in 2021.

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As all of our debt is fixed-rate convertible debt, interest rate changes do not affect our earnings or cash flows. flows, but it does lead to refinancing risk. In case we end up issuing new debt or refinancing our current debt, the overall interest expense can materially increase.

### *Commodity Price Risk*

We are subject to commodity price risk arising from price movements for natural gas that we supply to our customers to operate our Energy Servers under certain power purchase agreements. While we entered into a natural gas fixed price forward contract with our gas supplier in 2011, the fuel forward contract meets met the definition of a derivative under U.S. GAAP and accordingly, any changes in its fair value are were recorded within cost of revenue in our consolidated statements of operations. The fair value of the contract is determined using a combination of factors including our credit rating and future natural gas prices. As of December 31, 2021, our remaining natural gas fixed price forward contracts had no fair value. There were no natural gas fixed price forward contracts as of December 31, 2022. December 31, 2023 and 2022.

### *Foreign Currency Risk*

Our sales contracts are primarily denominated in U.S. dollars and, therefore, substantially all of our revenue is not subject to foreign currency market risk. Our supply contracts are primarily denominated in U.S. dollars and our corporate operations are domiciled in the United States. U.S. However, we conduct some international field operations and therefore find it necessary to transact in foreign currencies for limited operational purposes, necessitating that we hold foreign currency bank accounts.

To provide a meaningful assessment of the risk associated with our foreign currency holdings, we performed a sensitivity analysis to determine the impact a currency devaluation would have on our balance sheet, assuming a 20% 10% decline in the value of the U.S. dollar. Based on our foreign currency holdings as of December 31, 2022 December 31, 2023 and 2021, 2022, a hypothetical 20% 10% devaluation of the U.S. dollar against foreign currencies would not be material to our reported cash position.

However, an increasing portion of our operating expenses are incurred outside the United States. U.S., are denominated in foreign currencies and are subject to such risk. Although not yet material, if we are not able to successfully hedge against the risks associated with currency fluctuations in our future activities, our financial condition and operating results could be adversely affected.

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Actual future gains and losses associated with our investment portfolio, debt and derivative positions and foreign currency may differ materially from the sensitivity analyses performed as of **December 31, 2022** **December 31, 2023** and **2021** **2022** due to the inherent limitations associated with predicting the timing and amount of changes in interest rates, foreign currency exchange rates and our actual commodity derivative exposures and positions.

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### ITEM 8 FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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<a href="#">Consolidated Balance Sheets</a>	<b>82</b> <b>77</b>
<a href="#">Consolidated Statements of Operations</a>	<b>83</b> <b>78</b>
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### REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the stockholders and the Board of Directors of Bloom Energy Corporation

#### Opinion on the Financial Statements

We have audited the accompanying **consolidated balance sheets** **Consolidated Balance Sheets** of Bloom Energy Corporation and subsidiaries (the "Company") as of **December 31, 2022** **December 31, 2023** and **2021**, **2022**, the related **consolidated statements** **Consolidated Statements of operations, comprehensive loss, stockholders' equity (deficit)** **Operations, Comprehensive Loss, Changes in Stockholders' Equity (Deficit)** and **cash flows**, **Cash Flows**, for each of the three years in the period ended **December 31, 2022** **December 31, 2023**, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of **December 31, 2022** **December 31, 2023** and **2021**, and the results of its operations and its cash flows for each of the three years in the period ended **December 31, 2022** **December 31, 2023**, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of **December 31, 2022** **December 31, 2023**, based on criteria established in *Internal Control — Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated **February 21, 2023** **February 15, 2024**, expressed an unqualified opinion on the Company's internal control over financial reporting.

#### Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

## Critical Audit Matter Matters

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

### Product Revenue Recognition – Refer to Notes 2 and 3 to the financial statements

#### Critical Audit Matter Description

Product revenue for the sale of energy servers is recognized upon transfer of control to customers which typically occurs at customer acceptance, which, depending on the contract terms, is when the product is shipped and delivered to a customer, is physically ready for startup and commissioning, or when the product is shipped, delivered, turned on, and producing power. For the year ended December 31, 2022, the Company recorded \$880.7 million in product revenue.

We identified the timing of product revenue recognition (i.e., customer acceptance), as a critical audit matter because of the degree of auditor judgment and increased extent of effort when performing audit procedures to evaluate the appropriateness of the timing of product revenue recognized during the year.

#### How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the timing of product revenue recognition included the following, among others: following:

- We obtained an understanding of the nature of the revenue recognition process through inquiry with the Company personnel and inspection of executed contracts with customers
- We tested the design and operating effectiveness of internal controls over the Company's timing of product revenue recognition
- For a sample of product revenue acceptances during the year ended December 31, 2022 December 31, 2023, we performed the following:
  - a. We inspected the executed contracts to identify the relevant terms and conditions which would impact the Company's accounting conclusions, including the timing of the transfer of control of products to customers
  - b. We inspected source documents to test the timing of revenue recognition, or customer acceptance, such as agreed-upon sales orders, shipping records, mechanical completion certifications, commencement of operation certifications, as well as the related invoices generated and evaluated any differences. We corroborated our inspection of source documents by sending written confirmations to customers confirming the period of customer acceptance.

### Amendment to Securities Purchase Agreement and Second Tranche Closing – Refer to Note 17 to the financial statements

#### Critical Audit Matter Description

The Company amended its Securities Purchase Agreement ("Amended SPA") with SK ecoplant Co., Ltd. ("SK ecoplant.") and simultaneously entered into a loan commitment agreement (collectively "the Agreements"). The Agreements resulted in the Company receiving cash proceeds and a loan commitment asset from SK ecoplant. In return, SK ecoplant received consideration consisting of the release from the obligation to close on the original forward contract on Class A common stock ("the Pre-modified Forward Contract"), shares of Series B redeemable convertible preferred stock ("Series B RCPS"), and the option for SK ecoplant to convert the Series B RCPS to Class A common stock (the "Conversion Option").

We identified the accounting and the valuation of the Agreements as a critical audit matter because of the complexity in applying the accounting framework and the significant estimates and assumptions made by management in the determination of the fair values of the Pre-modified Forward Contract, the Series B RCPS, the Conversion Option, and the loan commitment asset (collectively, the "Financial Instruments"). This required a high degree of auditor judgment and an increased extent of effort when performing audit procedures to evaluate the appropriateness of the accounting framework and the reasonableness of the fair value estimates and assumptions.

#### How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the accounting for the Agreements, and the Company's determination of the fair values of the Financial Instruments, included the following:

- We tested the design and operating effectiveness of internal controls over the Company's accounting for the Agreements and over the determination of the fair values of the Financial Instruments
- With the assistance of our accounting specialists, we evaluated the Company's conclusions regarding the accounting for the Agreements including the Company's application of the contract modification and the identification and classification of financial instruments
- With the assistance of our fair value specialists, we evaluated the reasonableness of the following:
  - a. Valuation methodologies applied to determine the fair values of the Financial Instruments
  - b. Assumptions used by the Company in the valuation of the Financial Instruments, including the expected timing and the probability of a redemption event for the Series B RCPS and the Conversion Option, the note yield related to the loan commitment, and stock volatility
  - c. Accuracy, completeness, and relevancy of the source information underlying the fair value of the Financial Instruments and the mathematical accuracy of the calculations

- With the assistance of our fair value specialists, we developed independent estimates and compared them to the fair values of the Financial Instruments determined by management.

/s/ Deloitte & Touche LLP

San Jose, California

February 21, 2023

15, 2024

We have served as the Company's auditor since 2020.

#### REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the stockholders and the Board of Directors of Bloom Energy Corporation

#### Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Bloom Energy Corporation and subsidiaries (the "Company") as of December 31, 2022 December 31, 2023, based on criteria established in *Internal Control — Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022 December 31, 2023, based on criteria established in *Internal Control — Integrated Framework* (2013) issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2022 December 31, 2023, of the Company and our report dated February 21, 2023 February 15, 2024, expressed an unqualified opinion on those financial statements.

#### Basis for Opinion

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

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

#### Definition and Limitations of Internal Control over Financial Reporting

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

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

/s/ Deloitte & Touche LLP

San Jose, California

February 21, 2023 15, 2024

**Bloom Energy Corporation**  
**Consolidated Balance Sheets**  
*(in thousands, except share data and par values) data*

	December 31,	
	2022	2021

			December 31, 2023	December 31, 2023	December 31, 2023
<b>Assets</b>					
<b>Assets</b>					
<b>Assets</b>	<b>Assets</b>				
Current assets:	Current assets:				
Current assets:					
Cash and cash equivalents <sup>1</sup>	Cash and cash equivalents <sup>1</sup>	\$	348,498	\$	396,035
Restricted cash <sup>1</sup>	Restricted cash <sup>1</sup>		51,515		92,540
Accounts receivable less allowance for doubtful accounts of \$119 as of December 31, 2022 and 2021 <sup>1</sup>			250,995		87,789
Contract assets			46,727		25,201
Restricted cash <sup>1</sup>					
Restricted cash <sup>1</sup>					
Accounts receivable less allowance for credit losses of \$119 as of December 31, 2023 and \$119 as of December 31, 2022 <sup>1, 2</sup>					
Accounts receivable less allowance for credit losses of \$119 as of December 31, 2023 and \$119 as of December 31, 2022 <sup>1, 2</sup>					
Accounts receivable less allowance for credit losses of \$119 as of December 31, 2023 and \$119 as of December 31, 2022 <sup>1, 2</sup>					
Contract assets <sup>3</sup>					
Contract assets <sup>3</sup>					
Contract assets <sup>3</sup>					
Inventories <sup>1</sup>	Inventories <sup>1</sup>		268,394		143,370
Deferred cost of revenue			46,191		25,040
Customer financing receivable <sup>1</sup>			—		5,784
Prepaid expenses and other current assets <sup>1</sup>			43,643		30,661
Inventories <sup>1</sup>					
Inventories <sup>1</sup>					
Deferred cost of revenue <sup>4</sup>					
Deferred cost of revenue <sup>4</sup>					
Deferred cost of revenue <sup>4</sup>					
Prepaid expenses and other current assets <sup>1, 5</sup>					
Prepaid expenses and other current assets <sup>1, 5</sup>					
Prepaid expenses and other current assets <sup>1, 5</sup>					
Total current assets					
Total current assets					
Total current assets	Total current assets		1,055,963		806,420
Property, plant and equipment, net <sup>1</sup>	Property, plant and equipment, net <sup>1</sup>		600,414		604,106
Operating lease right-of-use assets <sup>1</sup>			126,955		106,660

Customer financing receivable <sup>1</sup>	—	39,484
Property, plant and equipment, net:		
Property, plant and equipment, net:		
Operating lease right-of-use assets <sup>1, 6</sup>		
Operating lease right-of-use assets <sup>1, 6</sup>		
Operating lease right-of-use assets <sup>1, 6</sup>		
Restricted cash <sup>1</sup>		
Restricted cash <sup>1</sup>	Restricted cash <sup>1</sup>	118,353
Deferred cost of revenue	Deferred cost of revenue	4,737
Other long-term assets:		
Deferred cost of revenue		
Deferred cost of revenue		
Other long-term assets <sup>1, 7</sup>		
Other long-term assets <sup>1, 7</sup>		
Other long-term assets <sup>1, 7</sup>		
Total assets	Total assets	\$ 1,946,627
<b>Liabilities, redeemable convertible preferred stock, redeemable noncontrolling interest and stockholders' equity (deficit)</b>		\$ 1,725,571
Total assets		
Total assets		
<b>Liabilities and stockholders' equity</b>		
<b>Liabilities and stockholders' equity</b>		
<b>Liabilities and stockholders' equity</b>		
Current liabilities:	Current liabilities:	
Accounts payable <sup>1</sup>	\$ 161,770	\$ 72,967
Current liabilities:		
Current liabilities:		
Accounts payable <sup>1, 8</sup>		
Accounts payable <sup>1, 8</sup>		
Accounts payable <sup>1, 8</sup>		
Accrued warranty	Accrued warranty	17,332
Accrued expenses and other current liabilities <sup>1</sup>		11,746
Accrued expenses and other current liabilities <sup>1</sup>		114,138
Deferred revenue and customer deposits:		
Deferred revenue and customer deposits:		89,975
Operating lease liabilities:		16,227
Operating lease liabilities:		13,101
Accrued warranty		
Accrued warranty		
Accrued expenses and other current liabilities <sup>1, 9</sup>		
Accrued expenses and other current liabilities <sup>1, 9</sup>		
Accrued expenses and other current liabilities <sup>1, 9</sup>		
Deferred revenue and customer deposits <sup>1, 10</sup>		
Deferred revenue and customer deposits <sup>1, 10</sup>		
Deferred revenue and customer deposits <sup>1, 10</sup>		
Operating lease liabilities <sup>1, 11</sup>		
Operating lease liabilities <sup>1, 11</sup>		
Operating lease liabilities <sup>1, 11</sup>		
Financing obligations	Financing obligations	17,363
Recourse debt	Recourse debt	14,721
Recourse debt		8,348
Recourse debt		

Non-recourse debt: Non-recourse debt: Non-recourse debt: Total current liabilities	Non-recourse debt: Total current liabilities	13,307	17,483
Deferred revenue and customer deposits: Operating lease liabilities: Total current liabilities	Deferred revenue and customer deposits: Operating lease liabilities: Total current liabilities	56,392	90,310
Operating lease liabilities: Total current liabilities	Operating lease liabilities: Total current liabilities	132,363	106,187
Deferred revenue and customer deposits <sup>12</sup> Deferred revenue and customer deposits <sup>12</sup> Deferred revenue and customer deposits <sup>12</sup> Operating lease liabilities <sup>13</sup> Operating lease liabilities <sup>13</sup> Operating lease liabilities <sup>13</sup> Financing obligations Financing obligations	Deferred revenue and customer deposits <sup>12</sup> Deferred revenue and customer deposits <sup>12</sup> Deferred revenue and customer deposits <sup>12</sup> Operating lease liabilities <sup>13</sup> Operating lease liabilities <sup>13</sup> Operating lease liabilities <sup>13</sup> Financing obligations Financing obligations		
Financing obligations Recourse debt Non-recourse debt: Recourse debt	Financing obligations Recourse debt	442,063	461,900
Non-recourse debt: Recourse debt Non-recourse debt: Non-recourse debt: Non-recourse debt: Other long-term liabilities Other long-term liabilities	Non-recourse debt: Recourse debt Non-recourse debt: Non-recourse debt: Non-recourse debt: Other long-term liabilities Other long-term liabilities	273,076	283,483
Non-recourse debt: Total liabilities	Non-recourse debt: Total liabilities	112,480	217,416
Recourse debt Recourse debt Non-recourse debt <sup>14</sup> Non-recourse debt <sup>14</sup> Non-recourse debt <sup>14</sup> Other long-term liabilities Other long-term liabilities	Recourse debt Recourse debt Non-recourse debt <sup>14</sup> Non-recourse debt <sup>14</sup> Non-recourse debt <sup>14</sup> Other long-term liabilities Other long-term liabilities		
Other long-term liabilities Total liabilities	Other long-term liabilities Total liabilities	9,491	16,772
Total liabilities	Total liabilities	1,567,811	1,518,547
Commitments and contingencies (Note 13)	Commitments and contingencies (Note 13)		
Redeemable convertible preferred stock, Series A: 10,000,000 shares authorized; no shares and 10,000,000 shares issued and outstanding at December 31, 2022 and December 31, 2021, respectively.	—	208,551	
Redeemable noncontrolling interest	—	300	
Stockholders' equity (deficit): Common stock: \$0.0001 par value; Class A shares - 600,000,000 shares authorized, and 189,864,722 shares and 160,627,544 shares issued and outstanding and Class B shares - 600,000,000 shares authorized and 15,799,968 shares and 15,832,863 shares issued and outstanding at December 31, 2022 and December 31, 2021, respectively.	20	18	
Commitments and contingencies (Note 13)			
Commitments and contingencies (Note 13)			
Stockholders' equity:			
Stockholders' equity:			
Stockholders' equity: Common stock: \$0.0001 par value; Class A shares — 600,000,000 shares authorized, and 224,717,533 shares and 189,864,722 shares issued and outstanding and Class B shares — 600,000,000 shares authorized, and no shares and 15,799,968 shares issued and outstanding at December 31, 2023 and December 31, 2022, respectively.			

Common stock: \$0.0001 par value; Class A shares — 600,000,000 shares authorized, and 224,717,533 shares and 189,864,722 shares issued and outstanding and Class B shares — 600,000,000 shares authorized, and no shares and 15,799,968 shares issued and outstanding at December 31, 2023 and December 31, 2022, respectively.			
Common stock: \$0.0001 par value; Class A shares — 600,000,000 shares authorized, and 224,717,533 shares and 189,864,722 shares issued and outstanding and Class B shares — 600,000,000 shares authorized, and no shares and 15,799,968 shares issued and outstanding at December 31, 2023 and December 31, 2022, respectively.			
Additional paid-in capital			
Additional paid-in capital			
Additional paid-in capital	Additional paid-in capital	3,906,491	3,219,081
Accumulated other comprehensive loss	Accumulated other comprehensive loss	(1,251)	(350)
Accumulated other comprehensive loss			
Accumulated other comprehensive loss			
Accumulated deficit	Accumulated deficit	(3,564,483)	(3,263,075)
Total stockholders' equity (deficit) attributable to Class A and Class B common stockholders		340,777	(44,326)
Accumulated deficit			
Accumulated deficit			
Total stockholders' equity attributable to common stockholders			
Total stockholders' equity attributable to common stockholders			
Total stockholders' equity attributable to common stockholders			
Noncontrolling interest	Noncontrolling interest	38,039	42,499
Total stockholders' equity (deficit)		\$ 378,816	\$ (1,827)
Total liabilities, redeemable convertible preferred stock, redeemable noncontrolling interest and stockholders' equity (deficit)		\$ 1,946,627	\$ 1,725,571
Noncontrolling interest			
Noncontrolling interest			
Total stockholders' equity			
Total stockholders' equity			
Total stockholders' equity			
Total liabilities and stockholders' equity			
Total liabilities and stockholders' equity			
Total liabilities and stockholders' equity			

<sup>1</sup>We have variable interest entities related to PPA\* the PPA\* V (see Note 11 10 — Portfolio Financings Financings) and a joint venture in the Republic of Korea (see Note 17 — SK ecoplant Strategic Investment), which represent a portion of the consolidated balances recorded within these financial statement line items.

In August 2023, we sold the PPA V as a result of the PPA V Repowering of the Energy Servers (see Note 10 — Portfolio Financings), as such the consolidated balance sheets, balances recorded within these financial statement line items as of December 31, 2023 exclude the PPA V balances.

<sup>2</sup> Including amounts from related parties of \$262.0 million and \$4.3 million as of December 31, 2023 and December 31, 2022, respectively.

<sup>3</sup> Including amounts from related parties of \$6.9 million as of December 31, 2023. There were no respective related party amounts as of December 31, 2022.

<sup>4</sup> Including amounts from related parties of \$0.9 million as of December 31, 2023. There were no respective related party amounts as of December 31, 2022.

<sup>5</sup> Including amounts from related parties of \$2.3 million as of December 31, 2023. There were no respective related party amounts as of December 31, 2022.

<sup>6</sup> Including amounts from related parties of \$2.0 million as of December 31, 2023. There were no respective related party amounts as of December 31, 2022.

<sup>7</sup> Including amounts from related parties of \$9.1 million as of December 31, 2023. There were no respective related party amounts as of December 31, 2022.

<sup>8</sup> Including amounts from related parties of \$0.1 million as of December 31, 2023. There were no respective related party amounts as of December 31, 2022.

<sup>9</sup> Including amounts from related parties of \$3.4 million as of December 31, 2023. There were no respective related party amounts as of December 31, 2022.

<sup>10</sup> Including amounts from related parties of \$1.7 million as of December 31, 2023. There were no respective related party amounts as of December 31, 2022.

<sup>11</sup> Including amounts from related parties of \$0.4 million as of December 31, 2023. There were no respective related party amounts as of December 31, 2022.

<sup>12</sup> Including amounts from related parties of \$6.7 million as of December 31, 2023. There were no respective related party amounts as of December 31, 2022.

<sup>13</sup> Including amounts from related parties of \$1.6 million as of December 31, 2023. There were no respective related party amounts as of December 31, 2022.

<sup>14</sup> Including amounts from related parties of \$4.6 million as of December 31, 2023. There were no respective related party amounts as of December 31, 2022.

\*Power Purchase Agreement

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

**Bloom Energy Corporation**  
**Consolidated Statements of Operations**  
(in thousands, except per share data)

		Years Ended December 31,		
		2022	2021	2020
Revenue:	Revenue:			
Revenue:				
Revenue:				
Product				
Product				
Product	Product	\$ 880,664	\$ 663,512	\$ 518,633
Installation	Installation	92,120	96,059	101,887
Installation				
Installation				
Service				
Service				
Service	Service	150,954	144,184	109,633
Electricity	Electricity	75,387	68,421	64,094
Total revenue		1,199,125	972,176	794,247
Electricity				
Electricity				
Total revenue <sup>1</sup>				
Total revenue <sup>1</sup>				
Total revenue <sup>1</sup>				
Cost of revenue:				
Cost of revenue:				
Cost of revenue:	Cost of revenue:			
Product	Product	616,178	471,654	332,724
Product				
Product				
Installation				
Installation				
Installation	Installation	104,111	110,214	116,542
Service	Service	168,491	148,286	132,329
Service				
Service				
Electricity	Electricity	162,057	44,441	46,859
Total cost of revenue		1,050,837	774,595	628,454
Electricity				
Electricity				
Total cost of revenue <sup>2</sup>				
Total cost of revenue <sup>2</sup>				
Total cost of revenue <sup>2</sup>				

Gross profit				
Gross profit	Gross profit	148,288	197,581	165,793
Operating expenses:	Operating expenses:			
Operating expenses:				
Operating expenses:				
Research and development				
Research and development				
Research and development	Research and development	150,606	103,396	83,577
Sales and marketing	Sales and marketing	90,934	86,499	55,916
General and administrative		167,740	122,188	107,085
Sales and marketing				
Sales and marketing				
General and administrative				
General and administrative				
General and administrative				
Total operating expenses				
Total operating expenses				
Total operating expenses	Total operating expenses	409,280	312,083	246,578
Loss from operations	Loss from operations	(260,992)	(114,502)	(80,785)
Loss from operations				
Loss from operations				
Interest income	Interest income	3,887	262	1,475
Interest expense		(53,493)	(69,025)	(76,276)
Interest expense - related parties		—	—	(2,513)
Interest income				
Interest income				
Interest expense <sup>4</sup>				
Interest expense <sup>4</sup>				
Interest expense <sup>4</sup>				
Other (expense) income, net				
Other (expense) income, net				
Other (expense) income, net				
Loss on extinguishment of debt	Loss on extinguishment of debt	(8,955)	—	(12,878)
Other income (expense), net		4,998	(8,139)	(8,318)
Gain (loss) on revaluation of embedded derivatives		566	(919)	464
Loss on extinguishment of debt				
Loss on extinguishment of debt				
(Loss) gain on revaluation of embedded derivatives				
(Loss) gain on revaluation of embedded derivatives				
(Loss) gain on revaluation of embedded derivatives				
Loss before income taxes				
Loss before income taxes				
Loss before income taxes	Loss before income taxes	(313,989)	(192,323)	(178,831)
Income tax provision	Income tax provision	1,097	1,046	256
Income tax provision				
Income tax provision				
Net loss				
Net loss				

Net loss	Net loss	(315,086)	(193,369)	(179,087)
Less: Net loss attributable to noncontrolling interest	Less: Net loss attributable to noncontrolling interest	(13,378)	(28,896)	(21,513)
Net loss attributable to Class A and Class B common stockholders		(301,708)	(164,473)	(157,574)
Less: Net loss attributable to noncontrolling interest				
Less: Net loss attributable to noncontrolling interest				
Net loss attributable to common stockholders				
Net loss attributable to common stockholders				
Net loss attributable to common stockholders				
Less: Net loss attributable to redeemable noncontrolling interest				
Less: Net loss attributable to redeemable noncontrolling interest				
Less: Net loss attributable to redeemable noncontrolling interest	Less: Net loss attributable to redeemable noncontrolling interest	(300)	(28)	(21)
Net loss before portion attributable to redeemable noncontrolling interest and noncontrolling interest	Net loss before portion attributable to redeemable noncontrolling interest and noncontrolling interest	\$ (301,408)	\$ (164,445)	\$ (157,553)
Net loss per share available to Class A and Class B common stockholders, basic and diluted		\$ (1.62)	\$ (0.95)	\$ (1.14)
Weighted average shares used to compute net loss per share available to Class A and Class B common stockholders, basic and diluted		185,907	173,438	138,722
Net loss before portion attributable to redeemable noncontrolling interest and noncontrolling interest				
Net loss before portion attributable to redeemable noncontrolling interest and noncontrolling interest				
Net loss per share available to common stockholders, basic and diluted				
Net loss per share available to common stockholders, basic and diluted				
Net loss per share available to common stockholders, basic and diluted				
Weighted average shares used to compute net loss per share available to common stockholders, basic and diluted				
Weighted average shares used to compute net loss per share available to common stockholders, basic and diluted				
Weighted average shares used to compute net loss per share available to common stockholders, basic and diluted				

<sup>1</sup> Including related party revenue of \$487.2 million, \$36.3 million and \$16.0 million for the years ended December 31, 2023, 2022 and 2021, respectively.

<sup>2</sup> Including related party cost of revenue of \$0.1 million for the year ended December 31, 2023. There was no related party cost of revenue for the years ended December 31, 2022 and 2021.

<sup>3</sup> Including related party general and administrative expenses of \$0.8 million for the year ended December 31, 2023. There were no related party general and administrative expenses for the years ended December 31, 2022 and 2021.

<sup>4</sup> Including related party interest expense of \$0.1 million for the year ended December 31, 2023. There was no related party interest expense for the years ended December 31, 2022 and 2021.

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

**Bloom Energy Corporation**  
**Consolidated Statements of Comprehensive Loss**  
*(in thousands)*

| Years Ended December 31, |
|--------------------------|--------------------------|--------------------------|--------------------------|
|                          |                          |                          |                          |

	Net loss	2022	2021	2020	2023	2022	2021
Net loss	Net loss	\$(315,086)	\$(193,369)	\$(179,087)			
Net loss							
Net loss							
Other comprehensive loss, net of taxes:	Other comprehensive loss, net of taxes:						
Unrealized loss on available-for-sale securities	Unrealized loss on available-for-sale securities	—	—	(23)			
Change in derivative instruments designated and qualifying as cash flow hedges	Change in derivative instruments designated and qualifying as cash flow hedges	—					
Change in derivative instruments designated and qualifying as cash flow hedges	Change in derivative instruments designated and qualifying as cash flow hedges	—					
Change in derivative instruments designated and qualifying as cash flow hedges	Change in derivative instruments designated and qualifying as cash flow hedges	—	15,243	(6,896)			
Foreign currency translation adjustment	Foreign currency translation adjustment	(794)	(595)	—			
Other comprehensive (loss) income, net of taxes	Other comprehensive (loss) income, net of taxes	(794)	14,648	(6,919)			
Comprehensive loss	Comprehensive loss	(315,880)	(178,721)	(186,006)			
Less: Comprehensive loss attributable to noncontrolling interest	Less: Comprehensive loss attributable to noncontrolling interest	(13,271)	(13,907)	(28,404)			
Comprehensive loss attributable to Class A and Class B common stockholders	Comprehensive loss attributable to Class A and Class B common stockholders	\$(302,609)	\$(164,814)	\$(157,602)			
Comprehensive loss attributable to common stockholders	Comprehensive loss attributable to common stockholders						
Less: Comprehensive loss attributable to redeemable noncontrolling interest	Less: Comprehensive loss attributable to redeemable noncontrolling interest	\$ (300)	\$ (28)	\$ (21)			
Comprehensive loss before portion attributable to redeemable noncontrolling interest and noncontrolling interest	Comprehensive loss before portion attributable to redeemable noncontrolling interest and noncontrolling interest	\$(302,309)	\$(164,786)	\$(157,581)			

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

**Bloom Energy Corporation**  
**Consolidated Statements of Stockholders' Equity (Deficit)**  
*(in thousands, except share data)*

		Total equity (deficit)							
		Class A and Class B Common Stock		Accumulated Additional Paid-In Capital		attributable to Class A and Class B common stockholders		Total Stockholders' Equity (Deficit)	
		Shares	Amount	Capital	Loss	Deficit	Noncontrolling Interest		
Balances at December 31, 2021		176,460,407	\$ 18	\$ 3,219,081	\$ (350)	\$ (3,263,075)	\$ (44,326)	\$ 42,499	\$ (1,827)
Conversion of redeemable convertible preferred stock to Class A Common Stock		10,000,000	1	208,550	—	—	208,551	—	208,551
	Common Stock								
	Common Stock								
	Common Stock								
	Shares								
Balances at December 31, 2022									
Balances at December 31, 2022									
Balances at December 31, 2022									
Issuance of restricted stock awards	Issuance of restricted stock awards	2,957,215	—	—	—	—	—	—	—
ESPP purchase	ESPP purchase	759,744	—	11,600	—	—	11,600	—	11,600
Exercise of stock options	Exercise of stock options	537,324	—	3,679	—	—	3,679	—	3,679
Stock-based compensation	Stock-based compensation	—	—	112,722	—	—	112,722	—	112,722
Distributions and payments to noncontrolling interests		—	—	(500)	—	—	(500)	(6,354)	(6,854)
Contributions from noncontrolling interest	Contributions from noncontrolling interest	—	—	—	—	—	—	2,815	2,815
Public share offering (Note 1)		14,950,000	1	371,526	—	—	371,527	—	371,527
Forward contract to purchase Class A Common Stock (Note 5)		—	—	4,183	—	—	4,183	—	4,183
Buyout of noncontrolling interest (Note 11)		—	—	(24,350)	—	—	(24,350)	12,350	(12,000)
Distributions and payments to noncontrolling interest									
Buyout of noncontrolling interest									

Derecognition of the pre- modified forward contract fair value							
Equity component of redeemable convertible preferred stock							
Purchase of capped call options related to convertible notes							
Conversion of redeemable convertible preferred stock							
Foreign currency translation adjustment	Foreign currency translation adjustment	—	—	—	(901)	—	(901)
						107	(794)
Net loss <sup>1</sup>		—	—	—	(301,408)	(301,408)	(13,378)
Balances at December 31, 2022		205,664,690	\$ 20	\$ 3,906,491	\$ (1,251)	\$ (3,564,483)	\$ 340,777
Net loss							
Balances at December 31, 2023							

		Total Equity (Deficit)							
		Accumulated				Attributable to			
		Common Stock		Other		Common Stockholders	Noncontrolling Interest	Total Stockholders' Equity (Deficit)	
		Shares	Amount	Paid-In Capital	Comprehensive Loss	Accumulated Deficit			
Balances at December 31, 2021		176,460,407	\$ 18	\$ 3,219,081	\$ (350)	\$ (3,263,075)	\$ (44,326)	\$ 42,499	\$ (1,827)
Issuance of restricted stock awards		2,957,215	—	—	—	—	—	—	—
ESPP purchase		759,744	—	11,600	—	—	11,600	—	11,600
Exercise of stock options		537,324	—	3,679	—	—	3,679	—	3,679
Stock-based compensation		—	—	112,722	—	—	112,722	—	112,722
Contributions from noncontrolling interest		—	—	—	—	—	—	2,815	2,815
Distributions and payments to noncontrolling interest		—	—	(500)	—	—	(500)	(6,354)	(6,854)
Buyout of noncontrolling interest		—	—	(24,350)	—	—	(24,350)	12,350	(12,000)
Public share offering		14,950,000	1	371,526	—	—	371,527	—	371,527
Forward contract to purchase Class A common stock		—	—	4,183	—	—	4,183	—	4,183
Conversion of redeemable convertible preferred stock		10,000,000	1	208,550	—	—	208,551	—	208,551
Foreign currency translation adjustment		—	—	—	(901)	—	(901)	107	(794)
Net loss <sup>1</sup>		—	—	—	—	(301,408)	(301,408)	(13,378)	(314,786)
Balances at December 31, 2022		205,664,690	\$ 20	\$ 3,906,491	\$ (1,251)	\$ (3,564,483)	\$ 340,777	\$ 38,039	\$ 378,816

<sup>1</sup> Excludes \$300 attributable to redeemable noncontrolling interest.

Note: Beginning redeemable NCI of \$300 + Net loss attributable to redeemable NCI of \$300 = Ending redeemable NCI of Nil.

Class A and Class B Common Stock	Additional	Accumulated	Accumulated	Total	Noncontrolling	Total
	Paid-In	Other	Deficit	(deficit)	Interest	Stockholders'
	Capital	Comprehensive		equity attributable to Class A		(Deficit) Equity

		Shares	Amount	and Class B common stockholders								
		Common Stock										
		Common Stock										
		Shares						Additional Paid-In Capital	Other Comprehensive Loss	Accumulated Deficit	Equity attributable to Common Stockholders	Total (Deficit)
											Noncontrolling Interest	Stockholders' Equity (Deficit)
Balances at December 31, 2020												
Balances at December 31, 2020												
Balances at December 31, 2020	Balances at December 31, 2020	168,002,726	\$ 17	\$3,182,753	\$ (9)	\$ (3,103,937)	\$ 78,824	\$ 62,195	\$ 141,019			
Cumulative effect upon adoption of new accounting standard	Cumulative effect upon adoption of new accounting standard	—	—	(126,799)	—	5,308	(121,491)	—	(121,491)			
Issuance of restricted stock awards	Issuance of restricted stock awards	3,052,012	—	—	—	—	—	—	—	—		
ESPP purchase	ESPP purchase	1,945,305	—	10,045	—	—	10,045	—	10,045			
Exercise of stock options	Exercise of stock options	3,460,364	1	79,744	—	—	79,745	—	79,745			
Stock-based compensation	Stock-based compensation	—	—	73,338	—	—	73,338	—	73,338			
Distributions and payments to noncontrolling interest	Change in effective portion of interest rate swap agreement	—	—	—	—	—	—	15,243	15,243			
Distributions and payments to noncontrolling interests	Change in effective portion of interest rate swap agreement	—	—	—	—	—	—	(5,789)	(5,789)			
Foreign currency translation adjustment	Foreign currency translation adjustment	—	—	—	(341)	(1)	(342)	(254)	(596)			
Net loss <sup>2</sup>	Net loss <sup>2</sup>	—	—	—	(164,445)	(164,445)	(28,896)	(193,341)				
Balances at December 31, 2021	Balances at December 31, 2021	176,460,407	\$ 18	\$3,219,081	\$ (350)	\$ (3,263,075)	\$ (44,326)	\$ 42,499	\$ (1,827)			

<sup>2</sup> Excludes \$28 attributable to redeemable noncontrolling interest.

Note: Beginning redeemable NCI of \$377 distributions to redeemable noncontrolling interests of \$49 Net loss attributable to redeemable NCI of \$28 = Ending redeemable NCI of \$300.

	Class A and Class B Common Stock	Additional Paid-In Capital	Accumulated Other	Accumulated Deficit	Total equity (deficit) attributable to Class A and Noncontrolling Interest	Total Stockholders' Equity (Deficit)
--	-------------------------------------	-------------------------------	----------------------	------------------------	-------------------------------------------------------------------------------------	--------------------------------------------

	Shares	Amount	Comprehensive (Loss) Gain		Class B common stockholders		
Balances at December 31, 2019	121,036,289	\$ 12	\$ 2,686,759	\$ 19	\$ (2,946,384)	\$ (259,594)	\$ 91,291
Conversion of Notes	35,881,250	4	300,848	—	—	300,852	—
Issuance of convertible notes	—	—	126,799	—	—	126,799	—
Adjustment of embedded derivative for debt modification	—	—	(24,071)	—	—	(24,071)	—
Issuance of restricted stock awards	7,806,038	1	—	—	—	1	—
ESPP purchase	1,937,825	—	8,499	—	—	8,499	—
Exercise of stock options	1,341,324	—	14,988	—	—	14,988	—
Stock-based compensation	—	—	68,931	—	—	68,931	—
Unrealized loss on available-for-sale securities	—	—	—	(23)	—	(23)	—
Change in effective portion of interest rate swap agreement	—	—	—	(5)	—	(5)	(6,891)
Distributions and payments to noncontrolling interests	—	—	—	—	—	—	(7,205)
Contributions from noncontrolling interest	—	—	—	—	—	—	6,513
Net loss <sup>a</sup>	—	—	—	—	(157,553)	(157,553)	(21,513)
Balances at December 31, 2020	168,002,726	\$ 17	\$ 3,182,753	\$ (9)	\$ (3,103,937)	\$ 78,824	\$ 62,195
							\$ 141,019

<sup>a</sup>Excludes \$21 attributable to redeemable noncontrolling interest.

Note: Beginning redeemable NCI of \$443 - distributions to redeemable noncontrolling interests of \$45 - Net loss attributable to redeemable NCI of \$21 = Ending redeemable NCI of \$377.

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

**Bloom Energy Corporation**  
**Consolidated Statements of Cash Flows**  
*(in thousands)*

Cash flows from operating activities:	Cash flows from operating activities:	Years Ended December 31,		
				2020
		2022	2021	
Net loss	Net loss			
Net loss	Net loss	\$ (315,086)	\$ (193,369)	\$ (179,087)
Adjustments to reconcile net loss to net cash used in operating activities:	Adjustments to reconcile net loss to net cash used in operating activities:			
Adjustments to reconcile net loss to net cash used in operating activities:	Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	Depreciation and amortization			
Depreciation and amortization	Depreciation and amortization	61,608	53,454	52,279
Non-cash lease expense	Non-cash lease expense	20,155	9,708	5,328
Write-off of assets related to PPA IIIa and PPA IV		113,514	—	—
Non-cash lease expense				
Non-cash lease expense				
Loss on disposal of property, plant and equipment				
Loss on disposal of property, plant and equipment				
Loss on disposal of property, plant and equipment				

Revaluation of derivative contracts	Revaluation of derivative contracts	(9,583)	17,532	(497)
Revaluation of derivative contracts				
Revaluation of derivative contracts				
Impairment of assets related to PPAs				
Impairment of assets related to PPAs				
Impairment of assets related to PPAs				
Derecognition of loan commitment asset related to SK ecoplant Second Tranche Closing				
Derecognition of loan commitment asset related to SK ecoplant Second Tranche Closing				
Derecognition of loan commitment asset related to SK ecoplant Second Tranche Closing				
Stock-based compensation expense	Stock-based compensation expense	112,259	73,274	73,893
Stock-based compensation expense				
Stock-based compensation expense				
Amortization of warrants and debt issuance costs				
Amortization of warrants and debt issuance costs				
Amortization of warrants and debt issuance costs				
Loss on extinguishment of debt				
Loss on extinguishment of debt				
Loss on extinguishment of debt				
Gain on remeasurement of investment				
Gain on remeasurement of investment				
Gain on remeasurement of investment	Gain on remeasurement of investment	—	(1,966)	—
Contingent consideration remeasurement	Contingent consideration remeasurement	—	(3,623)	—
Contingent consideration remeasurement				
Interest expense on interest rate swap settlement	Interest expense on interest rate swap settlement	—	(641)	—
Loss on extinguishment of debt		8,955	—	11,785
Amortization of warrants and debt issuance costs		3,032	3,797	6,455
Interest expense on interest rate swap settlement				
Interest expense on interest rate swap settlement				
Unrealized foreign currency exchange loss (gain)				
Unrealized foreign currency exchange loss (gain)				
Unrealized foreign currency exchange loss (gain)	Unrealized foreign currency exchange loss (gain)	(3,267)	77	19
Other	Other	3,532	—	4,346
Other				
Other				
Changes in operating assets and liabilities:	Changes in operating assets and liabilities:			
Accounts receivable		(162,864)	8,608	(61,702)
Contract assets		(21,525)	(21,874)	—
Changes in operating assets and liabilities:				
Changes in operating assets and liabilities:				
Accounts receivable:				

Accounts receivable: Accounts receivable: Contract assets <sup>2</sup> Contract assets <sup>2</sup> Contract assets <sup>2</sup>				
Inventories	Inventories	(124,878)	(885)	(33,004)
Deferred cost of revenue		(24,282)	17,567	19,910
Inventories				
Inventories				
Deferred cost of revenue <sup>3</sup>				
Deferred cost of revenue <sup>3</sup>				
Deferred cost of revenue <sup>3</sup>				
Customer financing receivable	Customer financing receivable	2,510	5,428	5,159
Prepaid expenses and other current assets		(17,590)	1,520	(3,124)
Other long-term assets		(2,617)	(2,854)	2,904
Customer financing receivable				
Customer financing receivable				
Prepaid expenses and other assets <sup>4</sup>				
Prepaid expenses and other assets <sup>4</sup>				
Other long-term assets <sup>5</sup>				
Other long-term assets <sup>5</sup>				
Other long-term assets <sup>5</sup>				
Operating lease right-of-use assets and operating lease liabilities				
Operating lease right-of-use assets and operating lease liabilities				
Operating lease right-of-use assets and operating lease liabilities	Operating lease right-of-use assets and operating lease liabilities	3,016	(12,953)	(2,855)
Financing lease liabilities	Financing lease liabilities	896	1,142	—
Accounts payable		86,498	13,017	(622)
Financing lease liabilities				
Financing lease liabilities				
Accounts payable <sup>6</sup>				
Accounts payable <sup>6</sup>				
Accounts payable <sup>6</sup>				
Accrued warranty	Accrued warranty	5,586	1,481	(241)
Accrued expenses and other current liabilities		43,243	(2,144)	17,753
Deferred revenue and customer deposits		35,156	(22,677)	(12,972)
Accrued warranty				
Accrued warranty				
Accrued expenses and other liabilities <sup>7</sup>				
Accrued expenses and other liabilities <sup>7</sup>				
Accrued expenses and other liabilities <sup>7</sup>				
Deferred revenue and customer deposits <sup>8</sup>				
Deferred revenue and customer deposits <sup>8</sup>				
Deferred revenue and customer deposits <sup>8</sup>				
Other long-term liabilities				
Other long-term liabilities				

Other long-term liabilities	Other long-term liabilities	(9,991)	(4,300)	(4,523)
Net cash used in operating activities	Net cash used in operating activities	(191,723)	(60,681)	(98,796)
Net cash used in operating activities				
Net cash used in operating activities				
<b>Cash flows from investing activities:</b>				
<b>Cash flows from investing activities:</b>				
Cash flows from investing activities:	Cash flows from investing activities:			
Purchase of property, plant and equipment	Purchase of property, plant and equipment	(116,823)	(49,810)	(37,913)
Purchase of property, plant and equipment				
Purchase of property, plant and equipment				
Proceeds from sale of property, plant and equipment				
Proceeds from sale of property, plant and equipment				
Proceeds from sale of property, plant and equipment				
Net cash acquired from step acquisition				
Net cash acquired from step acquisition				
Net cash acquired from step acquisition	Net cash acquired from step acquisition	—	3,114	—
Net cash used in investing activities	Net cash used in investing activities	(116,823)	(46,696)	(37,913)
Net cash used in investing activities				
Net cash used in investing activities				
<b>Cash flows from financing activities:</b>				
<b>Cash flows from financing activities:</b>				
Proceeds from issuance of debt		—	135,989	300,000
Proceeds from issuance of debt to related parties		—	—	30,000
Repayment of debt of PPA IIIa and PPA IV		(100,705)	—	—
<b>Cash flows from financing activities:</b>				
<b>Cash flows from financing activities:</b>				
Proceeds from issuance of debt				
Proceeds from issuance of debt				
Proceeds from issuance of debt				
Payment of debt issuance costs				
Payment of debt issuance costs				
Payment of debt issuance costs				
Repayment of debt	Repayment of debt	(19,881)	(123,374)	(176,522)
Repayment of debt - related parties		—	—	(2,105)
Repayment of debt				
Repayment of debt				
Make-whole payment related to PPA IIIa and PPA IV debt	Make-whole payment related to PPA IIIa and PPA IV debt	(6,553)	—	—
Debt issuance costs		—	(1,950)	(13,247)
Make-whole payment related to PPA IIIa and PPA IV debt				
Make-whole payment related to PPA IIIa and PPA IV debt				
Purchase of capped call options related to convertible notes				
Purchase of capped call options related to convertible notes				
Purchase of capped call options related to convertible notes				
Proceeds from financing obligations				
Proceeds from financing obligations				
Proceeds from financing obligations	Proceeds from financing obligations	3,261	16,849	26,279

Repayment of financing obligations	Repayment of financing obligations	(35,543)	(13,642)	(10,756)
Repayment of financing obligations				
Distributions and payments to noncontrolling interest				
Distributions and payments to noncontrolling interest				
Distributions and payments to noncontrolling interest				
Distributions to redeemable noncontrolling interest				
Distributions to redeemable noncontrolling interest				
Distributions to redeemable noncontrolling interest				
Proceeds from issuance of common stock				
Proceeds from issuance of common stock				
Proceeds from issuance of common stock				
Proceeds from public share offering				
Proceeds from public share offering				
Proceeds from public share offering				
Payment of public share offering costs				
Payment of public share offering costs				
Payment of public share offering costs				
Buyout of noncontrolling interest				
Buyout of noncontrolling interest				
Buyout of noncontrolling interest				
Proceeds from issuance of redeemable convertible preferred stock				
Proceeds from issuance of redeemable convertible preferred stock				
Proceeds from issuance of redeemable convertible preferred stock				
Payment of issuance costs related to redeemable convertible preferred stock				
Payment of issuance costs related to redeemable convertible preferred stock				
Payment of issuance costs related to redeemable convertible preferred stock				
Contributions from noncontrolling interest	Contributions from noncontrolling interest	2,815	—	6,513
Distributions to redeemable noncontrolling interests		—	(49)	(45)
Distributions and payments to noncontrolling interests		(6,854)	(5,789)	(7,577)
Purchase of noncontrolling interest of PPA IV and PPA V		(12,000)	—	—
Proceeds from issuance of common stock		15,279	89,790	23,491
Proceeds from issuance of redeemable convertible preferred stock, net		—	208,551	—
Proceeds from Class A common share offering		385,396	—	—
Public share offering costs		(13,775)	—	—
Contributions from noncontrolling interest				
Contributions from noncontrolling interest				
Other				
Other	Other	(76)	—	—
Net cash provided by financing activities	Net cash provided by financing activities	211,364	306,375	176,031
Net cash provided by financing activities				
Net cash provided by financing activities				
Effect of exchange rate changes on cash, cash equivalent and restricted cash	Effect of exchange rate changes on cash, cash equivalent and restricted cash	434	(594)	—

Net (decrease) increase in cash, cash equivalents and restricted cash	(96,748)	198,404	39,322
Effect of exchange rate changes on cash, cash equivalent and restricted cash			
Effect of exchange rate changes on cash, cash equivalent and restricted cash			
Net increase (decrease) in cash, cash equivalents, and restricted cash			
Net increase (decrease) in cash, cash equivalents, and restricted cash			
Net increase (decrease) in cash, cash equivalents, and restricted cash			
<b>Cash, cash equivalents, and restricted cash:</b>			
<b>Cash, cash equivalents, and restricted cash:</b>			
<b>Cash, cash equivalents, and restricted cash:</b>	<b>Cash, cash equivalents, and restricted cash:</b>		
Beginning of period	Beginning of period	615,114	416,710
Beginning of period			377,388
Beginning of period			
End of period			
End of period			
End of period	End of period	\$ 518,366	\$ 615,114
Supplemental disclosure of cash flow information:	Supplemental disclosure of cash flow information:		
<b>Supplemental disclosure of cash flow information:</b>			
<b>Supplemental disclosure of cash flow information:</b>			
Cash paid during the period for interest			
Cash paid during the period for interest			
Cash paid during the period for interest	Cash paid during the period for interest	\$ 48,980	\$ 68,739
Cash paid for amounts included in the measurement of lease liabilities:	Cash paid for amounts included in the measurement of lease liabilities:		
Cash paid for amounts included in the measurement of lease liabilities:			
Cash paid for amounts included in the measurement of lease liabilities:			
Operating cash flows from operating leases	Operating cash flows from operating leases	14,001	17,416
Operating cash flows from financing leases		1,085	878
Operating cash flows from operating leases			2,855
Operating cash flows from operating leases			61
Operating cash flows from finance leases			
Operating cash flows from finance leases			
Operating cash flows from finance leases			
Cash paid during the period for income taxes			
Cash paid during the period for income taxes			
Cash paid during the period for income taxes	Cash paid during the period for income taxes	1,439	576
Non-cash investing and financing activities:	Non-cash investing and financing activities:		
<b>Non-cash investing and financing activities:</b>			
<b>Non-cash investing and financing activities:</b>			
Increase in recourse debt, non-current upon adoption of ASU 2020-06, net	Increase in recourse debt, non-current upon adoption of ASU 2020-06, net	\$ —	\$ 121,491
			\$ —

Liabilities recorded for property, plant and equipment	10,988	6,095	7,175
Operating lease liabilities arising from obtaining right-of-use assets upon adoption of new lease guidance	—	—	39,775
Transfer from customer financing receivable to property, plant and equipment	42,758	—	—
Forward contract to purchase Class A Common Stock (Note 5)	4,183	—	—
Conversion of Series A Redeemable Convertible Preferred Stock to Class A Common Stock	208,551	—	—
Increase in recourse debt, non-current upon adoption of ASU 2020-06, net			
Increase in recourse debt, non-current upon adoption of ASU 2020-06, net			
Transfer from customer financing receivable to property, plant and equipment, net			
Transfer from customer financing receivable to property, plant and equipment, net			
Transfer from customer financing receivable to property, plant and equipment, net			
Forward to purchase Class A common stock			
Forward to purchase Class A common stock			
Forward to purchase Class A common stock			
Liabilities recorded for property, plant and equipment, net			
Liabilities recorded for property, plant and equipment, net			
Liabilities recorded for property, plant and equipment, net			
Recognition of operating lease right-of-use asset during the year-to-date period	36,402	82,802	12,829
Recognition of financing lease right-of-use asset during the year-to-date period	896	2,210	385
Conversion of 10% convertible promissory notes into Class A common stock	—	—	252,797
Conversion of 10% convertible promissory notes to related party into Class A common stock	—	—	50,800
Accrued interest for notes	—	—	1,298
Adjustment of embedded derivative related to debt extinguishment	—	—	24,071
Recognition of operating lease right-of-use asset during the year-to-date period			
Recognition of operating lease right-of-use asset during the year-to-date period			
Recognition of finance lease right-of-use asset during the year-to-date period			
Recognition of finance lease right-of-use asset during the year-to-date period			
Recognition of finance lease right-of-use asset during the year-to-date period			
Conversion of redeemable convertible preferred stock			
Conversion of redeemable convertible preferred stock			
Conversion of redeemable convertible preferred stock			
Derecognition of the pre-modified forward contract fair value			
Derecognition of the pre-modified forward contract fair value			
Derecognition of the pre-modified forward contract fair value			
Equity component of redeemable convertible preferred stock			
Equity component of redeemable convertible preferred stock			
Equity component of redeemable convertible preferred stock			

<sup>1</sup> Including changes in related party balances of \$257.8 million, \$0.1 million and \$2.0 million for the years ended December 31, 2023, 2022 and 2021, respectively.

<sup>2</sup> Including change in related party balances of \$6.9 million for the year ended December 31, 2023. There were no associated related party balances as of December 31, 2022 and 2021.

<sup>3</sup> Including change in related party balances of \$0.9 million for the year ended December 31, 2023. There were no associated related party balances as of December 31, 2022 and 2021.

<sup>4</sup> Including change in related party balances of \$2.3 million for the year ended December 31, 2023. There were no associated related party balances as of December 31, 2022 and 2021.

<sup>5</sup> Including change in related party balances of \$9.1 million for the year ended December 31, 2023. There were no associated related party balances as of December 31, 2022 and 2021.

<sup>6</sup> Including change in related party balances of \$0.1 million for the year ended December 31, 2023. There were no associated related party balances as of December 31, 2022 and 2021.

<sup>7</sup> Including change in related party balances of \$3.4 million for the year ended December 31, 2023. There were no associated related party balances as of December 31, 2022 and 2021.

<sup>8</sup> Including change in related party balances of \$8.4 million for the year ended December 31, 2023. There were no associated related party balances as of December 31, 2022 and 2021.

<sup>9</sup> Including proceeds from issuance of debt from related party of \$4.6 million for the year ended December 31, 2023. There were no proceeds from issuance of debt from related party for the years ended of December 31, 2022 and 2021.

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

**Bloom Energy Corporation**  
**Notes to Consolidated Financial Statements**

**1. Nature of Business, Liquidity and Basis of Presentation**

***Nature of Business***

We design, manufacture, sell and, in certain cases, install solid-oxide fuel cell systems ("Energy (the "Energy Servers") for on-site power generation. Our Energy Servers utilize an innovative fuel cell technology and provide efficient energy generation with reduced operating costs and lower greenhouse gas emissions as compared to conventional fossil fuel generation. By generating power where it is consumed, our energy producing systems offer increased electrical reliability and improved energy security, while providing a path to energy independence. The corporate headquarters is located in San Jose, California.

***In March 2020 the World Health Organization declared COVID-19 a pandemic. Throughout 2020 and into 2022, many variants of the virus arose. We are still assessing the impact COVID-19 and related variants (together, "COVID-19") may have on our business, but there can be no assurance that this analysis will enable us to avoid part or all of any impact from the spread of COVID-19 or its consequences. The extent to which the COVID-19 pandemic and global efforts to contain its spread will impact our operations will depend on future developments, which are highly uncertain and cannot be predicted at this time, and include the duration, severity and scope of the pandemic and the actions taken to contain or treat the COVID-19 pandemic.***

We continue to monitor and adjust as appropriate our operations in response to the COVID-19 pandemic. There have been a number of supply chain disruptions throughout the global supply chain as countries are in various stages of opening up and demand for certain components increases. Although we were able to find alternatives for many component shortages, we experienced some delays and cost increases with respect to container shortages, ocean shipping and air freight.

As a result of the war in Ukraine after invasion by the Russian Federation on February 24, 2022, various nations, including the United States, have instituted economic sanctions and other responsive measures, which have resulted in an increased level of global economic and political uncertainty and overall geopolitical instability. The impacts of sanctions and other measures being imposed have not had a material impact to the consolidated results of operations. However, a significant escalation or expansion of the Ukraine war's current scope and associated global economic disruption could have a negative effect on our business.

Additionally, supply chain disruptions and logistical challenges due to the war in Ukraine and any indirect effects thereof are expected to further complicate existing supply chain constraints, which could adversely affect profitability. To date, we have not experienced any supply chain disruptions as a result of the war in Ukraine.

Given the evolving nature of the war in Ukraine, and the related sanctions, potential governmental actions, and economic impact, the scope and magnitude of any such potential effects remain uncertain. While we may experience negative impacts on our business, financial condition, and consolidated results of operations, we are unable to estimate the ultimate extent or nature of these impacts at this time.

***Seasonal Trends and Economic Incentives***

Our business and results of financial operations are not subject to industry-specific seasonal fluctuations. The desirability of our solution can be impacted by the availability and value of various governmental, regulatory and tax-based incentives which may change over time.

***Liquidity***

We have generally incurred operating losses and negative cash flows from operations since our inception. With the series of new debt offerings, debt extensions extinguishments, and conversions to equity equity that we completed during 2020 2023, 2022 and 2021, we had \$285.8 \$842.0 million and \$4.6 million of total outstanding recourse and non-recourse debt, respectively, as of December 31, 2022 December 31, 2023, \$273.1 million of which was classified as long-term debt. Our recourse debt scheduled repayments commenced in June 2022.

On October 23, 2021, we entered into a the Securities Purchase Agreement (the "SPA") with SK ecoplant Co., Ltd. (formerly ("SK ecoplant", formerly known as SK Engineering and Construction Co., Ltd.) ("SK ecoplant") in connection with a strategic partnership. Pursuant to the SPA, on December 29, 2021, SK ecoplant purchased 10,000,000 shares of Bloom Energy zero coupon, non-

voting Series A redeemable convertible preferred stock, ("RCPS"), par value \$0.0001 per share (the "Series A RCPS") at a purchase price of \$25.50 per share, for an aggregate purchase price of \$255.0 million, including an option to purchase additional Class A common stock.

On August 10, 2022, pursuant to the SPA, SK ecoplant notified us of its intent to exercise its option to purchase additional shares of our Class A common stock, pursuant to a Second Tranche Exercise Notice (as defined in the SPA). It elected to purchase 13,491,701 shares (the "Second Tranche Shares") at a purchase price of \$23.05 per share, calculated as a 15% premium to the volume-weighted average closing price of the 20 consecutive trading day period immediately preceding the exercise of the option (see Note 5 -

*Fair Value).* share. The aggregate purchase price ~~approximates~~ approximated cash proceeds to be received by us of \$311.0 million, ~~net of excluding~~ related incremental direct costs costs.

On March 20, 2023, we entered into the Amended SPA, with SK ecoplant, pursuant to which we issued and sold to SK ecoplant 13,491,701 shares of ~~\$0.1~~ Series B RCPS for cash proceeds of \$311.0 million, excluding issuance cost of \$0.5 million. The closing On March 20, 2023, in connection with the Amended SPA, we also entered into the Shareholders' Loan Agreement with SK ecoplant (the "Loan Agreement"), pursuant to which we were entitled to draw down on a loan from SK ecoplant with a maximum principal amount of ~~this purchase (the "Second Closing Date") was expected~~ \$311.0 million, if SK ecoplant sent a redemption notice to us under the latter Amended SPA or otherwise had reduced any portion of its current holdings of our Class A common stock. On September 23, 2023, all 13,491,701 shares of the parties receiving clearance from the U.S. Department Series B redeemable convertible preferred stock, par value \$0.0001 per share (the "Series B RCPS") were automatically converted into shares of Justice and the Federal Trade Commission of the purchase under the Hart-Scott-Rodino Antitrust Improvements Act of 1974 (the "HSR"), as amended (which was October 7, 2022), and December 6, 2022, our Class A common stock.

On December 6, 2022 April 11, 2023 and October 5, 2023, our joint venture in the Republic of Korea entered into a three-year \$1.5 million and three-year \$3.1 million credit agreements with SK ecoplant, and Bloom mutually agreed respectively, to delay help fund its working capital. Both loans bear a fixed interest rate of 4.6% payable upon maturity along with the Second Closing Date until March 31, 2023, unless an earlier date is mutually agreed upon, and subject to and assuming the satisfaction of applicable regulatory clearance. We stipulated that if filing for HSR approval is required, in no event it can be filed later than March 31, 2023. principle.

For more information about on the SPA, strategic investment with SK ecoplant, please see Note 17 — SK ecoplant Strategic Investment, and for more information about our joint venture with SK ecoplant, in the Republic of Korea, please see Note 12 - 11 — Related Party Transactions.

In November 2021, PPA V our remaining Power Purchase Agreement ("PPA") entity, entered into \$136.0 million, 3.04% Senior Secured Notes due June 30, 2031. On August 24, 2023, which replaced as part of the LIBOR + 2.5% Term Loan PPA V Upgrade, we paid off the outstanding balance and related accrued interest of \$118.5 million and \$0.5 million, respectively, of our 3.04% Senior Secured Notes due December 2021, June 30, 2031. For more information, please see Note 10 — Portfolio Financings.

On August 19, 2022, we completed an underwritten public offering (the "Offering"), pursuant to which we issued and sold 13,000,000 shares of Class A common stock at the price of \$26.00 per share. As a part of the Offering, the underwriters were provided a 30-day option to purchase an additional 1,950,000 shares of our Class A common stock at the same price, less underwriting discounts and commissions, which was exercised contemporaneously with the Offering. The aggregate net proceeds received by us from the Offering were \$371.5 million after deducting underwriting discounts and commissions of \$16.5 million and incremental costs directly attributable to the Offering of \$0.7 million.

On May 16, 2023, we issued the 3% Green Convertible Senior Notes due June 2028 (the "3% Green Notes") with an aggregate principal amount of \$632.5 million due June 2028, unless earlier repurchased, redeemed or converted, resulting in net cash proceeds of \$612.8 million. On June 1, 2023, we used approximately \$60.9 million of the net proceeds from this offering to redeem all of the outstanding principal amount of our 10.25% Senior Secured Notes due March 2027. The redemption price equaled 104% of the principal amount redeemed plus accrued and unpaid interest. We also used approximately \$54.5 million of the net proceeds from the offering to purchase the Capped Calls. The remaining portion of the 3% Green Notes was planned to be used for working capital investment and general corporate purposes. For more information, please see Note 7 — Outstanding Loans and Security Agreements.

For further information on repayment of 3.04% Senior Secured Notes, issuance of 3% Green Notes, redemption of our 10.25% Senior Secured Notes, and purchase of Capped Calls, please see Note 7 — Outstanding Loans and Security Agreements.

Our future capital requirements will depend on many factors, including our rate of revenue growth, the timing and extent of spending on research and development efforts and other business initiatives, the rate of growth in the volume of system builds and the need for additional manufacturing space, the expansion of sales and marketing activities both in domestic and international markets, market acceptance of our product, products, our ability to secure financing for customer use of our Energy Servers, the timing of installations and of inventory build in anticipation of future sales and installations, and overall economic conditions. In order to support and achieve our future growth plans, we may need or seek advantageously to obtain additional funding through equity or debt financing. Failure to obtain this financing in future quarters may affect our results of operations, including the impact of COVID-19 on our revenues and inflationary pressure in the US on our ongoing and future operations. The rising interest rate environment in the US has and will continue to adversely impact the cost of new capital deployment, cash flows.

In the opinion of management, the combination of our existing cash and cash equivalents and operating cash flows is expected to be sufficient to meet our operational and capital cash flow requirements and other cash flow needs for the next 12 months from the date of issuance of this Annual Report on Form 10-K.

#### ***Inflation Reduction Act of 2022—New and Expanded Production and Tax Credits for Manufacturers and Projects to Support Clean Energy***

On August 16, 2022, President Biden signed into law the Inflation Reduction Act of 2022 (the "IRA"). The IRA contains provisions which we expect will have a significant impact on the development and financing of clean energy projects in the United States. The IRA includes the extension and expansion of the Investment Tax Credit ("ITC" (the "ITC") and the Production Tax Credit ("PTC" (the "PTC") and the addition of expanded tax credits for other technologies and for manufacturing of clean energy equipment as well as terms allowing parties to more easily monetize the tax credits. The IRA also includes some targeted bonus credit incentives intended to encourage development in low-income communities, the use of domestically produced materials, and compliance with certain labor-related requirements.

The IRA contains several credits and incentive provisions that may be relevant to us, which we have summarized below:

- Section 48 – the ITC, which provides a tax credit based on capital investment in a variety of renewable and conventional energy technologies to incentivize investment in new energy resources and more efficient use of fuel, including fuel cell technology;
- Section 48C – Qualified Advanced Energy Project (reenacted), which provides an ITC through a competitive application process administered through the Department of Energy equal to 6% or 30% of the investment with respect to advanced energy projects;
- Section 45V – Clean Hydrogen, which provides a PTC of up to \$3 per kg of qualified clean hydrogen over a 10-year credit period for the production of qualified clean hydrogen at a qualified facility in the US; and

- Section 45Q – Carbon Capture Sequestration, which provides a credit ranging from \$12-\$17 or \$60-\$85 per metric ton based on the amount of carbon oxides captured from a qualified facility over a 12-year period.

We believe that the programs and credits included in the IRA align well with our business model and could provide significant benefits with respect to incentivizing the purchase of our current product offerings and technologies. In particular, the IRA authorized a competitive process to apply for credits to expand or enhance manufacturing capacity under IRC 48C, and we have applied for a credit under this provision; at this time, we cannot be assured our application will ultimately be accepted or result in our receipt of credits. Also, the new PTC for qualified clean hydrogen and credit for carbon capture could result in increased demand for commercial solutions to hydrogen production technology and carbon capture, including our solid oxide fuel-cell based electrolyzer. As Treasury has not yet issued guidance on several of the provisions that applicable to our business, we continue to assess the impact.

At the time of IRA implementation in August 2022, some of our existing contracts contemplated price adjustments due to changes to ITC rate at the inception of the contracts. contract for the change in the ITC rate to 30%. As a result, we recognized \$8.7 million in product revenue and \$1.3 million in installation revenue for the year ended December 31, 2022, due to from such existing contracts, as a change in variable considerations consideration estimate for energy servers placed in service during the eligible periods from under the IRA and which qualified for the 30% ITC rate. In fiscal 2023, all of our contract prices included the impact of the 30% ITC rate under the IRA provisions.

The IRA also creates certain bonus tax credits relevant to our products placed in service in fiscal 2023 and fiscal 2024, available by satisfying domestic content criteria and/or other criteria if such existing contracts. products are located within an “energy community,” as defined by the IRA. In fiscal 2023, contracts that included price adjustments related to the domestic content bonus tax credit were evaluated as variable consideration and we estimated variable consideration by using the most likely amount method of meeting the IRA domestic content criteria. When recognizing revenue, we constrained the estimate of variable consideration to an amount that was not probable of a significant revenue reversal.

#### **Basis of Presentation**

We have prepared the consolidated financial statements included herein pursuant to the rules and regulations of the U.S. Securities and Exchange Commission (“SEC”), and as permitted by those rules, including all disclosures required by generally accepted accounting principles as applied in the United States (“U.S. GAAP”). Certain prior period amounts have been reclassified to conform to the current period presentation.

#### **Principles of Consolidation**

These consolidated financial statements reflect our accounts and operations and those of our subsidiaries in which we have a controlling financial interest. We use a qualitative approach in assessing the consolidation requirement for our variable interest entity entities (“VIEs”), which we refer to as a tax equity partnership partnerships (each such VIE, also referred to as our power purchase agreement PPA Entity) and a joint venture in the Republic of Korea (“Korea (the “Korean JV”). This approach focuses on determining whether we have the power to direct those activities of the PPA Entity Entities and the Korea Korean JV that most significantly affect their economic performance and whether we have the obligation to absorb losses, or the right to receive benefits, that which could potentially be significant to the PPA Entity Entities and the Korea Korean JV. For all periods presented, we have determined that we are the primary beneficiary in all of our operational PPA Entity Entities and the Korea Korean JV, as discussed in Note 11 - 10 — Portfolio Financings and Note 17 — SK ecoplant Strategic Investment, respectively. We evaluate our relationships with the PPA Entity Entities and the Korea Korean JV on an ongoing basis to ensure that we continue to be the primary beneficiary. In August 2023, we sold our last consolidated PPA Entity, PPA V, as a result of the PPA V Repowering of Energy Servers (see Note 10 — Portfolio Financings). All intercompany transactions and balances have been eliminated upon consolidation.

The sale of an operating company with a portfolio of the PPAs in which we do not have an equity interest is called a “Third-Party PPA.” We have determined that, although these entities are VIEs, we do not have the power to direct those activities of the Third-Party PPAs that most significantly affect their economic performance. We also do not have the obligation to absorb losses, or the right to receive benefits, that which could potentially be significant to the Third-Party PPAs. Because we are not the primary beneficiary of these activities, we do not consolidate Third-Party PPAs.

#### **Business Combinations**

Acquisitions of a business are accounted by using the acquisition method of accounting. Assets acquired and liabilities assumed, including amounts attributed to noncontrolling interests, are recorded at the acquisition date at their fair values. Assigning fair values requires us to make significant estimates and assumptions regarding the fair value of identifiable intangible assets, property, plant and equipment, deferred tax asset valuation allowances and liabilities, such as uncertain tax positions and contingencies. We may refine these estimates if necessary, over a period not to exceed one year by taking into consideration new information that, if known at the acquisition date, would have affected the fair values ascribed to the assets acquired and liabilities assumed.

#### **Use of Estimates**

The preparation of consolidated financial statements in conformity with U.S. GAAP requires us to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and the accompanying notes. The most significant estimates include the determination of the stand-alone selling price, including material rights estimates, valuation of financial instruments associated with SK ecoplant Amended SPA, inventory valuation, specifically excess and obsolescence provisions for obsolete or unsellable inventory and, in relation to property, plant and equipment (specifically Energy Servers), assumptions relating to economic useful lives and impairment assessments.

Other accounting estimates include variable consideration relating to product performance guarantees, lease and non-lease components and related financing obligations such as incremental borrowing rates, estimated output, efficiency and residual value of the Energy Servers, product performance warranties and guarantees and extended maintenance, derivative valuations, estimates for recapture of the U.S. Investment Tax Credit (“ITC”) and similar federal tax benefits, estimates relating to contractual indemnities provisions, estimates for income taxes and deferred tax asset valuation allowances, stock-based compensation expense, and estimates of fair value of preferred stock and equity and non-equity items in relation to the SK ecoplant strategic investment, investment, and financing obligation allocations in managed service transactions. In addition, certain of such estimates could require further judgment or modification and therefore carry a higher degree of variability and volatility. Actual results could differ materially from these estimates under different assumptions and conditions.

#### **Concentration of Risk**

**Geographic Risk** — The majority of our revenue for the year ended December 31, 2022 was and long-lived assets are attributable to operations in the Republic of Korea, and for the years ended December 31, 2021 and 2020 - to operations in the United States. A major portion of our long-lived assets is attributable to operations in the United States U.S. for all periods presented. In addition to shipments in the US and the Republic of Korea, U.S., we also ship our Energy Servers to other countries, primarily to Japan and India (the markets of the Republic of Korea, Japan, India and India, collectively Taiwan (collectively referred to as the "Asia Pacific region"). In the years ended December 31, 2022 December 31, 2023, 2021 2022 and 2020, 2021, total revenue in related to shipments to the Asia Pacific region was 44% 30%, 38% 44% and 35% 38%, respectively, of our total revenue, respectively.

**Credit Risk** — At December 31, 2022 December 31, 2023, and 2021, 2022, one customer that is our related party (see Note 11 — *Related Party Transactions*) accounted for approximately 75% 74% and 60% 75% of accounts receivable, respectively. To date, we have not experienced any credit losses.

**Customer Risk** — During the year ended December 31, 2022 December 31, 2023, revenue from two customers accounted for approximately 38% 37% and 37% 26% of our total revenue. During the year ended December 30, 2021 December 31, 2022, two customers represented approximately 43% 38% and 11% 37% of our total revenue. In the year ended December 31, 2020 December 31, 2021, revenue from two customers accounted for approximately 34% 43% and 28% 11% of our total revenue.

## 2. Summary of Significant Accounting Policies

### Revenue Recognition

We primarily earn product and installation revenue from the sale and installation of our Energy Servers, service revenue by providing services under operations and maintenance services contracts, and electricity revenue by selling electricity to customers under PPAs and Managed Services Agreements (as defined below). Agreements. We offer our customers several ways to finance their use of a Bloom Energy Server Servers. Customers, including some of our international channel providers and the Third Party PPAs, may choose to purchase our Energy Servers outright. Customers may also enter into contracts with us for the purchase of electricity generated by our Energy Servers (a "Managed (i.e., Managed Services Agreement" Agreement), which is then financed through one of our financing partners ("i.e., Managed Services Financings"), or as a traditional lease. Financings). Finally, customers may purchase electricity through our PPA Entities ("i.e., Portfolio Financings") Financings). For additional information, please see Part I, Item 7, Section *Purchase and Financing Options*.

#### Revenue Recognition under ASC 606 Revenue from Contracts with Customers

In applying Accounting Standards Codification ("ASC") 606 *Revenue from Contracts with Customers*, revenue is recognized by following a five-step process:

**1. Identify the contract(s) with a customer.** Evidence of a contract generally consists of an agreement, or a purchase order issued pursuant to the terms and conditions of a distributor, reseller, purchase, use and maintenance agreement, maintenance services agreements or energy supply agreement.

**2. Identify the performance obligations in the contract.** Performance obligations are identified in our contracts and primarily include transferring control of an the Energy Server, Servers, installation of the Energy Servers, providing maintenance services and maintenance services renewal options which, in certain situations, provide customers with material rights.

**3. Determine the transaction price.** The purchase price stated in an agreed-upon purchase order or contract is generally representative of the transaction price. When determining the transaction price, we consider the effects of any variable consideration, which include performance guarantees that may be payable to our customers.

**4. Allocate the transaction price to the performance obligations in the contract.** The transaction price in a contract is allocated based upon the relative standalone selling price of each distinct performance obligation identified in the contract.

**5. Recognize revenue when (or as) we satisfy a performance obligation.** We satisfy performance obligations either over time or at a point in time as discussed in further detail below. Revenue is recognized at the time the related performance obligation is satisfied by transferring control of the promised products or services to a customer.

We sometimes combine contracts governing the sale and installation of an our Energy Server Servers with the related maintenance services contracts and account for them as a single contract at contract inception to the extent the contracts are with the same customer. These contracts are not combined when the customer for the sale and installation of the Energy Server Servers is different to the maintenance services contract customer. We also assess whether any contract terms including default provisions, put or call options result in components of our contracts being accounted for as financing or leasing transactions outside of the scope of ASC 606, 606.

Most of our contracts contain performance obligations with a combination of our Energy Server product, Servers, installation and maintenance services. For these performance obligations, we allocate the total transaction price to each performance obligation based on the relative standalone selling price. Our maintenance services contracts are typically subject to renewal by customers on an annual basis. We assess these maintenance services renewal options at contract inception to determine whether they provide customers with material rights that give rise to separate performance obligations.

The total transaction price is determined based on the total consideration specified in the contract, including variable consideration in the form of a performance guaranty payment that represents potential amounts payable to customers. The expected value method is generally used when estimating variable consideration, which typically reduces the total transaction price due to the nature of the performance obligations to which the variable consideration relates. These estimates reflect our historical experience and current contractual requirements which cap the maximum amount that may be paid. The expected value method requires judgment and considers multiple factors that may vary over time depending upon the unique facts and circumstances related to each performance obligation. Depending on the facts and circumstances, a change in variable consideration estimate will either be accounted for at the contract level or using the portfolio method.

We exclude from the transaction price all taxes assessed by governmental authorities that are both (i) imposed on and concurrent with a specific revenue-producing transaction and (ii) collected from customers. Accordingly, such tax amounts are not included as a component of net sales or cost of sales. These tax amounts are recorded in cost

of electricity revenue, cost of service revenue, and general and administrative operating expenses.

We allocate the transaction price to each distinct performance obligation based on relative standalone selling prices. Given that we typically sell **an our** Energy **Server Servers** together with the related installation and maintenance services, standalone selling prices are not directly observable. We estimate standalone selling prices by using a cost-plus approach. Costs relating to **the** Energy Servers include all direct and indirect manufacturing costs, applicable overhead costs and costs for normal production inefficiencies (i.e., variances). We then apply a margin to the Energy Servers based on our Company's pricing strategy. As our business offerings and eligibility for the ITC evolve over time, we may be required to modify the expected margin in subsequent periods and our revenue could be materially affected. Costs relating to installation include all direct and indirect installation costs. The margin we apply reflects our profit objectives relating to installation. Costs for maintenance services arrangements are estimated over the life of the maintenance contracts and include estimated future material costs and non-material costs. Material costs over the period of the service arrangement are impacted significantly by the longevity of the fuel cells themselves. We apply a lower margin to our total service costs than to our Energy Servers as it best reflects our long-term service margin expectations and comparable historical industry service margins.

We generally recognize product and installation revenue at a point in time that **the customer obtains our customers obtain** control of the Energy **Server. Servers**. For certain instances, control of the installations is transferred to the **customer** **customers** over time, and the related revenue is recognized over time as the performance obligation is satisfied using the cost-to-cost (percentage-of-completion) method. We use an input measure of progress to determine the amount of revenue to be recognized during each reporting period. We

recognize maintenance services revenue, including revenue associated with any related customer material rights, over time as we perform service maintenance activities.

Amounts billed to **our** customers for shipping and handling activities are considered contract fulfillment activities and not a separate performance obligation of the contract. Shipping and handling costs are recorded within **the** cost of revenue.

The following is a description of the principal activities from which we generate revenue. Our four revenue streams are classified as follows:

**Product Revenue** **All** of our product revenue is generated from the sale of our Energy Servers to direct purchase customers, including financing partners on **the** Third-Party PPAs and sale-and-leaseback transactions, and international channel

providers. We generally recognize product revenue from contracts with customers at the point that control is transferred to the customers. This occurs when we achieve customer acceptance, which depending on the contract terms is when the system is shipped and delivered to our customers, when the system is shipped and delivered and is physically ready for startup and commissioning (i.e., **Mechanical Completion**), or when the system is shipped and delivered and is turned on and producing **power. power** (i.e., **Commencement of Operations** or "COO").

Under our traditional lease financing option **that we had in fiscal 2021**, we sell our Energy Servers through a direct sale to a financing partner who, in turn, leases the Energy Servers to the customer under a lease agreement. With our sales to our international channel providers, our international channel providers typically sell the Energy Servers to, or sometimes provide a PPA to, an end customer. In both traditional lease and international channel providers transactions, we contract directly with the end customer to provide extended maintenance services after the end of the standard warranty period. As a result, since the customer that purchases the server is a different and unrelated party to the customer that purchases extended warranty services, the product and maintenance services contract are not combined.

**Installation Revenue** **Nearly** all of our installation revenue relates to the installation of **the** Energy Servers sold to **the** customers as part of a direct purchase and to financing parties as part of a traditional lease or **Portfolio Financing. Financings**. Generally, we recognize installation revenue when the system is physically ready for startup and commissioning (i.e., **Mechanical Completion**), or when the system is turned on and producing **power. power** (i.e., COO). For instances when control for installation services is transferred over time, we use an input measure of progress to determine the amount of revenue to recognize during each reporting period based on the costs incurred to satisfy the performance obligation.

Payments received from customers are recorded within deferred revenue and customer deposits in the consolidated balance sheets until control is transferred. The related cost of such product and installation is also deferred as a component of deferred cost of revenue in the consolidated balance sheets until control is transferred.

**Service Revenue** **Service** revenue is generated from **maintenance services agreements. O&M Agreements**. As part of our initial contract with customers for the sale and installation of our Energy Servers, we typically provide a standard one-year warranty which covers defects in materials and workmanship and manufacturing or performance conditions under normal use and service for the first year following **commencement Commencement of operations. Operations**. As part of this standard first-year warranty, we also monitor the operations of the underlying systems and provide output and efficiency guarantees. We have determined that this standard first-year warranty is a distinct performance obligation **being a promise to stand-ready to maintain the Energy Servers when and if required during the first year following installation**. We also sell to our customers extended annual maintenance services that effectively extend the standard first-year warranty coverage at the customer's option. These customers generally have an option to renew or cancel the extended maintenance services on an annual basis and nearly every customer has renewed historically. Similar to the standard first-year warranty, the optional extended annual maintenance services are considered a distinct performance obligation – being a promise to stand-ready to maintain the Energy Servers when and if required during the renewal service year.

Given our customers' renewal history, we anticipate that most of them will continue to renew their maintenance services agreements each year for the period of their expected use of the Energy **Server. Servers**. The contractual renewal price may be less than the standalone selling price of the maintenance services and consequently the contract renewal option may provide the customer with a material right. We estimate the standalone selling price for customer renewal options that give rise to material rights using the practical alternative by reference to optional maintenance services renewal periods expected to be provided and the corresponding expected consideration for these services. This reflects the fact that our additional performance obligations in any contractual renewal period are consistent with the services provided under the standard first-year warranty. Where we have determined that **a customer has a the customers have material right rights** as a result of their contract renewal option, we recognize that portion of the transaction price allocated to the material right rights over the period in which such rights are exercised.

Payments from customers for the extended maintenance contracts are generally received at the beginning of each service year. Accordingly, the customer payment received is recorded as a customer deposit and revenue is recognized over the related service period as the services are performed.

**Electricity Revenue** — We sell electricity produced by our Energy Servers owned directly by us or by our consolidated PPA Entities. Our PPA Entities purchase purchased the Energy Servers from us and sell sold electricity produced by these systems to customers through long-term PPAs. Customers were required to purchase all of the electricity produced by those Energy Servers at agreed-upon rates over the course of the PPAs' contractual term. In August 2023, we sold our last consolidated PPA Entity, PPA V.

In addition, in certain Managed Services Financings pursuant to which we are party to a Managed Services Agreement with a customer in a sale-leaseback-sublease arrangement, we may recognize electricity revenue. We first determine whether the Energy Servers under the sale-leaseback arrangement of a Managed Services Financing were "integral equipment." As the Energy Servers were determined not to be integral equipment, we determined determined if the leaseback was classified as a financing lease or an operating lease.

We adopted ASC 842, *Leases* ("ASC 842"), with effect from January 1, 2020. Managed Services Financings entered prior to June 30, 2021, were accounted as failed sale-and-leaseback transactions because some financing agreements included repurchase option which prevented the transfer of control of the systems to the financier. Additionally, some of our leaseback agreements with financiers did not meet the criteria of operating leases that resulted in failed sale-and-leaseback transactions. We also determined that the sub-lease arrangements under the Managed Services Agreements with the customer are not within the scope of ASC 842 because the customer does not have the right to control the use of the underlying assets (i.e., the Energy Servers). Accordingly, such agreements are accounted for under ASC 606. Under ASC 606, we recognize customer payments for electricity as electricity revenue.

The transition guidance associated with ASC 842 also permitted certain practical expedients. We elected the practical expedient, which allowed us to carryforward certain aspects of our historical lease accounting under ASC 840 for leases that commenced before the effective date, including not to reassess (i) whether any expired or existing contracts are or contain leases, (ii) lease classification for any expired or existing leases, During 2023, 2022, and (iii) initial direct costs for any existing leases. We also elected the practical expedient to not separate non-lease and lease components and instead account for them as a single lease component for all classes of underlying assets. Lastly, for all classes of underlying assets, we elected to adopt an accounting policy for which we will not record on our consolidated balance sheets leases whose terms are 12 months or less. Instead, these lease payments are recognized in profit or loss on a straight-line basis over the lease term.

During the second half of fiscal 2021, and 2022, we completed several successful sale-and-lease back sale-and-leaseback transactions in which we transferred control of the Energy Server to the financier and leased it back as an operating lease to provide electricity to the end customer.

In order for the transaction to meet the criteria for successful sale-leaseback accounting, control of the Energy Servers must transfer to the financier, which requires, among other criteria, the leaseback to meet the criteria for an operating lease in accordance with ASC 842. *Leases* ("ASC 842"). Accordingly, for such transactions where control transfers and the leaseback is classified as an operating lease, the proceeds from the sale to the financier are recognized as revenue based on the fair value of the Energy Servers sold and are allocated between Product Revenue product revenue and Installation Revenue installation revenue based on the relative standalone selling prices.

We recognize a operating lease liability for the Energy Server Servers leaseback obligation based on the present value of the future payments to the financier that are attributed to the Energy Server Servers leaseback using our incremental borrowing rate. We also record a operating lease right-of-use asset, which is amortized over the term of the leaseback, and is included as a cost of electricity revenue on the consolidated statements of operations.

For certain sale-leaseback sale-and-leaseback transactions, we receive proceeds from the financier in excess of the fair value of the Energy Servers in order to finance our ongoing costs associated with the operation of the Energy Servers during the term of the end customer agreement to provide electricity. Such proceeds are recognized as a financing obligation obligations.

We allocate payments we are obligated to make under the leaseback agreement with the financier between the lease liability and the financing obligation based on the proportion of the financing obligation to the total proceeds to be received.

We recognize revenue from the satisfaction of performance obligations under our PPAs and Managed Services Financings to provide electricity to our end customers as the electricity is provided over the term of the agreement in the amount invoiced, which reflects the amount of consideration to which we have the right to invoice, and which corresponds to the value transferred under such arrangements.

#### Modifications

Contract modifications are accounted for as separate contracts if the additional products and services are distinct and priced at standalone selling prices. If the additional products and services are distinct, but not priced at standalone selling prices, the modification is treated as a termination of the existing contract and the creation of a new contract. If the additional products and services are not distinct within the context of the contract, the modification is combined with the original contract and either an increase or decrease in revenue is recognized on the modification date.

#### Deferred Revenue

We recognize a contract liability (referred to as deferred revenue in our consolidated financial statements) when we have an obligation to transfer products or services to a customer in advance of us satisfying a performance obligation and the contract liability is reduced as performance obligations are satisfied and revenue is recognized. The related cost of such product is deferred as a component of deferred cost of revenue in the consolidated balance sheets. Prior to shipment of the product or the commencement of performance of maintenance services, any prepayment made by the customer is recorded as a customer deposit. Deferred revenue related to material rights for options to renew are recognized in revenue over the maintenance services period.

A description of the principal activities from which we recognize cost of revenues associated with each of our revenue streams are classified as follows:

**Cost of Product Revenue** — Cost of product revenue consists of costs of our Energy Servers that we sell to direct purchase, including financing partners on the Third-Party PPAs, international channel providers and traditional lease customers. It includes costs paid to our materials suppliers, direct labor, manufacturing and other overhead costs, shipping costs, provisions for excess and obsolete inventory and the depreciation costs of our equipment. For the Energy Servers sold to customers

pending installation, we provide warranty reserves as a part of product costs for the period from transfer of control of the Energy Servers to commencement Commencement of operations. Operations.

**Cost of Installation Revenue** — Cost of installation revenue primarily consists of the costs to install our Energy Servers that we sell to direct purchase, including financing partners on the Third-Party PPAs and traditional lease and successful sale-leaseback customers. It includes the cost of materials and service providers, personnel costs, shipping costs and allocated costs.

**Cost of Service Revenue** — Cost of service revenue consists of costs incurred under maintenance service contracts for all customers. It includes the cost of field replacement units, personnel costs for our customer support organization, certain allocated costs, and extended maintenance-related product repair and replacement costs.

**Cost of Electricity Revenue** — Cost of electricity revenue primarily consists of the depreciation of the cost of the Energy Servers owned by us or the consolidated PPA Entities. The cost of electricity revenue is generally recognized over the term of the Managed Services Agreement or customer's PPA contract. In August 2023, we sold our last consolidated PPA Entity, PPA V.

**Revenue Recognized from Portfolio Financings Through the PPA Entities (See Note 11 — Portfolio Financings)**

In 2010, we began selling our Energy Servers to tax equity partnerships in which we held an equity interest as a managing member, or a PPA Entity. The investors in a PPA Entity contribute cash to the PPA Entity in exchange for an equity interest, which then allows the PPA Entity to purchase the Operating Company and the Energy Servers.

The cash contributions held are classified as short-term or long-term restricted cash according to the terms of each PPA Entity's governing documents. As we identified customers, the Operating Company entered into a PPA with the customer pursuant to which the customer agreed to purchase the power generated by one or more Energy Servers at a specified rate per kilowatt hour for a specified term, which can range from 10 to 21 years. The Operating Company, wholly owned by the PPA Entity, typically entered into a maintenance services agreement with us following the first year of service to extend the standard one-year performance warranties and guarantees. This intercompany arrangement is eliminated on consolidation. Those PPAs that qualify as leases are classified as either sales-type leases or operating leases and those that do not qualify as leases are classified as tariff agreements or revenue arrangements with customers. For arrangements classified as operating leases, tariff agreements, or revenue arrangements with customers, income is recognized as contractual amounts are due when the electricity is generated and presented within electricity revenue on the consolidated statements of operations.

In June 2022 and November 2022, August 2023, we completed the repowering of sold our last consolidated PPA IIIa and Entity, PPA IV, respectively. Please refer to Note 11 — Portfolio Financings for details.

**Sales-type Leases** — Certain Portfolio Financings with the PPA Entities entered into prior to our adoption of ASC 842 qualified as sales-type leases in accordance with ASC 840. 840, **Leases ("ASC 840")**. The classification for such arrangements were carried over and accounted for as sales-type leases under ASC 842.

As the Portfolio Financings through the PPA Entities entered into prior to our adoption of ASC 842 contain a lease, the consideration received is was allocated between the lease elements (lease of property and related executory costs) and non-lease elements (other products and services, excluding any derivatives) based on relative fair value. Lease elements include included the leased system and the related executory costs (i.e. installation of the system, electricity generated by the system, maintenance costs). Non-lease elements include included service, fuel and interest related to the leased systems.

Service revenue is was recognized over the term of the PPA as electricity is was generated. For those transactions that contain contained a lease, the interest component related to the leased system is was recognized as interest revenue over the life of the lease term. The customer has had the option to purchase the Energy Servers at the then fair market value at the end of the PPA contract term.

In fiscal 2022 we sold PPA IIIa, as such we no longer have sale-type lease arrangements. Please refer to Note 10 — Portfolio Financings for details.

Service revenue related to sales-type leases of \$0.4 million \$2.3 and \$2.3 million and \$2.3 million for the years ended December 31, 2022, December 31, 2022 and 2021, and 2020, respectively, is included in service revenue in the consolidated statements of operations. There was no service revenue related to sales-type leases for the year ended December 31, 2023. We have not entered into any new Portfolio Financing arrangements through the PPA Entities during the last three years.

**Operating Leases** — Certain Portfolio Financings with the PPA Entities entered into prior to the adoption of ASC 842 that were deemed leases in substance but did not meet the criteria of sales-type leases or direct financing leases in accordance with ASC 840, were accounted for as operating leases. The classification for such arrangements were carried over and accounted for as operating leases under ASC 842. Revenue under these arrangements is was recognized as electricity sales and service revenue and is was provided to the customer at rates specified under the PPAs. During the years ended December 31, 2022, 2021 December 31, 2023, 2022 and 2020, 2021, revenue from electricity sales from these Portfolio Financings with the PPA Entities amounted to \$14.3 million, \$25.9 million and \$28.6 million, and \$27.7 million, respectively. During the years ended December 31, 2022, 2021 December 31, 2023, 2022 and 2020, 2021, service revenue amounted to \$3.1 million, \$13.1 million \$14.6 million, and \$13.8 \$14.6 million, respectively.

**Investment Tax Credits** — Through December 31, 2016, our Energy Servers were eligible for federal ITCs that accrued to eligible property under Internal Revenue Code Section 48. Under our Portfolio Financings with PPA Entities, ITCs are were primarily passed through to Equity Investors with approximately 1% to 10% of incentives received by us. These incentives are were accounted for by using the flow-through method. On February 9, 2018, the U.S. Congress passed legislation to extend the federal ITCs for fuel cell systems applicable retroactively to January 1, 2017. On December 21, 2020, the U.S. Congress passed legislation to extend the federal ITCs at a rate of 26% for a further two years.

The ITC program has operational criteria for the first five years after the qualified equipment is placed in service. If the qualified energy property is disposed of or otherwise ceases to be investment credit property before the close of the five-year recapture period is fulfilled, it could result in a partial reduction of the federal tax incentives. No recapture has occurred during the years ended December 31, 2022 December 31, 2023, 2022 and 2021, 2021.

On August 7, 2022, the U.S. Senate passed the IRA under the fiscal year In August 2022, budget reconciliation instructions. On August 16, 2022, the IRA was signed into law. This new bill became the U.S. federal government's largest-ever investment to fight climate change. The IRA includes numerous investments in climate protection, among them the extension and expansion of the ITC and the Production Tax Credit, PTC, the addition of expanded tax credits for other technologies and for manufacturing of clean energy equipment, as well as terms allowing parties to more easily monetize the tax credits. The IRA contains a two-tiered credit-amount structure for many applicable tax credits. Specifically, many of the credits have a lower base credit amount that can be increased up to five times if the taxpayer can satisfy applicable prevailing wage or apprenticeship

requirements. The IRA also creates certain bonus tax credit amounts relevant to Bloom products placed in service in 2023 and 2024, available by satisfying domestic content criteria and/or locating within an “energy community,” as defined by the IRA. The IRA also creates tax credit credits for the production of hydrogen and carbon capture. By implementing the IRA, the government aims to make an impact on energy markets so that cleaner options are more affordable to consumers.

On August 16, 2022, the IRA enacted provisions to enable our Energy Servers being to be qualified for 30% or more ITCs. If a contract consideration subject to changes due to the underlying ITC rate assumption changes, we will consider such potential ITC benefit changes as a variable consideration and will generally estimate the variable consideration by using the most likely amount method. When recognizing revenue, we will constrain the estimate of variable consideration to an amount that is not probable of a significant revenue reversal.

#### **Recapture of Federal Tax Incentives, Including the Investment Tax Credit ITC**

Our Energy Servers are eligible for federal ITCs that accrued to qualified property under Internal Revenue Code Section 48 when placed into service. However, the ITC program has operational criteria that extend for five years. If the energy property is disposed of or otherwise ceases to be qualified investment credit property before the close of the five year five-year recapture period is fulfilled, it could result in a partial reduction of the ITC. Our sale of Energy Servers to the PPA Entities and pursuant to the Third-Party PPAs, in each case pursuant to a Portfolio Financing, Financings, generates ITCs benefiting the third party third-party owners of the PPA Entities or tax equity partnerships (the tax equity partnership purchaser, an “Investment Company”) and, therefore, the third party third-party owners of the PPA Entities or Investment Companies, as the case may be, bear the risk of recapture if the assets placed in service do not meet the ITC operational criteria in the future.

#### **Warranty Costs**

We generally warrant our products sold to our customers, international channel providers, and financing parties for the first year following the date of acceptance of the Energy Servers. This standard warranty covers defects in materials, workmanship and manufacturing or performance conditions under normal use and service conditions for the first year following acceptance or for the optional extended annual maintenance services period.

We recognize warranty costs for those contracts that are considered to be assurance-type warranties and consequently do not give rise to performance obligations or for those maintenance service contracts that were previously in the scope of ASC 605-20-25, Separately Priced Extended Warranty and Product Maintenance Contracts.

In addition, as part of our standard one-year warranty and Managed Services Agreements Agreement obligations, we monitor the operations of the underlying systems and provide output and efficiency guarantees (collectively “product performance guarantees”). If the Energy Servers run at a lower efficiency or power output than we committed under our performance warranty or guarantee, we will reimburse the customer for this underperformance. Our performance obligation includes ensuring the Energy Server operates Servers operate at least at the efficiency and/or power output levels set forth in the customer agreement. Our aggregate reimbursement obligation for a performance guarantee for each customer is capped based on the purchase price of the underlying Energy Server. Servers. Product performance guarantee payments are accounted for as a reduction in service revenue. We accrue for performance guarantees based on the estimated amounts reimbursable at each reporting period and recognize the costs as a reduction to revenue.

#### **Shipping and Handling Costs**

We generally record costs related to shipping and handling in cost of product revenue, cost of installation revenue and cost of service as they are incurred.

#### **Sales and Utility Taxes**

We recognize revenue on a net basis for taxes charged to our customers and collected on behalf of the taxing authorities.

#### **Operating Expenses**

**Advertising and Promotion Costs** Expenses related to advertising and promotion of products are charged to sales and marketing expense as incurred. We did not incur any material advertising or promotion expenses during the years ended December 31, 2022 December 31, 2023, 2022 and 2021, 2021.

**Research and Development** We conduct internally funded research and development activities to improve anticipated product performance and reduce product life-cycle costs. Research and development costs are expensed as incurred and include salaries and expenses related to employees conducting research and development and other costs.

**Stock-Based Compensation** We account for stock options, restricted stock units (“RSUs”) and performance-based stock units (“PSUs”) awarded to employees and non-employee directors under the provisions of ASC 718, Compensation-Stock Compensation – Stock Compensation (“ASC 718”).

Stock-based compensation costs for options are measured using the Black-Scholes valuation model. The Black-Scholes valuation model uses as inputs the fair value of our common stock and assumptions we make for the volatility of our common stock, the expected term of the award, the risk-free interest rate for a period that approximates the expected term of the stock options and the expected dividend yield. In developing estimates used to calculate assumptions, we established the expected term for employee options as well as expected forfeiture rates based on the historical settlement experience and after giving consideration to vesting schedules. For options with a vesting condition tied to the attainment of service and market conditions, stock-based compensation costs are recognized using Monte Carlo simulations. Stock-based compensation costs are recorded net of estimated forfeitures such that expense is recorded only for those stock-based awards that are expected to vest. We typically record stock-based compensation costs for options under the straight-line attribution method over the requisite service period, which is generally the vesting term, which is generally four years for options.

Stock-based compensation costs for RSUs and PSUs are measured based on the fair value of the underlying shares on the date of grant. We recognize the compensation cost for RSUs using a straight-line basis over the requisite service period of the RSUs, which is generally three to four years. We recognize the compensation cost for PSUs over the expected performance period using the graded vesting method as the achievement of the milestones become probable, which is generally one to three years.

We also use the Black-Scholes valuation model to estimate the fair value of stock purchase rights under the Bloom Energy Corporation 2018 Employee Stock Purchase Plan (the “2018 ESPP”). The fair value of the 2018 ESPP purchase rights is recognized as an expense under the multiple options approach. Forfeitures are estimated at the time of grant and revised in subsequent periods, if necessary, if actual forfeitures differ from initial estimates.

Stock issued to grantees in our stock-based compensation is from authorized and previously unissued shares. Stock-based compensation expense is costs are recorded in the consolidated statements of operations based on the employees’ respective function, functions. Stock-based compensation costs directly associated with the product

manufacturing operations process are capitalized into inventory and expensed when the capitalized asset is used in the normal course of the sales or services process.

We record deferred tax assets for awards that result in deductions on our income tax returns, unless we cannot realize the deduction (i.e., we are in a net operating loss position), based on the amount of compensation cost recognized and our statutory tax rate.

Refer to Note 10-9 — *Stock-Based Compensation and Employee Benefit Plans* for further discussion of our stock-based compensation arrangements.

#### **Income Taxes**

We account for income taxes using the liability method under ASC 740, *Income Taxes* ("ASC 740"). Under this method, deferred tax assets and liabilities are determined based on net operating loss carryforwards, research and development credit carryforwards and temporary differences resulting from the different treatment of items for tax and financial reporting purposes. Deferred items are measured using the enacted tax rates and laws that are expected to be in effect when the differences reverse. Additionally, we must assess the likelihood that deferred tax assets will be recovered as deductions from future taxable income. We have provided a full valuation allowance on our domestic deferred tax assets because we believe it is more likely than not that our deferred tax assets will not be realized.

We follow the accounting guidance in ASC 740, which requires a more-likely-than-not threshold for financial statement recognition and measurement of tax positions taken or expected to be taken in a tax return. We record a liability for the difference between the benefit recognized and measured pursuant to ASC 740-10 and the tax position taken or expected to be taken on our tax return. To the extent that the assessment of such tax positions changes, the change in estimate is recorded in the period in which the determination is made. We established reserves for tax-related uncertainties based on estimates of whether, and the extent to which, additional taxes will be due. These reserves are established when we believe that certain positions might be challenged despite our belief that the tax return positions are fully supportable. The reserves are adjusted in light of changing facts and circumstances such as the outcome of a tax audit. The provision for income taxes includes the impact of reserve provisions and changes to reserves that are considered appropriate. We recognize interest and penalties related to unrecognized tax benefits in income tax expense.

Refer to Note 15 — *Income Taxes* for further discussion of our income tax expense.

#### **Comprehensive Loss**

Our comprehensive loss is comprised of net loss attributable to *Class A and Class B* common stockholders, *unrealized loss on available-for-sale securities*, change in derivative instruments designated and qualifying as cash flow hedges, foreign currency translation adjustment and comprehensive loss attributable to noncontrolling interest and redeemable noncontrolling interest.

#### **Fair Value Measurement**

ASC 820, *Fair Value Measurements and Disclosures*, defines fair value, establishes a framework for measuring fair value under U.S. GAAP and enhances disclosures about fair value measurements. Fair value is defined under ASC 820 as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principle or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value under ASC 820 must maximize the use of observable inputs and minimize the use of unobservable inputs. The guidance describes a fair value hierarchy based on three levels of inputs, of which the first two are considered observable and the last unobservable, that may be used to measure fair value:

<b>Level 1</b>	Quoted prices in active markets for identical assets or liabilities. Financial assets utilizing Level 1 inputs typically include money market securities and U.S. Treasury securities.
<b>Level 2</b>	Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities. <i>Financial</i> There were neither financial assets, nor financial liabilities as of December 31, 2023 and 2022 utilizing Level 2 inputs are represented by SK ecoplant option to acquire a variable number of shares of Class A common stock and its valuation is performed with the help of a Monte Carlo simulation model using a stochastic volatility parameter, which is calibrated and considers the observable implied volatility, the stock price of our Class A Common Stock and market interest rates. <i>inputs</i> .
<b>Level 3</b>	Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities. Financial liabilities utilizing Level 3 inputs include contract embedded derivatives. Their valuations are performed using a Monte Carlo simulation model which considers various potential electricity price curves over the sales contract terms.

#### **Other Balance Sheet Components**

*Cash, Cash Equivalents, and Restricted Cash* — Cash equivalents consist of highly liquid short-term investments with maturities of 90 days or less at the date of purchase.

Restricted cash is held as collateral to provide financial assurance that we will fulfill obligations and commitments primarily related to our Portfolio Financings, *Third Party PPA* the *Third-Party PPAs* and *Managed Services Agreements*. Restricted cash also includes debt service reserves, maintenance service reserves and facility lease agreements. Restricted cash that is expected to be used within one year of the balance sheet date is classified as a current asset, whereas restricted cash expected to be used more than one year from the balance sheet date is classified as a non-current asset.

*Derivatives* — We account for our derivative instruments as either an asset or a liability which are carried at fair value on the consolidated balance sheets. Changes in the fair value of the derivatives that are designated and qualify as cash flow hedges are recorded in accumulated other comprehensive *income (loss) loss* on the consolidated *balance sheets*. *statements of comprehensive loss*. Changes in fair value of those derivatives that no longer qualify as cash flow hedges or are derivatives that do not qualify for hedge accounting are recorded through earnings in the consolidated statements of operations.

**Customer Financing Receivables** - The contractual terms of our customer financing receivables are primarily contained within the PPA Entities' customer lease agreements. Leases entered into prior to our adoption of ASC 842 carried over their classification as either operating or sales-type leases in accordance with the relevant accounting guidelines. Customer financing receivables were generated by Energy Servers leased to PPA Entities' customers in leasing arrangements that qualified and continue to be accounted for as sales-type leases. Customer financing receivables for such arrangements represent the gross minimum lease payments to be received from customers and the system's estimated residual value, net of unearned income and allowance for estimated losses. Initial direct costs for such sales-type leases continued to be recognized as cost of revenue when the Energy Servers were placed in service.

We record a reserve for credit losses related to the collectability of customer financing receivables using the historical aging of the customer receivable balance. The collectability is determined based on past events, including historical experience, customer credit rating, as well as current market conditions. We monitor customer ratings and collectability on an on-going basis. Account balances are charged off against the credit loss reserve, when needed, after all means of collection have been exhausted and the potential for recovery is considered remote.

With the PPA IIIa repowering of energy servers in June 2022 (refer to Note 11 - *Portfolio Financings*) customer financing receivables were reclassified to property, plant and equipment, net, impaired and written off.

**Accounts Receivable** Accounts receivable primarily represents trade receivables from sales to customers recorded at amortized cost less allowance for credit losses. The allowance for credit losses reflects our best estimate about future losses over the contractual life of outstanding accounts receivable taking into consideration historical experience, specific allowances for known troubled accounts, other currently available information including customer financial condition, and both current and forecasted economic conditions.

**Inventories** Inventories consist principally of raw materials, work-in-process and finished goods and are stated on a first-in, first-out basis at the lower of cost or net realizable value. We record inventory excess and obsolescence provisions for estimated obsolete or unsellable inventory, equal to the difference between the cost of inventory and estimated net realizable value based upon assumptions about market conditions and future demand for product generally expected to be utilized over the next 12 to 24 months, including product needed to fulfill our warranty obligations. If actual future demand for our products is less than currently forecasted, additional inventory provisions may be required. Once a provision is recorded, it is maintained until the product to which it relates is sold or otherwise disposed.

**Property, Plant and Equipment** Property, plant and equipment, including leasehold improvements, are stated at cost less accumulated depreciation. The Energy Servers are depreciated to their residual values over their useful economic lives which reflect consideration of the terms of their related PPA and tariff agreements. These useful lives are reassessed when there is an expected change in the use of the Energy Servers. Leasehold improvements are depreciated over the shorter of the lease term or their estimated depreciable lives. Buildings are amortized over the shorter of the lease or property term or their estimated depreciable lives. Assets under construction are capitalized as costs are incurred and depreciation commences after the assets are put into service within their respective asset class.

Depreciation is calculated using the straight-line method over the estimated depreciable lives of the respective assets as follows:

	Depreciable Lives
Energy Servers	15-21 years
Computers, software and hardware	3-5 years
Machinery and equipment	5-10 years
Furniture and fixtures	3-5 years
Leasehold improvements	1-10 years
Buildings	*

\* Lesser of 35 years or the term of the underlying land lease.

When assets are retired or disposed of, the assets and related accumulated depreciation and amortization are removed from our consolidated financial statements and the resulting gain or loss is reflected in the consolidated statements of operations.

**Impairment of Long-Lived Assets** Our long-lived assets include property, plant and equipment and the Energy Servers capitalized in connection with our Managed Services Financing Program, Portfolio Financings and other similar arrangements. The carrying amounts of our long-lived assets are periodically reviewed for impairment whenever events or changes in circumstances indicate that the carrying value of these assets may not be recoverable or that the useful life is shorter than originally estimated. Impairment charges for the year ended December 31, 2023, amounted to \$123.7 million related to the PPA

**V Upgrade.** Impairment charges for the year ended December 31, 2022, amounted to \$44.8 million and \$64.0 million related to the PPA IIIa Upgrade and the PPA IV Upgrade, respectively (see Note 11 - *Portfolio Financings*). We did not have impairment charges for the year ended December 31, 2021 and 2020.

**Redeemable Convertible Preferred Stock** - We issued RCPS on December 29, 2021 that was recorded as mezzanine equity on our consolidated balance sheets because there are certain redemption provisions upon liquidation, dissolution, or deemed liquidation events (which include a change in control and the sale or other disposition of all or substantially all of our assets), which are considered contingent redemption provisions that are not solely within our control. We recorded the RCPS at fair value upon issuance, net of any issuance costs. On November 8, 2022, each share of Series A Preferred Stock was converted into 10,000,000 shares of Class A common stock. For additional information, see Note 17 - *SK ecoplant Strategic Investment*.

**Allocation of Profits and Losses of Consolidated Entities to Noncontrolling Interests** We generally allocate profits and losses to noncontrolling interests under the hypothetical liquidation at book value ("HLBV") method. The determination of equity in earnings under the HLBV method requires management to determine how proceeds, upon a

hypothetical liquidation of the entity at book value, would be allocated between our investors. The noncontrolling interest balance is presented as a component of permanent equity in the consolidated balance sheets.

For income tax purposes, the Equity Investors of the PPA Entities receive a greater proportion of the share of losses and other income tax benefits. This includes the allocation of investment tax credits which are distributed to the Equity Investors through an Investment Company subsidiary of Bloom. Allocations are initially based on the terms specified in each respective partnership agreement until either a specific date or the Equity Investors' targeted rate of return specified in the partnership agreement is met (the "flip" of the flip structure) whereupon the allocations change. In some cases, after the Equity Investors receive their contractual rate of return, we receive substantially all of the remaining value attributable to the long-term recurring customer payments and the other incentives. In August 2023, we sold our last consolidated PPA Entity being our VIE, PPA V, as a result of the PPA V Repowering of the Energy Servers (see Note 10 — *Portfolio Financings*). As of December 31, 2023 we had one VIE which we consolidate, Korean JV, which profit and loss are allocated to noncontrolling interests under the HLBV method.

#### **Foreign Currency Considerations**

Items included in the financial statements of each of the Company's entities are measured using the currency of the primary economic environment in which the entity operates (the "functional currency"). The functional currency of the Company's parent entity is the U.S. dollar.

**Functional** The **functional** currencies of our foreign subsidiaries are local currencies. The functional currency of our joint venture in the Republic of Korea is the local currency, the South Korean won ("KRW"), since the joint venture is financially independent of its U.S. parent and the KRW is the currency in which the joint venture generates and expends cash. **Assets** The **assets** and liabilities of these entities are translated at the rate of exchange at the balance sheet date. Revenue and expenses are translated at the weighted average rate of exchange during the period. For these entities, translation adjustments resulting from the process of translating the local currency financial statements into **the** U.S. dollars are included in other comprehensive loss. Translation adjustments attributable to noncontrolling interests are allocated to and reported as part of the noncontrolling interests in the consolidated financial statements.

Transactions made in a currency other than the functional currency are remeasured to the functional currency at exchange rates at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies at the reporting date are remeasured to the functional currency at the exchange rate at that date and non-monetary assets and liabilities are measured at historical rates. Foreign currency transaction gains and losses are included as a component of other **expense** (**expense**) income, **net** in our consolidated statements of operations.

The reporting currency for these consolidated financial statements is **the** U.S. dollar.

#### **Accounting Guidance Not Yet Adopted**

In August 2023, the FASB issued ASU 2023-05, *Business Combinations — Joint Venture Formations (Subtopic 805-60): Recognition and Initial Measurement* ("ASU 2023-05"), which addresses the accounting for contributions made to a joint venture. ASU 2023-05 requires joint ventures to measure all assets and liabilities upon formation at fair value. This guidance will be applied prospectively to all joint venture formations with a formation date on or after January 1, 2025. We do not expect the adoption of this guidance to have a material impact on our consolidated financial statements.

In November 2023, the FASB issued ASU 2023-07, *Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures* ("ASU 2023-07"). ASU 2023-07 requires disclosure of significant segment expenses that are regularly provided to the chief operating decision maker and included within the segment measure of profit or loss. This guidance will be applied retrospectively and is effective for annual reporting periods in fiscal years beginning after December 15, 2023, and interim reporting periods in fiscal years beginning after December 31, 2024. We are currently evaluating the potential impact, but we do not expect the adoption of this guidance to have a material impact on our consolidated financial statements.

In December 2023, the FASB issued ASU 2023-09, *Income Taxes (Topic 740): Improvements to Income Tax Disclosures* ("ASU 2023-09"). ASU 2023-09 addresses investor requests for more transparency about income tax information through improvements to income tax disclosures primarily related to the rate reconciliation and income taxes paid information. This guidance will be applied on a prospective basis and is effective for annual reporting periods in fiscal years beginning after December 15, 2024. Retrospective application is permitted. We are currently evaluating the potential impact, but we do not expect the adoption of this guidance to have a material impact on our consolidated financial statements.

#### **Recent Accounting Pronouncements**

**Contract Assets and Contract Liabilities Acquired in a Business Combination** In October 2021, the FASB issued ASU 2021-08, *Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers* ("ASU 2021-08"), which requires contract assets and contract liabilities acquired in a business combination to be recognized and measured by the acquirer on the acquisition date in accordance with ASC 606, **Revenue from Contracts with Customers**, as if it had originated the contracts. This approach differs from the **current** **previous** requirement to measure contract assets and contract liabilities acquired in a business combination at fair value. ASU 2021-08 **is** **became** effective for fiscal years, including interim periods within those fiscal years, beginning after December 15, 2022. The standard does not impact acquired contract assets or liabilities from business combinations occurring prior to the adoption date.

There have been no significant changes in our reported financial position or results of operations and cash flows resulting from the adoption of new accounting pronouncements.

### **3. Revenue Recognition**

#### **Contract Balances**

The following table provides information about accounts receivables, contract assets, customer deposits and deferred revenue from contracts with customers (in thousands):

		December 31,		December 31,
		December 31,		
		2022	2021	2023
Accounts receivable	Accounts receivable			
Accounts receivable	Accounts receivable	\$ 250,995	\$ 87,788	
Contract assets	Contract assets			46,727
Customer deposits	Customer deposits			121,085
Deferred revenue	Deferred revenue			94,355
				115,476

Contract assets relate to contracts for which revenue is recognized upon transfer of control of performance obligations, however but where billing milestones have not been reached. Customer deposits and deferred revenue are include payments received from customers or invoiced amounts prior to transfer of controls of performance obligations. Customer At December 31, 2022, customer deposits include \$24.6 million included \$24.6 million related to transactions with SK ecoplant, and refundable fees received from customers. At December 31, 2023, there were no customer deposits related to transactions with SK ecoplant (see Note 17 — SK ecoplant Strategic Investment).

Contract assets and contract liabilities are reported in a net position on an individual contract basis at the end of each reporting period. Contract assets are classified as current in the consolidated balance sheet when both the milestones other than the passage of time, are expected to be complete and the customer is invoiced within one year of the balance sheet date, and as long-term when both the above-mentioned milestones are expected to be complete, and the customer is invoiced more than one year out from the balance sheet date. Contract liabilities are classified as current in the consolidated balance sheet when the revenue recognition associated with the related customer payments and invoicing is expected to occur within one year of the balance sheet date and as long-term when the revenue recognition associated with the related customer payments and invoicing is expected to occur in more than one year from the balance sheet date.

#### Contract Assets

		Years Ended	Years Ended	Years Ended	Years Ended
		December 31,	December 31,	December 31,	December 31,
		2023	2023	2023	2022
		Years Ended			
		December 31,			
		2022	2021		
Beginning balance	Beginning balance				
Beginning balance	Beginning balance	\$ 25,201	\$ 3,327		
Transferred to accounts receivable from contract assets recognized at the beginning of the period	Transferred to accounts receivable from contract assets recognized at the beginning of the period	(20,250)	(1,198)		

Revenue	Revenue
recognized	recognized
and not	and not
billed as of	billed as of
the end of	the end of
the period	the period
	41,776 23,072
Ending	Ending
balance	\$ 46,727 \$ 25,201

Contract assets as of December 31, 2023 were primarily related to the PPA V Upgrade. For additional information, please see Note 10 — *Portfolio Financings*.

#### Deferred Revenue

Deferred revenue activity **including deferred incentive revenue activity**, during the years ended **December 31, 2022** **December 31, 2023** and **2021** **2022** consisted of the following (in thousands):

	Years Ended		2023	2022
	December 31,			
	Years Ended	December 31,		
	December 31,	December 31,		
	December 31,	December 31,		
Beginning balance				
Beginning balance				
Beginning balance				
Beginning balance	\$ 115,476	\$ 135,578		
Additions	1,001,404	916,604		
Revenue				
recognized	(1,022,525)	(936,706)		
Ending balance	\$ 94,355	\$ 115,476		

Deferred revenue is equivalent to the total transaction price allocated to the performance obligations that are unsatisfied, or partially unsatisfied, as of the end of the period. The **significant primary** component of deferred revenue at the end of the period consists of performance obligations relating to the provision of maintenance services under current contracts and future renewal periods. Some of these obligations provide customers with material rights over a period that we estimate **will** **to** be largely commensurate with the period of their expected use of the associated Energy **Server**, **Servers**. As a result, we expect to recognize these amounts as revenue over a period of up to 21 years, predominantly on a relative standalone selling price basis that reflects the cost of providing these services. Deferred revenue also includes performance obligations relating to product acceptance and installation. A significant amount of this deferred revenue is reflected as additions and revenue recognized in the same 12-month period, and a portion of this deferred revenue is expected to be recognized beyond **this** 12-month period mainly due to deployment schedules.

We do not disclose the value of the unsatisfied performance obligations for (i) contracts with an original expected length of one year or less and (ii) contracts for which we recognize revenue at the amount to which we have the right to invoice for services performed.

#### Disaggregated Revenue

We disaggregate revenue from contracts with customers into four revenue categories: product, installation, **services** **service** and electricity (in thousands):

	Years Ended			2023	2022	2021
	December 31,					
	2022	2021	2020			
	Years Ended	December 31,	Years Ended	December 31,	Years Ended	December 31,
	December 31,					

Revenue from contracts with customers:	Revenue from contracts with customers:
Revenue from contracts with customers:	Revenue from contracts with customers:
Product revenue	Product revenue
Product revenue	Product revenue \$ 880,664 \$ 663,512 \$ 518,633
Installation revenue	Installation revenue 92,120 96,059 101,887
Services revenue	Services revenue 150,954 144,184 109,633
Service revenue	Service revenue
Electricity revenue	Electricity revenue 11,608 3,103 1,071
Total revenue from contract with customers	Total revenue from contract with customers 1,135,346 906,858 731,224
Total revenue from contracts with customers	Total revenue from contracts with customers
Revenue from contracts that contain leases:	Revenue from contracts that contain leases:
Electricity revenue	Electricity revenue 63,779 65,318 63,023
Electricity revenue	Electricity revenue
Total revenue	Total revenue \$ 1,199,125 \$ 972,176 \$ 794,247

#### 4. Financial Instruments

##### Cash, Cash Equivalents, and Restricted Cash

The carrying values of cash, cash equivalents, and restricted cash approximate fair values and were as follows (in thousands):

		December 31,			
		December		December 31,	
		31,			
As Held:	As Held:	2022	2021	2023	2022
Cash	Cash	\$226,463	\$318,080		
Cash	Cash				
Money market funds	Money market funds	291,903	297,034		
		\$518,366	\$615,114		
		\$			

As	As		
<b>Reported:</b>			
Cash and cash equivalents	Cash and cash equivalents	\$348,498	\$396,035
Cash and cash equivalents			
Restricted cash	Restricted cash	169,868	219,079
		\$518,366	\$615,114
		\$	
		=	

Restricted cash consisted of the following (in thousands):

		December 31,			
		December 31,		December 31,	
		2022	2021	2023	2022
<b>Current:</b>	<b>Current:</b>				
Restricted cash	Restricted cash	\$ 50,965	\$ 89,462		
Restricted cash related to PPA					
Entities <sup>1</sup>		550	3,078		
		51,515	92,540		
Restricted cash related to PPA V <sub>1</sub>					
		46,821			
<b>Non-current:</b>	<b>Non-current:</b>				
Restricted cash	Restricted cash	110,353	103,300		
Restricted cash related to PPA					
Entities <sup>1</sup>		8,000	23,239		
		118,353	126,539		
		\$169,868	\$219,079		
Restricted cash					
Restricted cash					
Restricted cash related to PPA V <sub>1</sub>					
		33,764			
		\$			

<sup>1</sup> We have VIEs As of December 31, 2022, we had a variable interest entity ("VIE") related to PPAs that represent our PPA Entity, PPA V, which represented a portion of the consolidated balances recorded within the "restricted cash" "restricted cash" and other financial statement line items in the consolidated balance sheets (see Note 11 - 10 — Portfolio Financings). In August 2023, we sold the PPA V as a result of the PPA V Repowering of the Energy Servers (see Note 10 — Portfolio Financings), and as such there were no balances related to PPA V in the consolidated balance sheets as of December 31, 2023. In addition, the restricted cash held in the PPA II and PPA IIb entities as of December 31, 2022, includes \$40.6 million and \$1.2 million of current restricted cash, respectively, and \$28.5 million and \$6.7 million of non-current restricted cash, respectively. The restricted cash held in the PPA II and PPA IIb entities as of December 31, 2021 December 31, 2022, includes \$41.7 million and \$1.2 million of current restricted cash, respectively, and \$57.7 million and \$6.7 million of non-current restricted cash, respectively. These entities are not considered VIEs.

#### Factoring Arrangements

We sell certain customer trade receivables on a non-recourse basis under factoring arrangements with our designated certain financial institution. These transactions are accounted for as sales and cash proceeds are included in cash used in operating activities. We derecognized \$283.3 million \$291.4 million, \$283.3 million and \$116.3 million \$116.3 million of accounts receivable during the years ended December 31, 2022 December 31, 2023, 2022 and 2021, respectively.

The cost of factoring such accounts receivable on our consolidated statements of operations for the years ended December 31, 2022 December 31, 2023 and 2022 was \$4.0 million, \$5.5 million and \$4.0 million, respectively. The cost of factoring such accounts receivable on our consolidated statements of operations for the year ended December 31, 2021 was not material.

The cost of factoring is recorded in general and administrative expenses.

## 5. Fair Value

Our accounting policy for the fair value measurement of cash equivalents is described in Note 2 [Summary of Significant Accounting Policies](#).

### Financial Assets and Liabilities Measured at Fair Value on a Recurring Basis

The tables below set forth, by level, our financial assets that are accounted for at fair value for the respective periods. The table does not include assets and liabilities that are measured at historical cost or any basis other than fair value (in thousands):

December 31, 2022	Fair Value Measured at Reporting Date Using				Fair Value Measured at Reporting Date Using	
	Level					
	Level 1	2	Level 3	Total		
Fair Value Measured at Reporting Date Using						
December 31, 2023	December 31, 2023	Level 1	Level 2	Level 3	Total	
Assets	Assets					
Assets						
Assets						
Cash	Cash					
equivalents:	equivalents:					
Cash equivalents:						
Cash equivalents:						
Money market funds						
Money market funds						
Money market funds	\$291,903	\$ —	\$ —	\$291,903		
	\$					
	\$291,903	\$ —	\$ —	\$291,903		
	\$					
	\$					
Liabilities	Liabilities					
Derivatives:						
Derivatives:						
Derivatives:	Derivatives:					
Embedded derivatives	Embedded derivatives	—	—	5,895	5,895	
Embedded derivatives						
Embedded derivatives						
Embedded derivatives	\$ —	\$ —	\$ 5,895	\$ 5,895		
Embedded derivatives	\$					
Embedded derivatives	—					
Embedded derivatives	\$					
	=					

		Fair Value Measured at Reporting Date Using			
		Date Using			
December 31, 2021		Level 1	Level 2	Level 3	Total
December 31, 2022		December 31, 2022			
Assets	Assets				
Assets					
Assets					
Cash equivalents:					
Cash equivalents:					
Cash equivalents:					
Money market funds	Money market funds	\$297,034	\$ —	\$ —	\$297,034
		\$297,034	\$ —	\$ —	\$297,034
Money market funds					
Money market funds					
Liabilities	Liabilities				
Derivatives: Derivatives:					
Option to acquire a variable number of shares of Class A Common Stock		\$ —	\$13,200	\$ —	\$13,200
Derivatives:					
Derivatives:					
Embedded EPP derivatives	Embedded EPP derivatives	\$ —	\$ —	\$6,461	\$6,461
		\$ —	\$ —	\$6,461	\$6,461
Embedded EPP derivatives					
Embedded EPP derivatives					

**Money Market Funds** — Money market funds are valued using quoted market prices for identical securities and are therefore classified as Level 1 financial assets.

**Option to Acquire a Variable Number of Shares of Class A Common Stock** - We estimated the fair value of SK ecoplant's option to acquire a variable number of shares of Class A common stock (the "Option") using a Monte Carlo simulation model using a stochastic volatility parameter, which is calibrated and considers the observable implied volatility, the stock price of our Class A Common Stock and market interest rates. As the fair value is determined based on observable inputs, the Option to acquire a variable number of shares of Class A common stock is classified as a Level 2 financial liability. The fair value of the Option was reflected in accrued expenses and other current liabilities in our consolidated balance sheet as of December 31, 2021.

**SK ecoplant Notice to Exercise the Option to Acquire a Variable Number of Shares of Class A Common Stock** - On August 10, 2022, pursuant to the SPA, SK ecoplant notified us of its intent to exercise its option to purchase additional shares of our Class A common stock, pursuant to a Second Tranche Exercise Notice (as defined in the SPA), and if elected to purchase

13,491,701 shares at a purchase price of \$23.05 per share. Upon receipt of SK ecoplant's notice the Option was no longer accounted for as liability. Please refer to Note 17 - **SK ecoplant Strategic Investment** for details.

**Natural Gas Fixed Price Forward Contracts** - Our natural gas fixed price forward contracts were valued using a combination of factors including the counterparty's credit rating and estimates of future natural gas prices. The leveling of each financial instrument is reassessed at the end of each period and is based on pricing information received from third-party pricing sources. As of December 31, 2021, our remaining natural gas fixed price forward contracts had no fair value. In March 2022, these contracts expired. As of December 31, 2022, we did not have any natural gas fixed price forward contracts.

The following table provides the number and fair value of our natural gas fixed price forward contracts (in thousands):

	December 31, 2022		December 31, 2021	
	Number of Contracts (MMBTU) <sup>2</sup>	Fair Value	Number of Contracts (MMBTU) <sup>2</sup>	Fair Value
	<b>Liabilities:</b>			
Natural gas fixed price forward contracts (not under hedging relationships)	—	\$ —	88	\$ —

<sup>1</sup> Recorded in current liabilities and derivative liabilities in the consolidated balance sheets.

<sup>2</sup> One MMBTU is a traditional unit of energy used to describe the heat value (energy content) of fuels.

For the years ended December 31, 2022, 2021 and 2020, we recognized no unrealized gain/loss, an unrealized gain of \$1.1 million and an unrealized loss of \$0.1 million, respectively. We realized no gain/loss, gains of \$1.5 million, and gains of \$4.5 million for the years ended December 31, 2022, 2021 and 2020, respectively, on the settlement of these contracts in cost of revenue on our consolidated statements of operations.

**Embedded Escalation Protection Plan Derivative Liability in Sales Contracts** - We estimate the fair value of the embedded EPP derivatives in certain sales contracts using a Monte Carlo simulation model, which considers various potential electricity price curves over the sales contracts' terms. We use historical grid prices and available forecasts of future electricity prices to estimate future electricity prices. We have classified these derivatives as a Level 3 financial liability.

For The changes in the Level 3 financial liabilities during the years ended December 31, 2022 December 31, 2023, 2021 2022 and 2020 we recorded the fair value of the embedded EPP derivatives with no material unrealized gains or losses recorded in either of the three years ended December 31, 2022, 2021 and 2020 in our consolidated statements of operations.

	Natural Gas Fixed Price Forward Contracts		Embedded EPP Derivative Liability		Total
	\$	2,574	\$	5,542	
Liabilities at December 31, 2020	\$	2,574	\$	5,542	\$ 8,116
Changes in fair value		(2,574)		919	(1,655)
Liabilities at December 31, 2021		—		6,461	6,461
Changes in fair value		—		(566)	(566)
Liabilities at December 31, 2022	\$	—	\$	5,895	\$ 5,895

were as follows (in thousands):

	Embedded EPP Derivative Liability
Liabilities at December 31, 2021	\$ 6,461
Changes in fair value	(566)
Liabilities at December 31, 2022	5,895
EPP liability settlement	(3,160)
Changes in fair value	1,641
Liabilities at December 31, 2023	\$ 4,376

To estimate the liabilities related to the EPP contracts, an option pricing method was implemented through a Monte Carlo simulation, which considers various potential electricity price forward curves over the sales contracts' terms. We use historical grid prices and available forecasts to estimate future electricity prices. The grid pricing EPP guarantees that we provided in some of our sales arrangements represent an embedded derivative, with the initial value accounted for as a reduction in product revenue and any changes, reevaluated quarterly, in the fair market value of the derivative recorded in gain (loss) on revaluation of embedded derivatives.

The unobservable inputs were simulated based on the available values for avoided cost and cost of electricity as calculated for December 31, 2022 December 31, 2023 and 2021, 2022, using an expected growth rate of 7% and 7% over the contracts' life and volatility of 15% and 20%, respectively. The estimated growth rate and volatility were estimated based on the historical tariff changes for the period 2008 to 2022, 2023. Avoided cost is the transmission and distribution cost expressed in dollars per kilowatt hours avoided in the given year of the contract, calculated using the billing rates of the effective utility tariff applied during the year to the host account for which usage is offset by the generator. If the billing rates within the utility tariff change during the measurement period, the average of the amount of charge for each rate shall be weighted by the number of effective months for each amount.

The inputs listed above would have had a direct impact on the fair values of the **above EPP** derivatives if they were adjusted. Generally, **an increase in natural gas prices and a decrease in electric grid prices would each result in an increase in the estimated fair value of our EPP derivative liabilities.**

For the years ended December 31, 2023, 2022 and 2021, we recorded the fair value of the embedded EPP derivatives with no material unrealized gains or losses in either of the three years ended December 31, 2023, 2022 and 2021 in our consolidated statements of operations. The fair value of these derivatives was 4.4 million and 5.9 million as of December 31, 2023 and 2022, respectively.

In June 2023, per an EPP agreement with one of our customers, we paid \$3.2 million, which was recorded as a reduction to our balance of embedded EPP derivative liability as of December 31, 2023.

#### **Financial Assets and Liabilities and Other Items Not Measured at Fair Value on a Recurring Basis**

**Customer Receivables and Debt Instruments** The fair value for customer financing receivables is based on a discounted cash flow model, whereby the fair value approximates the present value of the receivables (Level 3). The senior secured notes, term loans and convertible senior notes are based on rates currently offered for instruments with similar maturities and terms (Level 3). The following table presents the estimated fair values and carrying values of **customer receivables and debt instruments** (in thousands):

	December 31, 2022		December 31, 2021		December 31, 2023	Net Carrying Value	Fair Value	December 31, 2022				
	Net Carrying Value	Fair Value	Net Carrying Value	Fair Value				Net Carrying Value	Fair Value			
<b>Customer receivables</b>												
Customer financing receivables												
Customer financing receivables	\$ —	\$ —	\$ 45,269	\$ 38,334								
Debt instruments												
Debt instruments												
Recourse:	Recourse:											
Recourse:												
Recourse:												
3% Green Convertible Senior Notes due June 2028												
3% Green Convertible Senior Notes due June 2028												
3% Green Convertible Senior Notes due June 2028												
3% Green Convertible Senior Notes due June 2028												
2.5% Green Convertible Senior Notes due August 2025												
2.5% Green Convertible Senior Notes due August 2025												
10.25% Senior Secured Notes due March 2027	10.25%	Senior Secured Notes due March 2027	60,960	60,472	68,968	72,573						
2.5% Green Convertible Senior Notes due August 2025	224,832	309,488	222,863	356,822								
Non-recourse:	Non-recourse:											
7.5% Term Loan due September 2028	—	—	29,006	35,669								

6.07% Senior Secured Notes due March 2030	—	—	73,262	83,251
4.6% Term Loan due October 2026				
4.6% Term Loan due October 2026				
4.6% Term Loan due October 2026				
4.6% Term Loan due April 2026				
3.04% Senior Secured Notes due June 2031	3.04% Senior Secured Notes due June 2031	125,787	117,028	132,631
				137,983

## 6. Balance Sheet Components

### Inventories

The components of inventory consist of the following (in thousands):

	December 31,		December 31,	
	December 31,		December 31,	
	2022	2021	2023	2022
Raw materials	\$165,446	\$ 80,809		
Raw materials				
Work-in-progress	44,660	31,893		
Finished goods	58,288	30,668		
	\$268,394	\$143,370		
	\$			
	=			

The inventory reserves were \$17.2 million \$18.7 million and \$13.9 million \$17.2 million as of December 31, 2022 December 31, 2023 and 2021, 2022, respectively.

### Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets consist of the following (in thousands):

	December 31,		December 31,	
	December 31,		December 31,	
	2023	2022	2022	2021
Prepaid workers compensation				
Receivables from employees				
from employees				
Prepaid workers compensation			\$ 6,553	\$ 5,463
Prepaid Managed Services			5,536	5,330
			4,405	2,480

Prepaid managed services			
Prepaid hardware and software maintenance		4,290	3,494
Tax receivables		3,676	1,518
Advance income tax provision			
Deferred expenses (Note 17)			
Deposits made		1,409	817
Interest receivable			
Prepaid rent			
Prepaid deferred commissions		1,002	724
Other prepaid expenses and other current assets			
		16,772	10,835
		\$ 43,643	\$ 30,661
		\$	\$

#### Property, Plant and Equipment, Net

Property, plant and equipment, net, consists of the following (in thousands):

	December 31,		December 31,	
	December 31,		December 31,	
	2022	2021	2023	2022
Energy Servers	Energy Servers	\$538,912	\$674,799	
Machinery and equipment	Machinery and equipment	145,555	110,600	
Construction-in-progress				
Leasehold improvements	Leasehold improvements	104,528	52,936	
Construction-in-progress		72,174	43,544	
Buildings	Buildings	49,240	48,934	
Computers, software and hardware	Computers, software and hardware	24,608	21,276	
Furniture and fixtures	Furniture and fixtures	9,581	8,607	
		944,598	960,696	
		774,534		
Less: accumulated depreciation	Less: accumulated depreciation	(344,184)	(356,590)	

	\$600,414	\$604,106
\$		

Depreciation expense related to property, plant and equipment was \$62.6 million, \$61.6 million \$53.4 million and \$52.2 \$53.4 million for the years ended December 31, 2022 December 31, 2023, 2021 2022 and 2020, 2021, respectively.

Property, plant and equipment under operating leases by the PPA Entities V was \$226.0 million and \$368.0 million \$226.0 million and accumulated depreciation for these assets was \$92.7 million and \$139.4 million \$92.7 million as of December 31, 2022. There were no property, plant and 2021, respectively, equipment under operating leases by PPA V as of December 31, 2023. Depreciation expense for these assets property, plant and equipment under operating leases by PPA V (sold in August 2023) was \$12.1 \$10.9 million \$23.5 million for the year ended December 31, 2023. Depreciation expense for property, plant and \$23.8 million equipment under operating leases by PPA V, PPA IV (sold in November 2022), and PPA IIIa (sold in June 2022) was \$12.1 million and \$23.5 million for the years ended December 31, 2022, and 2021, and 2020, respectively.

#### PPA IIIa Upgrade

In June 2022, we started a project (the "PPA IIIa Upgrade," the "PPA IIIa Repowering") to replace 9.8 megawatts of second-generation the Energy Servers (the "old PPA IIIa Energy Servers") at PPA IIIa Investment Company and Operating Company ("PPA IIIa")

with current generation Energy Servers (the "new PPA IIIa Energy Servers") (the "PPA IIIa Upgrade", the "PPA IIIa Repowering"). The replacement was substantially complete as in the fourth quarter of December 31, 2022, fiscal 2022. See Note 11 - 10 — Portfolio Financings for additional information.

#### PPA IV Upgrade

In November 2022, we started a project (the "PPA IV Upgrade," the "PPA IV Repowering") to replace 19.3 megawatts of second-generation the Energy Servers (the "old PPA IV Energy Servers") at PPA IV Investment Company and Operating Company ("PPA IV") with current generation Energy Servers (the "new PPA IV Energy Servers") (the "PPA IV Upgrade", the "PPA IV Repowering"). The replacement was ongoing substantially complete as of December 31, 2022 December 31, 2023. See Note 11 - 10 — Portfolio Financings for additional information.

#### Change in Estimate PPA V Upgrade

In June 2022 and November 2022, due August 2023, we started a project (the "PPA V Upgrade," the "PPA V Repowering") to the replacement replace 37.1 megawatts of old the Energy Servers as part of the (the "old PPA IIIa and V Energy Servers") at PPA IV Repowering, respectively, we revised the expected useful life of the old Energy Servers. As a result, the expected useful life of old V with current generation Energy Servers decreased from 15 years to approximately 0.5 years. We recognized accelerated depreciation (the "new PPA V Energy Servers"). The replacement was complete in the first quarter of \$0.5 million in electricity cost of revenue on the revised carrying amount of the old Energy Servers after impairment loss in our consolidated statements of operations. There is no effect from this change in accounting estimate on future periods, fiscal 2024. See Note 10 — Portfolio Financings for additional information.

#### Other Long-Term Assets

Other long-term assets consist of the following (in thousands):

	December 31,			December 31,	
	2022	2021		2023	2022
	December 31,			December 31,	
	2023			2023	2022
Deferred commissions	Deferred commissions	\$ 8,320	\$ 7,569		
Deferred expenses (Note 17)					
Long-term lease receivable	Long-term lease receivable	8,076	7,953		
Deposits made					
Prepaid managed services					
Deferred tax asset					
Prepaid insurance	Prepaid insurance	4,047	9,534		
Deposits made		2,672	1,923		

Prepaid Managed Services	2,373	3,010
Deferred tax asset	1,151	955
Investments in subsidiaries	—	1,819
Prepaid and other long-term assets	13,566	8,310
	<u>\$ 40,205</u>	<u>\$41,073</u>

Prepaid and other long-term assets

Prepaid and other long-term assets	—
	<u>\$</u>
	<u>=</u>

#### Accrued Warranty and Product Performance Liabilities

Accrued warranty liabilities consist of the following (in thousands):

	December 31,		December		December 31,
	31,		31,		
	2022	2021	2023	2022	
Product performance	Product performance	\$16,901	\$10,785		
Product warranty	Product warranty	431	961		
		<u>\$17,332</u>	<u>\$11,746</u>		
		<u>\$</u>	<u>=</u>		
		<u>\$</u>	<u>=</u>		
		<u>\$</u>	<u>=</u>		
		<u>\$</u>	<u>=</u>		

Changes in the product warranty and product performance liabilities were as follows (in thousands):

Balances at December 31, 2020	\$ 10,154
Accrued warranty, net	11,049
Warranty expenditures during the year	(9,457)
Balances at December 31, 2021	\$ 11,746
Accrued warranty and product performance liabilities, net	17,719
Warranty and product performance expenditures during the year	(12,133)
Balances at December 31, 2022	\$ 17,332
Accrued warranty and product performance liabilities, net	27,845
Warranty and product performance expenditures during the year	(25,851)
Balances at December 31, 2023	\$ 19,326

#### Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consist of the following (in thousands):

	December 31,		December		December 31,
	31,		31,		
	2022	2021	2023	2022	

Compensation and benefits	Compensation and benefits	\$ 48,156	\$ 38,222
General invoice and purchase	General invoice and purchase		
order accruals	order accruals	44,010	23,706
Delaware grant		9,495	—
Sales tax liabilities			
Sales-related liabilities			
Accrued installation	Accrued installation	7,905	13,968
Sales-related liabilities		7,147	6,040
Sales tax liabilities		6,172	1,491
Interest payable			
Accrued restructuring costs (Note 12)			
Provision for income tax			
Accrued consulting expenses			
Accrued legal expenses			
Finance lease liability			
Delaware grant (Note 13)			
PPA IV	PPA IV		
Upgrade financing obligations	Upgrade financing obligations	6,076	—
Accrued legal expenses		4,403	1,765
Interest payable		3,128	2,159
Current portion of derivative liabilities	Current portion of derivative liabilities	2,596	6,059
Accrued consulting expenses		1,390	1,731
Provision for income tax		1,140	479
Finance lease liability		1,024	863
Option to acquire a variable number of shares of Class A			
Common Stock		—	13,200
Other	Other	1,541	4,455
		<u>\$144,183</u>	<u>\$114,138</u>
		<u>\$</u>	<u>=</u>

#### Preferred Stock

As of December 31, 2022 and December 31, 2021 December 31, 2023, we had 20,000,000 shares of preferred stock authorized. 13,491,701 of these shares were designated as Series B RCPS and 10,000,000 were converted to Class A common stock as of September 23, 2023, as a result of the SK ecoplant Second Tranche Closing. As of December 31, 2022, we had 20,000,000 shares of preferred stock authorized, respectively, authorized. 10,000,000 of which 10,000,000 these shares were designated as Series A redeemable

convertible preferred stock, stock and were converted to Class A common stock as of November 8, 2022, as a result of the SK ecoplant Initial Investment. For additional information, please see Note 17—SK ecoplant Strategic Investment.

The preferred stock had \$0.0001 par value. There were no shares of preferred stock issued or outstanding as of December 31, 2022 December 31, 2023 and other than the Series December 31, 2022.

#### Conversion of Class B Common Stock

On July 27, 2023, in accordance with our Restated Certificate of Incorporation, each share of our Class B common stock entitled to ten votes per share automatically converted into one share of our Class A redeemable convertible common stock as of December 31, 2021, entitled to one vote per share.

## 7. Outstanding Loans and Security Agreements

The following is a summary of our debt as of December 31, 2022 December 31, 2023 (in thousands, except percentage data):

	Unpaid Net Carrying Value								Unpaid Principal	Net Carrying Value	Interest Rate		
	Principal Balance	Current	Long-Term	Total	Interest Rate	Maturity Dates	Entity	Recourse					
10.25% Senior Secured Notes due March 2027	\$ 61,653	\$ 12,716	\$ 48,244	\$ 60,960	10.25%	2027	Company	Yes					
3% Green Convertible Senior Notes due June 2028													
3% Green Convertible Senior Notes due June 2028													
3% Green Convertible Senior Notes due June 2028									632,500	—	615,205	615,205	
2.5% Green Convertible Senior Notes due August 2025	2.5% Green Convertible Senior Notes due August 2025	230,000	—	224,832	224,832	2.5%	2025	Company	Yes	230,000	—	226,801	226,801
Total recourse debt	Total recourse debt	291,653	12,716	273,076	285,792								2.5%
3.04% Senior Secured Notes due June 30, 2031													
4.6% Term Loan due October 2026													
4.6% Term Loan due October 2026													
4.6% Term Loan due October 2026										3,085	—	3,085	3,085
4.6% Term Loan due April 2026										1,542	—	1,542	1,542
Total non-recourse debt	Total non-recourse debt	127,430	13,307	112,480	125,787								
Total debt	Total debt	\$ 419,083	\$ 26,023	\$ 385,556	\$ 411,579								
Total debt													
Total debt													

The following is a summary of our debt as of December 31, 2021 December 31, 2022 (in thousands, except percentage data):

	Unpaid Net Carrying Value								Unpaid Principal	Net Carrying Value	Interest Rate	
	Principal Balance	Current	Long-Term	Total	Interest Rate	Maturity Dates	Entity	Recourse				

10.25% Senior Secured Notes due March 2027	10.25% Senior Secured Notes due March 2027	\$ 70,000	\$ 8,348	\$ 60,620	\$ 68,968	10.25%	2027	March	Company	Yes
10.25% Senior Secured Notes due March 2027										
10.25% Senior Secured Notes due March 2027									\$ 61,653	\$ 12,716
2.5% Green Convertible Senior Notes due August 2025	2.5% Green Convertible Senior Notes due August 2025	230,000	—	222,863	222,863	2.5%	2025	August	230,000	—
Total recourse debt	Total recourse debt	300,000	8,348	283,483	291,831		2025	Company	Yes	224,832
3.04% Senior Secured Notes due June 30, 2031	3.04% Senior Secured Notes due June 30, 2031	134,644	9,376	123,255	132,631	3.04%	June 2031	PPA V	No	224,832
7.5% Term Loan due September 2028		31,070	3,436	25,570	29,006	7.5%	2028	PPA IIIa	No	224,832
6.07% Senior Secured Notes due March 2030		73,955	4,671	68,591	73,262	6.07%	2030	PPA IV	No	2.5%
3.04% Senior Secured Notes due June 30, 2031										
3.04% Senior Secured Notes due June 30, 2031									127,430	13,307
Total non-recourse debt	Total non-recourse debt	239,669	17,483	217,416	234,899					112,480
Total debt	Total debt	\$539,669	\$25,831	\$500,899	\$526,730					125,787
Total debt										3.04%
Total debt										

Recourse debt refers to debt that we have an obligation to pay. Non-recourse debt refers to debt that is recourse to only our subsidiaries, subsidiaries (i.e., PPAs and Korean JV). The differences between the unpaid principal balances and the net carrying values apply to deferred financing costs. We and all of our subsidiaries were in compliance with all financial covenants as of December 31, 2022 December 31, 2023 and December 31, 2021 December 31, 2022.

#### Recourse Debt Facilities

##### 10.25% 3% Green Convertible Senior Secured Notes due March 2027 - June 2028

On May 1, 2020 May 16, 2023, we issued \$70.0 million of 10.25% Senior Secured the 3% Green Notes in a private placement (the "10.25% Senior Secured Notes" an aggregate principal amount of \$632.5 million due on June 1, 2028, unless earlier repurchased, redeemed or converted, less an initial purchasers' discount of \$15.8 million and other issuance costs of \$3.9 million (together, the "3% Green Notes Transaction Costs"), resulting in net proceeds of \$612.8 million. The 10.25% Senior Secured 3% Green Notes were issued pursuant to, and are governed by, an indenture (the "Senior Secured Notes Indenture" "Indenture") entered into among us, the guarantor party thereto and U.S. Bank National Association, in its capacity, dated as trustee and collateral agent. The 10.25% Senior Secured Notes are secured by certain of our operations and maintenance agreements that previously were part of the security for the 6% Convertible Notes. The 10.25% Senior Secured Notes are supported by a \$150.0 million indenture May 16, 2023, between us and U.S. Bank Trust Company, National Association, which contained as Trustee, in private placements to qualified institutional buyers pursuant to Rule 144A of the Securities Act of 1933, as amended (the "Securities Act").

Pursuant to the purchase agreement among us and the representatives of the initial purchasers of the 3% Green Notes, we granted the initial purchasers an accordion feature for option to purchase up to an additional \$80.0 million \$82.5 million aggregate principal amount of the 3% Green Notes (the "Greenshoe Option"). The 3% Green Notes issued on May 16, 2023, included \$82.5 million aggregate principal amount pursuant to the full exercise by the initial purchasers of the Greenshoe Option.

The 3% Green Notes are senior, unsecured obligations accruing interest at a rate of 3% per annum, payable semi-annually in arrears on June 1 and December 1 of each year, beginning on December 1, 2023.

We may not redeem the 3% Green Notes prior to June 5, 2026, subject to a partial redemption limitation. We may elect to redeem, at face value, all or any portion of the 3% Green Notes at any time, and from time to time, on or after June 5, 2026, and on or before the forty-sixth scheduled trading day immediately before the maturity date, provided the share price for our Class A common stock exceeds 130% of the conversion price at redemption.

Before March 1, 2028, the noteholders have the right to convert their 3% Green Notes only upon the occurrence of certain events, including satisfaction of a condition relating to the closing price of our common stock (the "Closing Price Condition") or the trading price of the 3% Green Notes (the "Trading Price Condition"), a redemption event, or other specified corporate events. If the Closing Price Condition is met on at least 20 (whether or not consecutive) of the last 30 consecutive trading days in any calendar quarter, and only during such calendar quarter, the noteholders may convert their 3% Green Notes at any time during the immediately following quarter, commencing after the calendar quarter ending on September 30, 2023, subject to partial redemption limitation. The Closing Price Condition was not met during the three months ended September 30, 2023, and accordingly, the noteholders could not convert their 3% Green Notes during the quarter ended December 31, 2023.

Subject to the Trading Price Condition, the noteholders may convert their 3% Green Notes during the five business days immediately after any five consecutive trading day period in which the trading price per \$1,000 principal amount of the 3% Green Notes, as determined following a request by a holder of the 3% Green Notes, for each day of that period is less than 98% of the product of the closing price of our common stock and the then applicable conversion rate. From and after March 1, 2028, the noteholders may convert their 3% Green Notes at any time at their election until the close of business on the second scheduled trading day immediately before the maturity date. Should the noteholders elect to convert their 3% Green Notes, we may elect to settle the conversion by paying or delivering, as applicable, cash, shares of our Class A common stock, \$0.0001 par value per share, or a combination thereof, at our election.

The initial conversion rate is 53.0427 shares of Class A common stock per \$1,000 principal amount of notes, which represents an initial conversion price of approximately \$18.85 per share of Class A common stock. The conversion rate and conversion price are subject to customary adjustments upon the occurrence of certain events. Also, we may increase the conversion rate at any time if our Board of Directors determines it is in the best interests of the Company or to avoid or diminish income tax to holders of common stock. In addition, if certain corporate events that constitute a Make-Whole Fundamental Change, as defined below, occur, then the conversion rate applicable to the conversion of the 3% Green Notes may, in certain circumstances, be increased by up to 22.5430 shares of Class A common stock per \$1,000 principal amount of notes for a specified period of time. On December 31, 2023, the maximum number of shares into which the 3% Green Notes could have been issued on or prior to the date of conversion if the conversion features were triggered was 47,807,955 shares of Class A common stock.

According to September 27, 2021. We chose not to exercise this accordion feature, which has already expired.

Interest on the 10.25% Senior Secured Notes is payable quarterly, commencing June 30, 2020. The 10.25% Senior Secured Notes Indenture, contains customary a Make-Whole Fundamental Change means (i) a Fundamental Change, that includes certain change-of-control events of default and covenants relating to among other things, us, certain business combination transactions involving us and certain delisting events with respect to our Class A common stock, or (ii) the incurrence sending of new debt, affiliate transactions, liens a redemption notice with respect to the 3% Green Notes.

The 3% Green Notes contain certain customary provisions relating to the occurrence of Events of Default, as defined in the Indenture. If an Event of Default involving bankruptcy, insolvency or reorganization events with respect to us occurs, then the principal amount of, and restricted payments. Commencing all accrued and unpaid interest on, March 27, 2022, we may redeem all of the 10.25% Senior Secured 3% Green Notes then outstanding will immediately become due and payable without any further action or notice by any person. However, notwithstanding the foregoing, we may elect, at our option, that the sole remedy for an Event of Default relating to certain failures by us to comply with certain reporting covenants in the Indenture consists exclusively of the right of the noteholders to receive special interest on the 3% Green Notes for up to 180 days at a price equal specified rate per annum not exceeding 0.50% on the principal amount of the 3% Green Notes.

The 3% Green Notes Transaction Costs were recorded as debt issuance costs and presented a reduction to 108% the 3% Green Notes on our consolidated balance sheets and are amortized to interest expense at an effective interest rate of 3.8%.

Total interest expense recognized related to the 3% Green Notes for the year ended December 31, 2023, was \$14.4 million, and was comprised of contractual interest expense of \$12.0 million and amortization of the initial purchasers' discount and other issuance costs of 2.4 million. We have not recognized any special interest expense related to the 3% Green Notes to date. The amount of unamortized debt issuance costs as of December 31, 2023, was \$17.3 million.

Although the 3% Green Notes contain embedded conversion features, we account for the 3% Green Notes in its entirety as a liability. As of December 31, 2023, the net carrying value of the 3% Green Notes was classified as a long-term liability in our consolidated balance sheets.

#### Capped Calls

On May 11, 2023, in connection with the pricing of the 3% Green Notes, and on May 15, 2023, in connection with initial purchasers' exercise of the Greenshoe Option, we entered into privately negotiated capped call transactions (the "Capped Calls") with certain counterparties (the "Option Counterparties"). The Capped Calls cover, subject to customary anti-dilution adjustments substantially similar to those applicable to the 3% Green Notes, the aggregate number of shares of our Class A common stock that initially underlie the 3% Green Notes, and are expected generally to reduce potential dilution to holders of our common stock upon any conversion of the 3% Green Notes and at our election (subject to certain conditions) offset any cash payments we would be required to make in excess of the principal amount of converted 3% Green Notes.

The Capped Calls expire on June 1, 2028, and are exercisable only at maturity, but may be early terminated in various circumstances, including if the 10.25% Senior Secured 3% Green Notes plus are early converted or repurchased. The default settlement method for the Capped Calls is net share settlement. However, we may elect to settle the Capped Calls in cash.

The Capped Calls have an initial strike price of approximately \$18.85 per share of Class A common stock, subject to certain adjustments. The strike price of \$18.85 corresponds to the initial conversion price of the 3% Green Notes. The number of shares underlying the Capped Calls is 33,549,508 shares of Class A common stock. The cap price of the Capped Calls is initially \$26.46 per share of Class A common stock, which represents a premium of 100% over the last reported sale price of our common stock on May 11, 2023.

accrued The Capped Calls are freestanding financial instruments. We used a portion of the proceeds from the issuance of the 3% Green Notes to pay for the Capped Calls' premium. As the Capped Calls meet certain accounting criteria, they are recorded in stockholders' equity and unpaid interest, with such optional redemption prices decreasing to 104% on and after March 27, 2023, 102% on and after March 27, 2024 and 100% on and after March 27, 2026. If we experience a change are not accounted for as derivatives. The cost of control, we must offer \$54.5 million incurred to purchase for cash all or any part of each holder's 10.25% Senior Secured Notes at the Capped Calls was recorded as a purchase price equal reduction to 101% of the principal amount of the 10.25% Senior Secured Notes, plus accrued additional paid-in capital on our consolidated balance sheets and unpaid interest. The non-current balance of the outstanding unpaid principal of the 10.25% Senior Secured Notes was \$48.9 million and \$61.7 million as of December 31, 2022 and 2021, respectively. The current balance of the outstanding unpaid principal of the 10.25% Senior Secured Notes was \$12.7 million and \$8.3 million as of December 31, 2022 and 2021, respectively. will not be remeasured.

#### 2.5% Green Convertible Senior Notes due August 2025

In August 2020, we issued \$230.0 million aggregate principal amount of our 2.5% Green Convertible Senior Notes due August 2025 (the "Green 2.5% Green Notes"), in an aggregate principal amount of \$230.0 million, unless earlier repurchased, redeemed or converted. The principal amount of the Green Notes is \$230.0 million, converted, less an initial purchaser's discount of \$6.9 million and other issuance costs of \$3.0 million (together, the "2.5% Green Notes Transaction Costs"), resulting in net proceeds of \$220.1 million.

The Green Notes are senior, unsecured obligations accruing interest at a rate of 2.5% per annum, payable semi-annually in arrears on February 15 and August 15 of each year, beginning on February 15, 2021.

We may not redeem the Green Notes prior to August 21, 2023. We may elect to redeem, at face value, all or any portion of the 2.5% Green Notes at any time on or after August 21, 2023, and on or before the twenty-sixth trading day immediately before the maturity date, provided certain conditions are met.

Before May 15, 2025, the noteholders have the right to convert their 2.5% Green Notes only upon the occurrence of certain events, including a conversion upon satisfaction of a condition relating to the closing price of our common stock (the "Closing Closing Price Condition"). Condition. If the Closing Price Condition is met on at least 20 of the last 30 consecutive trading days in any quarter, the noteholders may convert their 2.5% Green Notes at any time during the immediately following quarter. The Closing Price Condition was not met during the three months ended September 30, 2022 September 30, 2023, and accordingly, the noteholders could not convert their 2.5% Green Notes at any time during the quarter ended December 31, 2022, but they did not elect to do so, December 31, 2023. From and after May 15, 2025, the noteholders may convert their 2.5% Green Notes at any time at their election until the close of business on the second trading day immediately before the maturity date. Should the noteholders elect to convert their 2.5% Green Notes, we may elect to settle the conversion by paying or delivering, as applicable, cash, shares of our Class A common stock or a combination thereof.

The initial conversion rate is 61.6808 shares of Class A common stock per \$1,000 principal amount of notes, which represents an initial conversion price of approximately \$16.21 per share of Class A common stock. The conversion rate and conversion price are subject to customary adjustments upon the occurrence of certain events. In addition, if certain corporate events that constitute a "Make-Whole Fundamental Change", as defined, occur, the conversion rate will, applicable to the conversion of the 2.5% Green Notes may, in certain circumstances, be increased by up to 15.4202 shares of Class A common stock per \$1,000 principal amount of notes for a specified period of time.

We adopted ASU 2020-06 as On December 31, 2023, the maximum number of January 1, 2021 using shares into which the modified retrospective transition method. Upon adoption, we combined the previously separated equity component of the 2.5% Green Notes with could have been potentially converted if the liability component, which is now together classified conversion features were triggered was 17,733,230 shares of Class A common stock.

The 2.5% Green Notes Transaction Costs were recorded as debt thereby eliminating the subsequent amortization of the debt discount as interest expense. Similarly, the portion of issuance costs previously allocated and presented a reduction to equity was reclassified the 2.5% Green Notes on our consolidated balance sheets and are amortized to debt and amortized as interest expense. Accordingly, we recorded a net decrease to accumulated deficit expense at an effective interest rate of \$5.3 million, a decrease to additional paid-in capital of \$126.8 million, and an increase to recourse debt, non-current, of approximately \$121.5 million upon adoption as of January 1, 2021 3.5%.

Interest on the 2.5% Green Notes for the years ended December 31, 2022 December 31, 2023, 2021 2022 and 2020 2021, was \$7.7 million, \$7.7 million and \$2.9 \$7.7 million, respectively, including amortization of issuance costs of \$2.0 million, \$2.0 million and \$0.8 \$2.0 million, respectively. The amount of unamortized debt issuance costs as of December 31, 2023 and 2022, was \$3.2 million and \$5.2 million, respectively.

#### 10.25% Senior Secured Notes due March 2027

On May 1, 2020, we issued \$70.0 million of 10.25% Senior Secured Notes in a private placement (the "10.25% Senior Secured Notes"). The 10.25% Senior Secured Notes were governed by an indenture (the "Senior Secured Notes Indenture") entered into among us, the guarantor party thereto and U.S. Bank National Association, in its capacity as trustee and collateral agent. The 10.25% Senior Secured Notes were secured by certain of our operations and maintenance agreements. The 10.25% Senior Secured Notes were supported by a \$150.0 million indenture between us and U.S. Bank National Association, which contained an accordion feature for an additional \$80.0 million of notes that could have been issued on or prior to September 27, 2021. We chose not to exercise this accordion feature, which has already expired.

Interest on the 10.25% Senior Secured Notes was payable quarterly, commencing June 30, 2020. The 10.25% Senior Secured Notes Indenture contained customary events of default and covenants relating to, among other things, the incurrence of new debt, affiliate transactions, liens and restricted payments. Commencing on March 27, 2022, we had the right to redeem all of the 10.25% Senior Secured Notes at a price equal to 108% of the principal amount of the 10.25% Senior Secured Notes plus accrued and unpaid interest, with such optional redemption prices decreasing to 104% on and after March 27, 2023, 102% on and after March 27, 2024, and 100% on and after March 27, 2026. Had we experienced a change of control, we must have offered to purchase for cash all or any part of each holder's 10.25% Senior Secured Notes at a purchase price equal to 101% of the principal amount of the 10.25% Senior Secured Notes, plus accrued and unpaid interest.

The current and non-current balances of the outstanding unpaid principal of the 10.25% Senior Secured Notes were \$12.7 million and \$48.9 million as of December 31, 2022, respectively. The total outstanding unpaid principal balance of \$57.6 million on the 10.25% Senior Secured Notes due March 2027 was called and retired at 104% on June 1, 2023. The 4% premium of \$2.3 million and unpaid accrued interest of \$1.0 million were included in the final payment to the noteholders. We recognized a loss on extinguishment of debt of \$2.9 million as a result of redemption of the 10.25% Senior Secured Notes.

Interest on the 10.25% Senior Secured Notes for the years ended December 31, 2023, 2022 and 2021, was \$2.6 million, \$7.0 million and \$7.2 million, respectively, including amortization of issuance costs of 0.1 million, 0.3 million and 0.4 million, respectively.

#### Non-recourse Debt Facilities

##### 3.04% Senior Secured Notes due June 2031

In November 2021, PPA V issued senior secured notes in an aggregate principal amount of \$136.0 million due June 2031. The note bears notes bore a fixed rate of 3.04% per annum payable quarterly. The proceeds from the 3.04% Senior Secured Notes due June 2031 were utilized to (i) repay all obligations of the existing LIBOR + 2.5% Term Loan due December 2021, including an outstanding principal balance of \$109.1 million, accrued interest of \$0.1 million, and fees required to terminate associated interest rate swaps of \$11.5 million, (ii) pay the required premium for the PPA V production insurance of \$6.5 million, (iii) and pay related fees and expenses related to the refinancing totaling \$2.1 million, resulting in a net cash flow of \$6.7 million. The note purchase agreement requires required us to maintain a debt service reserve, the balance of which was \$8.0 million and \$8.0 \$8.6 million as of December 31, 2022 and 2021, respectively, out of which \$8.0 million was included as part of long-term restricted cash and \$0.6 million was included as part of current restricted cash in the consolidated balance sheets. The loan was secured by all assets of PPA V.

On August 24, 2023, as part of the PPA V Upgrade, we paid off the outstanding balance and related accrued interest of \$118.5 million and \$0.5 million, respectively, of our 3.04% Senior Secured Notes due June 2031, and recognized a loss on extinguishment of debt of \$1.4 million (for additional information, please see Note 10 —*Portfolio Financings*). The debt service reserve of \$8.6 million was reclassified from restricted cash to cash and cash equivalents at the time of extinguishment of debt.

#### 7.5% Term Loan due September 2028

On June 14, 2022, as part of the PPA IIIa Upgrade, we paid off the outstanding balance and related accrued interest of \$30.2 million and \$0.4 million, respectively, and recognized a loss on extinguishment of debt of \$4.2 million. The debt service reserve of \$3.6 million was reclassified from restricted cash to cash and cash equivalents at the time of extinguishment of debt.

#### 6.07% Senior Secured Notes due March 2030

On November 22, 2022, as part of the PPA IV Upgrade, we paid off the outstanding balance and related accrued interest of \$70.5 million and \$0.4 million, respectively, and recognized a loss on extinguishment of debt of \$4.7 million. The debt service reserve of \$9.1 million was reclassified from restricted cash to cash and cash equivalents at the time of extinguishment of debt.

#### 4.6% Term Loans due April 2026 and October 2026

On April 11, 2023 and October 5, 2023, Korean JV entered into three-year \$1.5 million and three-year \$3.1 million credit agreements with SK ecoplant, respectively, to help fund its working capital. Both loans bear a fixed interest rate of 4.6% payable upon maturity along with the principle. Neither loan requires us to maintain a debt service reserve.

#### Repayment Schedule and Interest Expense

The following table presents details of our outstanding loan principal repayment schedule as of December 31, 2022 December 31, 2023 (in thousands):

2023		\$ 26,023
2024	2024	25,428
2025	2025	258,061
2026	2026	30,641
2027	2027	17,772
2028		
Thereafter	Thereafter	61,158
		\$ 419,083
		\$

Interest expense of \$108.3 million, \$53.5 million, \$69.0 million and \$78.8 \$69.0 million for the years ended December 31, 2022 December 31, 2023, 2021 2022 and 2020, 2021, respectively, was recorded in interest expense on the consolidated statements of operations. This interest interest expense includes interest expense - related parties of \$2.5 million for the year ended December 31, 2020. We did not incur any interest expense - related parties during December 31, 2023 included \$52.8 million as a result of the years ended December 31, 2022 and 2021.

## 8. Derivative Financial Instruments

#### Option to Acquire a Variable Number of Shares of Class A Common Stock

In December 2021, we provided SK ecoplant with an option to acquire a variable number of shares of Class A common stock (the "Option"). We concluded that the Option is a freestanding financial instrument that should be separately recorded at fair value on the date the SPA was executed. We determined the fair value of the Option on that date to be \$9.6 million. We revalued the Option to its fair value of \$13.2 million as of December 31, 2021.

On August 10, 2022, pursuant to the SPA, SK ecoplant notified us of its intent to exercise its option to purchase additional shares of our Class A common stock, pursuant to a Second Tranche Exercise Notice (as defined in the SPA), and it elected to purchase 13,491,701 shares at a purchase price of \$23.05 per share. Please refer to Closing. For additional information, please see Note 17 — SK ecoplant Strategic Investment for more detail of this transaction.

#### Cash Flow Hedges

As of December 31, 2021, we had settled our interest rate swaps, which had been designated as cash flow hedges. There were no cash flow hedges as of December 31, 2022. The changes in fair value of the interest rate swaps designated as cash flow hedges and the amounts recognized in accumulated other comprehensive loss and in earnings were as follows during the year ended December 31, 2021 (in thousands):

	Year Ended December 31, <u>2021</u>
Beginning balance	\$ 15,989
Gain recognized in other comprehensive loss	(2,714)
Amounts reclassified from other comprehensive loss to earnings	(12,529)
Net gain recognized in other comprehensive loss	(15,243)
Gain recognized in earnings	(746)
<b>Ending balance</b>	<b>\$ —</b>

#### **Embedded EPP Derivatives in Sales Contracts**

We estimate the fair value of the embedded EPP derivatives in certain of the contracts with our customers using a Monte Carlo simulation model, which considers various potential electricity price forward curves over the sales contracts' terms. We use historical grid prices and available forecasts of future electricity prices to estimate future electricity prices. The grid pricing EPP guarantees that we provided in some of our sales arrangements represent an embedded derivative, with the initial value accounted for as a reduction in product revenue and any changes, reevaluated quarterly, in the fair market value of the derivative recorded in gain (loss) on revaluation of embedded derivatives.

For the years ended December 31, 2022, 2021 and 2020 we recorded the fair value of the embedded EPP derivatives with no material unrealized gains or losses recorded in either of the three years ended December 31, 2022, 2021 and 2020 in our consolidated statements of operations. The fair value of these derivatives was \$5.9 million and \$6.5 million as of December 31, 2022 and 2021, respectively.

#### **9.8. Leases**

##### **Facilities, Energy Servers, and Vehicles**

We lease most of our facilities, the Energy Servers, and vehicles under operating and finance leases that expire at various dates through February 2036, November 2037. We lease various manufacturing facilities in California and Delaware. Our Sunnyvale, California manufacturing facility lease was entered into in April 2005 and expires in December 2023. In June 2020, March 2021 and June 2022, we signed leases in Fremont, California that will expire in 2027, 2036 and 2028, respectively, to replace our manufacturing facilities in Sunnyvale and Mountain View, California. These existing plants in California together comprise approximately 421,000 square feet of space. In 2021, we extended the lease term for our headquarters in San Jose, California to 2031 and leased three additional floors. We lease additional office space as field offices in the United States U.S. and around the world including in China, India, Germany, Japan, the Republic of Korea and Taiwan.

Some of these the lease arrangements have free rent periods or escalating rent payment provisions. We recognize lease cost under such arrangements on a straight-line basis over the life of the leases. For the years ended December 31, 2022 December 31, 2023, 2022 and 2021, and 2020, rent expense expenses for all occupied facilities was \$21.4 million, \$16.0 million were \$23.0 million, \$21.4 million and \$9.9 million, \$16.0 million, respectively.

At inception of the contract, we assess whether a contract is a lease based on whether the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. Lease classification, measurement, and recognition are determined at lease commencement, which is the date the underlying asset is available for use by us. The accounting classification of a lease is based on whether the arrangement is effectively a financed purchase of the underlying asset (financing lease) or not (operating lease). Our operating leases are comprised primarily of leases for facilities, the Energy Servers, office buildings, and vehicles, and our financing leases are comprised primarily of vehicles.

Our leases have lease terms ranging from less than 1 year to 15 years, some of which include options to extend the leases. The lease term is the non-cancelable period of the lease and includes options to extend the lease when it is reasonably certain that an option will be exercised.

Lease liabilities are measured at the lease commencement date as the present value of future lease payments. Lease right-of-use assets are measured as the lease liability plus unamortized initial direct costs and prepaid (accrued) lease payments less unamortized balance lease incentives received. In measuring the present value of the future lease payments, the discount rate for the lease is the rate implicit in the lease unless that rate cannot be readily determined. In that case, the lessee is required to use its incremental borrowing rate. Incremental Borrowing Rate ("IBR"). In computing our lease liabilities, we use the incremental borrowing rate IBR based on the information available on the commencement date using an estimate of company-specific rate in the United States U.S. on a collateralized basis and consistent with the lease term for each lease. The lease term is the non-cancelable period of the lease and includes options to extend or terminate the lease when it is reasonably certain that an option will be exercised.

Operating and financing lease right-of-use assets and lease liabilities for facilities, Energy Servers, and vehicles as of December 31, 2022 December 31, 2023 and 2021 2022 were as follows (in thousands):

Years Ended December 31,		Years Ended December 31,	
2022	2021	2023	2022
Years Ended December 31,		Years Ended December 31,	
2023		2022	
<b>Operating Leases:</b>	<b>Operating Leases:</b>	<b>Operating Leases:</b>	<b>Operating Leases:</b>

<b>Operating Leases:</b>					
Operating lease right-of-use assets, net <sup>1, 2</sup>					
Operating lease right-of-use assets, net <sup>1, 2</sup>					
Operating lease right-of-use assets, net <sup>1,</sup>	Operating lease right-of-use assets, net <sup>1,</sup>	\$ 126,955	\$ 106,660		
<sup>2</sup>	<sup>2</sup>				
Current operating lease liabilities	Current operating lease liabilities	(16,227)	(13,101)		
Non-current operating lease liabilities	Non-current operating lease liabilities	(132,363)	(106,187)		
Total operating lease liabilities	Total operating lease liabilities	\$ (148,590)	\$ (119,288)		
<b>Finance Leases:</b>	<b>Finance Leases:</b>				
<b>Finance Leases:</b>					
Finance lease right-of-use assets, net <sup>2, 3, 4</sup>					
Finance lease right-of-use assets, net <sup>2, 3, 4</sup>					
Finance lease right-of-use assets, net <sup>2,</sup>	Finance lease right-of-use assets, net <sup>2,</sup>	\$ 2,824	\$ 2,944		
<sup>3, 4</sup>	<sup>3, 4</sup>				
Current finance lease liabilities <sup>5</sup>	Current finance lease liabilities <sup>5</sup>	(1,024)	(863)		
Non-current finance lease liabilities <sup>6</sup>	Non-current finance lease liabilities <sup>6</sup>	(1,971)	(2,157)		
Total finance lease liabilities	Total finance lease liabilities	\$ (2,995)	\$ (3,020)		
Total lease liabilities	Total lease liabilities	\$ (151,585)	\$ (122,308)		

<sup>1</sup> These assets primarily include leases for facilities, **the** Energy Servers, and vehicles.

<sup>2</sup> Net of accumulated amortization.

<sup>3</sup> These assets primarily include leases for vehicles.

<sup>4</sup> Included in property, plant and equipment, net in the consolidated balance sheets.

<sup>5</sup> Included in accrued expenses and other current liabilities in the consolidated balance sheets.

<sup>6</sup> Included in other long-term liabilities in the consolidated balance sheets.

The components of our facilities, Energy Servers, and vehicles' lease costs for the years ended December 31, 2022 December 31, 2023, 2021, 2022 and 2020 2021 were as follows (in thousands):

		Years Ended					
		December 31,					
		2022	2021	2020			
		Years Ended					
		December 31,					
		Years Ended					
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Weighted average discount rate:	Weighted average discount rate:					
Operating leases	Operating leases	10.3 %	9.6 %			
Operating leases				10.6 %		10.3 %
Operating leases					9.5 %	
Finance leases	Finance leases	6.9 %	7.6 %	Finance leases		6.9 %

Future lease payments under lease agreements for our facilities, Energy Servers and vehicles as of December 31, 2022 December 31, 2023 were as follows (in thousands):

	Operating Leases	Operating Leases		Finance Leases	
		Operating Leases	Finance Leases		
2023		\$ 30,058	\$ 1,250		
2024					
2024	2024	26,145	1,076		
2025	2025	26,879	590		
2026	2026	26,743	371		
2027	2027	25,442	180		
2028					
Thereafter	Thereafter	95,980	11		
Total minimum lease payments	Total minimum lease payments	231,247	3,478		
Less: amounts representing interest or imputed interest	Less: amounts representing interest or imputed interest	(82,657)	(483)		
Present value of lease liabilities	Present value of lease liabilities	\$ 148,590	\$ 2,995		

#### Managed Services and Portfolio Financings Through the PPA Entities

Certain of our customers enter into Managed Services or Portfolio Financings through a PPA Entity to finance their lease of Bloom Energy Servers. Prior to our adoption of ASC 842 as of January 1, 2020, such arrangements with customers that qualified as leases were classified as either sales-type leases or operating leases. For all pre-existing Managed Services Financings or Portfolio Financings through PPA Entities, we have carried over the accounting classifications for those transactions and continue to account for such transactions as either sales-type leases or operating leases under ASC 842. Customer arrangements under Managed Services and Portfolio Financings through PPA Entities entered into after January 1, 2020, do not contain a lease under ASC 842 and are accounted for under ASC 606 as revenue arrangements.

Lease agreements under our Managed Services Financings and Portfolio Financings through the PPA Entities include non-cancellable lease terms, during which terms the majority of our investment in the Energy Servers under lease are typically recovered. We mitigate remaining residual value risk of its the Energy Servers through its provision of maintenance on the Energy Servers during the lease term and through insurance whose which proceeds are payable in the event of theft, loss, damage, or destruction.

Managed Services Our Managed Services Financings with financiers that result in failed sale-and-leaseback transactions are accounted for as financing transactions. Payments received from the financier are recognized as financing obligations in our consolidated balance sheets. Proceeds from the financiers in excess of fair value of the Energy Servers under successful sale-and-leaseback transactions are also accounted for as financing obligations. These financing obligations are included in each agreement's contract value and are recognized as short-term or long-term liabilities financing obligations based on the estimated payment dates. The lease agreements expire on various dates through 2034. For successful sale-and-leaseback transactions, we record operating lease right-of-use assets and operating lease liabilities and record operating lease expense expenses over the lease term. The recognized operating lease expense expenses for the years ended December 31, 2023 and 2022 were \$9.7 million and \$5.6 million. The recognized operating lease expenses for the year ended December 31, 2022 was \$5.6 million. The recognized lease expense for the years ended December 31, 2021 and 2020 have been were immaterial.

We recognized \$28.7 million, \$20.4 million and \$35.1 million of product revenue, \$8.4 million, \$11.3 million and \$20.9 million of installation revenue, \$5.0 million, \$3.3 million and \$10.0 million of financing obligations, and \$16.5 million, \$12.6 million and \$29.4 million of operating lease right-of-use assets and operating lease liabilities from such successful sale and leaseback transactions for the years ended December 31, 2022 December 31, 2023, 2022 and 2021, respectively.

At December 31, 2022 December 31, 2023, future lease payments under the Managed Services Agreements financing obligations were as follows (in thousands):

		Financing Obligations
		Financing Obligations
		Financing Obligations
		Financing Obligations
2024		
2023		\$ 44,740
2024		
2024	2024	42,742
2025	2025	41,726
2025		
2025		
2026		
2026		
2026	2026	37,138
2027	2027	20,793
2027		
2027		
2028		
2028		
2028		
Thereafter		
Thereafter		
Thereafter	Thereafter	36,223
Total minimum lease payments	Total minimum lease payments	223,362
Total minimum lease payments		
Total minimum lease payments		
Less: imputed interest		
Less: imputed interest		
Less: imputed interest	Less: imputed interest	(122,580)
Present value of net minimum lease payments	Present value of net minimum lease payments	100,782
Present value of net minimum lease payments		
Present value of net minimum lease payments		
Less: current financing obligations		
Less: current financing obligations		
Less: current financing obligations	Less: current financing obligations	(17,364)
Long-term financing obligations	Long-term financing obligations	\$ 83,418
Long-term financing obligations		
Long-term financing obligations		

The long-term total financing obligations, as reflected in our consolidated balance sheets, were \$442.1 million \$444.8 million and \$461.9 million \$459.4 million as of December 31, 2022 December 31, 2023 and 2021, 2022, respectively. The We expect the difference between these obligations and the principal obligations in the table above will to be offset against the carrying value of the related Energy Servers at the end of the lease and the remainder recognized as either a gain or loss at that point.

*Portfolio Financings through the PPA Entities* — Customer arrangements entered into prior to January 1, 2020 under Portfolio Financing arrangements through a PPA Entity that qualified as leases are/were accounted for as either sales-type leases or operating leases. Since January 1, 2020, we have not entered into any new PPAs with customers under such arrangements.

The components of in August 2023, we sold our aggregate net investment in sales-type leases under our last consolidated PPA Entity, PPA V. For additional information, please see Note 10 — *Portfolio Financings through PPA entities consisted of the following (in thousands):*

	December 31, Financings.	2021
Lease payment receivables, net <sup>1</sup>	\$ 44,378	
Estimated residual value of leased assets (unguaranteed)	890	
Net investment in sales-type leases	45,268	
Less: current portion	(5,784)	
Non-current portion of net investment in sales-type leases	\$ 39,484	

<sup>1</sup> Net of current estimated credit losses of approximately \$0.1 million as of December 31, 2021.

As of December 31, 2022, there was no net investment in sales-type leases as a result of PPA IIIa Repowering. Please refer to Note 11 - *Portfolio Financings* for details.

Future estimated operating lease payments we expect to receive from Portfolio Financing arrangements through PPA Entities as of December 31, 2022, were as follows (in thousands):

	Operating Leases
2023	21,063
2024	21,238
2025	21,630
2026	22,092
2027	22,566
Thereafter	85,009
Total minimum lease payments	\$ 193,598

## 10.9. Stock-Based Compensation and Employee Benefit Plans

Share-based grants are designed to reward employees for their long-term contributions to us and provide incentives for them to remain with us.

### 2012 Equity Incentive Plan

Our 2012 Equity Incentive Plan (the "2012 Plan") was approved in August 2012. The 2012 Plan provided for the grant of incentive stock options, non-statutory stock options, stock appreciation rights and RSUs, all of which may be granted to employees, including officers, and to non-employee directors and consultants except we may grant incentive stock options only to employees.

Grants under the 2012 Plan generally vest ratably over a four year four-year period from the vesting commencement date and expire ten years from the grant date. Original grants under the 2012 Plan were for "common stock". Pursuant to the Twelfth Amended and Restated Articles of Incorporation authorized in July 2018, all such shares automatically converted to Class B shares of common stock. As of December 31, 2022, December 31, 2023 and 2022, stock options to purchase of 4,511,074 and 5,436,417 shares of Class B common stock were outstanding with a weighted average exercise price of \$27.28 and \$27.15 per share, respectively, and no shares were available for future grant. The 2012 Equity Incentive Plan has been canceled but continues to govern outstanding option grants under the 2012 Plan.

### 2018 Equity Incentive Plan

The 2018 Equity Incentive Plan (the "2018 Plan") was approved in April 2018. The 2018 Plan became effective upon the IPO our initial public offering ("IPO") and serves as the successor to the 2012 Plan. The 2018 Plan authorizes the award of stock options, restricted stock awards, stock appreciation rights, RSUs, PSUs and stock bonuses. The 2018 Plan provides for the grant

of awards to employees, directors, consultants, independent contractors and advisors provided the consultants, independent contractors, directors and advisors render services not in connection with the offer and sale of securities in a capital-raising transaction. The exercise price of stock options is at least equal to the fair market value of Class A common stock on the date of grant. Grants under the 2018 Plan generally vest ratably over three or four years from the vesting commencement date and expire ten years from the grant date.

The 2018 Plan allows for an annual increase on January 1, of each of 2019 through 2028, by the lesser of (a) four percent (4%) of the number of Class A common stock, Class B common stock (until their automatic conversion to Class A common stock on July 27, 2023), and common stock equivalents (including options, RSUs, warrants and preferred stock on an as-converted basis) issued and outstanding on each December 31 immediately prior to the date of increase, and (b) such number of shares determined by the Board of Directors.

As of December 31, 2022, December 31, 2023 and 2022, stock options to purchase 2,736,550 and 3,311,892 shares of Class A common stock were outstanding, respectively, with a weighted average exercise price of \$10.42 and \$10.11 per share, respectively. As of December 31, 2023 and 2022, 9,887,706 and 9,543,386 RSUs that may be settled for Class A common stock, which were granted pursuant to the 2018 Plan, respectively, were outstanding. As of December 31, 2022, December 31, 2023 and 2022, we had 32,877,906 and 28,340,641 shares reserved for issuance under the 2018 Plan.

#### 2002 Stock Plan

Our 2002 Stock Plan, (the "2002 Plan") was approved in April 2002 and amended in June 2011. In August 2012 and in connection with the adoption of the 2012 Plan, shares authorized for issuance under the 2002 Plan were cancelled, except for those shares reserved for issuance upon exercise of outstanding stock options. Any outstanding stock options granted under the 2002 Plan remain outstanding, subject to the terms of the 2002 Plan, until such shares are issued under those awards (by exercise of stock options) or until the awards terminate or expire by terms, respectively.

Grants under the 2002 Plan generally vest ratably over a four years period from the vesting commencement date and expire ten years from grant date. Original grants under the 2002 Plan were for "common stock". Pursuant to the Twelfth Amended and Restated Articles of Incorporation authorized in July 2018, all such shares automatically converted to Class B shares of common stock. As of December 31, 2022, there were no outstanding options to purchase shares of Class B common stock. The 2002 Stock Plan has been canceled but continues to govern outstanding option grants under the 2012 Plan.

#### Stock-Based Compensation Expense

We used the following weighted-average assumptions in applying the Black-Scholes valuation model for determination of option valuation for options granted for the year ended December 31, 2020:

	Year Ended December 31, 2020
Risk-free interest rate	0.6%
Expected term (years)	6.6
Expected dividend yield	—
Expected volatility	71.0%

There were no options granted for the years ended December 31, 2022 and 2021.

The following table summarizes the components of stock-based compensation expense in the consolidated statements of operations (in thousands):

	Years Ended December 31,			Years Ended December 31,		
	2022	2021	2020	2023	2022	2021
Cost of revenue	Cost of revenue	\$ 18,955	\$ 13,811	\$ 17,475		
Cost of revenue						
Cost of revenue						
Research and development	Research and development	33,956	20,274	19,037		
Sales and marketing	Sales and marketing	18,651	17,085	10,997		
General and administrative	General and administrative	42,404	24,962	26,384		
	\$113,966	\$76,132	\$73,893			
	\$					
	=					

As of December 31, 2022 December 31, 2023, and 2021, 2022, we capitalized \$6.3 \$8.9 million and \$5.8 \$6.3 million of stock-based compensation cost, respectively, into inventory, property, plant and equipment and deferred cost of goods sold.

#### Stock Option and Stock Award Activity

The following table summarizes the stock option activity under our stock plans during the reporting period:

	Outstanding Options				Outstanding Options				Aggregate Intrinsic Value	
	Weighted Average		Remaining Aggregate		Weighted Average		Remaining Aggregate			
	Number of Shares	Exercise Price	Contractual Life (Years)	Intrinsic Value	Number of Shares	Exercise Price	Contractual Life (Years)	Intrinsic Value		

		(in thousands)				(in thousands)	
Balances at							
December 31, 2020	15,354,271	\$ 21.27					
Exercised	(3,460,364)	23.05					
Forfeited	(1,156,612)	16.33					
Balances at	Balances at						
December 31, 2021	December 31, 2021	10,737,295	21.23	5.2	\$ 60,304		
Exercised	Exercised	(537,324)	7.08				
Forfeited	Forfeited	(42,774)	6.98				
Forfeited							
Forfeited							
Expired							
Expired	Expired	(1,408,888)	30.39				
Balances at	Balances at						
December 31, 2022	December 31, 2022	8,748,309	20.70	4.6	40,532		
Vested and expected to vest at December 31, 2022		8,743,013	20.71	4.6	40,469		
Exercisable at December 31, 2022		8,636,644	20.86	4.6	39,296		
Balances at December 31, 2022							
Balances at December 31, 2022							
Exercised							
Expired							
Expired							
Balances at December 31, 2023							
Balances at December 31, 2023							
Balances at December 31, 2023							
Vested and expected to vest at December 31, 2023							
Exercisable at December 31, 2023							

**Stock Options** — During the years ended December 31, 2022 December 31, 2023, 2021 2022 and 2020, 2021, we recognized \$0.4 million, \$7.1 million \$15.6 million and \$19.1 \$15.6 million of stock-based compensation costs for stock options, respectively.

We did not grant options in the years ended December 31, 2022 December 31, 2023, 2022 and 2021.

During the years ended December 31, 2022 December 31, 2023, 2021 2022 and 2020, 2021, the intrinsic value of stock options exercised was \$3.6 million, \$3.8 million \$28.9 million and \$11.2 \$28.9 million, respectively.

As of December 31, 2022 December 31, 2023 and 2021, 2022, we had unrecognized compensation costs related to unvested stock options of \$0.4 \$0.1 million and \$6.2 \$0.4 million, respectively. This cost is expected to be recognized over the remaining weighted-average period of 0.9 0.3 years and 0.9 years, respectively. Cash received from stock options exercised totaled \$3.6 million, \$3.7 million and \$79.7 million and \$15.0 million for the years ended December 31, 2022 December 31, 2023, 2022 and 2021, and 2020, respectively.

A summary of our stock awards activity and related information is as follows:

				Number of Awards Outstanding	Number of Awards Outstanding	Weighted Average Grant Date Fair Value
				Number of Awards Outstanding	Weighted Average Grant Date Fair Value	
Unvested Balance at December 31, 2020				6,418,788	\$ 13.71	
Granted				6,475,536	25.82	
Vested				(2,904,996)	17.04	
Forfeited				(1,621,664)	20.97	
Unvested Balance at December 31, 2021						
Unvested Balance at December 31, 2021						
Unvested Balance at December 31, 2021	Unvested Balance at December 31, 2021	Unvested Balance at December 31, 2021		8,367,664	\$ 20.52	
Granted	Granted			5,395,199	19.74	
Vested	Vested			(2,957,215)	18.14	
Forfeited	Forfeited			(1,256,613)	21.32	
Unvested Balance at December 31, 2022	Unvested Balance at December 31, 2022	Unvested Balance at December 31, 2022		9,549,035	\$ 19.99	
Granted						
Vested						
Forfeited						
Unvested Balance at December 31, 2023	Unvested Balance at December 31, 2023	Unvested Balance at December 31, 2023				

**Stock Awards** — The estimated fair value of RSUs and PSUs is based on the fair value of our Class A common stock on the date of grant. For the years ended **December 31, 2022** **December 31, 2023**, **2021** **2022** and **2020** **2021**, we recognized **\$71.2 million**, **\$89.4 million** **\$50.1 million** and **\$44.1 million** of stock-based compensation costs for stock awards, respectively.

As of **December 31, 2022** **December 31, 2023** and **2021**, 2022, we had **\$135.7 million** and **\$114.9 million** of unrecognized stock-based compensation cost related to unvested stock awards, expected to be recognized over a weighted average period of **2.0 years** and **1.9 years**, and **2.3 years**, respectively.

#### Executive Awards

In 2020, the Company granted RSU, PSU and stock option awards (the "2020 Executive Awards") to certain executive staff pursuant to the 2018 Plan. The RSUs and stock options have time-based vesting schedules. The PSUs consist of three vesting tranches with an annual vesting schedule based on the attainment of performance conditions during fiscal year 2020 and assuming continued employment and service through each vesting date. Stock-based compensation costs associated with the 2020 Executive Awards are recognized over the service period as we evaluate the probability of the achievement of the performance conditions.

In 2021, the Company granted RSU and PSU awards (the "2021 Executive Awards") to certain executive staff, other than our Chief Executive Officer, pursuant to the 2018 Plan. The RSUs have time-based vesting schedules. The PSUs consist of annual vesting tranches based on the attainment of performance conditions and assuming continued employment and service through each vesting date. Stock-based compensation costs associated with the 2021 Executive Awards are recognized over the service period as we evaluate the probability of the achievement of the performance conditions.

In 2021, the Company also granted RSU and PSU awards to our Chief Executive Officer pursuant to the 2018 Plan. The RSUs will vest in equal annual installments over five years from the grant date. A portion of the PSUs can be earned based on achieving certain financial performance goals and another portion can be earned based upon achieving

certain progressive stock price hurdles. Any shares issued under the PSU awards will be subject to a two-year post-vest holding period in which the award holder will be restricted from selling any shares (net of shares settled for taxes). As of **December 31, 2022** **December 31, 2023**, the unamortized compensation expense for the RSUs and PSUs was **\$22.4** **\$8.2** million. Actual compensation expense is dependent on the performance of the PSUs that vest based upon a performance condition. We estimated the fair value of the PSUs that vest based on a market condition on the date of grant using a Monte Carlo simulation with the following assumptions: (i) expected volatility of 71.2%, (ii) risk-free interest rate of 1.6%, and (iii) no expected dividend yield.

In 2022, the Company granted RSU and PSU awards (the "2022 Executive Awards") to certain executive staff, including our Chief Executive Officer, pursuant to the 2018 Plan. The RSUs have time-based vesting schedules. The PSUs consist of three vesting tranches **during 2023-2025** with an annual vesting schedule based on the attainment of performance conditions **during related to fiscal year 2022** and assuming continued employment and service through each vesting date. Stock-based compensation costs associated with the 2022 Executive Awards are recognized over the service period. As of December 31, 2023, the unamortized compensation expense for the RSUs and PSUs was **\$6.2** million. Actual compensation expense is determined by the attained performance condition of the PSUs in fiscal 2022.

On February 15, 2023 and July 11, 2023, the Company granted RSU and PSU awards (the "2023 Executive Awards") to certain executive staff pursuant to the 2018 Equity Incentive Plan. The RSUs have time-based vesting schedules, started vesting on February 15, 2023 and shall vest over a three year period. The PSUs which started vesting on February 15, 2023 have either a three-year or one-year cliff vesting period, and the PSUs which started vesting on July 11, 2023, cliff vest on February 15, 2024. The PSUs will vest based on a combination of time and achievement against performance metrics targets assuming continued employment and service through each vesting date. Stock-based compensation costs associated with the 2023 Executive Awards are recognized over the service period as we evaluate the probability of the achievement of the performance conditions. As of December 31, 2023, the unamortized compensation expense for the RSUs and PSUs was **\$7.0** million.

The following table presents the stock activity and the total number of shares available for grant under our stock plans:

	Plan Shares Available for Grant
Balances at <b>December 31, 2020</b> <b>December 31, 2021</b>	<b>20,233,754</b> <b>24,146,784</b>
Added to plan	8,102,014 <b>8,384,460</b>
Granted	(6,475,536) <b>(5,431,930)</b>
Cancelled/Forfeited	2,778,276 <b>2,597,990</b>
Expired	(491,724) <b>(1,356,663)</b>
Balances at <b>December 31, 2021</b> <b>December 31, 2022</b>	<b>28,340,641</b> <b>24,146,784</b>
Added to plan	8,384,460 <b>8,948,255</b>
Granted	(5,431,930) <b>(6,290,060)</b>
Cancelled/Forfeited	2,597,990 <b>2,774,990</b>
Expired	(1,356,663) <b>(895,920)</b>
Balances at <b>December 31, 2022</b> <b>December 31, 2023</b>	<b>32,877,906</b> <b>28,340,641</b>

#### 2018 Employee Stock Purchase Plan

In April 2018, we adopted the 2018 ESPP. The 2018 ESPP became effective upon our **initial public offering ("IPO")** IPO in July 2018. The 2018 ESPP is intended to qualify under Section 423 of the Internal Revenue Code. The aggregate number of our shares that may be issued over the term of our ESPP is 33,333,333 Class A common stock. A total of 3,333,333 shares of our Class A common stock were initially reserved for issuance under the plan. The number of shares reserved for issuance under the 2018 ESPP will increase automatically on the 1st day of January of each of the first nine years following the first offering date by the number of shares equal to one percent (1%) of the total number of Class A common stock, Class B common stock **(automatically converted to Class A common stock on July 27, 2023)** and common stock equivalents (including options, RSUs, warrants and preferred stock on an as converted basis) issued and outstanding on the immediately preceding December 31 (rounded down to the nearest whole share); provided, that the Board of Directors or the Compensation Committee may in its sole discretion reduce the amount of the increase in any particular year.

The 2018 ESPP allows eligible employees to purchase shares, subject to purchase limits of 2,500 shares during each six month period or \$25,000 worth of stock for each calendar year, of our Class A common stock through payroll deductions at a price per share equal to 85% of the lesser of the fair market value of our Class A common stock (i) on the first trading day of the applicable offering date and (ii) the last trading day of each purchase date.

During the years ended **December 31, 2022** **December 31, 2023**, **2021** **2022** and **2020** **2021**, we recognized **\$15.5** million, **\$16.2** million **\$7.6** million and **\$5.7** **\$7.6** million of stock-based compensation costs for the 2018 ESPP, respectively. We issued 875,695, 759,744 and 1,945,305 shares in the years ended **December 31, 2022** **December 31, 2023**, **2022** and **2021**, respectively. During the years ended **December 31, 2022** **December 31, 2023**, **2022** and **2021**, we added an additional 2,239,563, 12,055,792 and 1,902,572 shares and there were **13,840,716** **15,204,584** and **2,544,668** **13,840,716** shares available for issuance as of **December 31, 2022** **December 31, 2023** and **2021**, **2022**, respectively.

As of **December 31, 2022** **December 31, 2023** and **2021**, **2022**, we had **\$12.0** **\$8.8** million and **\$9.8** **\$12.0** million of unrecognized stock-based compensation costs, expected to be recognized over a weighted average period of **0.8** years and **0.6** years and **0.5** years, respectively.

We used the following weighted-average assumptions in applying the Black-Scholes valuation model for determination of the 2018 ESPP share valuation:

Years Ended
December 31,

		2023	Years Ended December 31,	Years Ended December 31,
		2022	2021	
Risk-free interest rate				
Risk-free interest rate	Risk-free interest rate	3.1%-3.2%	0.1% - 2.8%	
Expected term (years)	Expected term (years)	0.5 - 2.0	0.5 - 2.0	
Expected term (years)				
Expected term (years)				
Expected dividend yield				
Expected dividend yield	Expected dividend yield	—	—	
Expected volatility	Expected volatility	78.0%-88.9%	95.0% - 114.5%	
Expected volatility				
Expected volatility				

## 11.

### 10. Portfolio Financings

#### Overview

We have developed various financing options that enable customers' use of the Energy Servers through third-party ownership financing arrangements.

In some cases, similar to direct purchases and leases, the standard one-year warranty and performance guarantees are included in the price of the product. The Operating Company also enters into a master services agreement with us following the first year of service to extend the warranty services and guarantees over the term of the PPA. In other cases, the master services agreements including performance warranties and guarantees are billed on a quarterly basis starting in the first quarter following the placed-in-service date of the Energy Server(s) and continuing over the term of the PPA. The first of such arrangements was considered a sales-type lease and the product revenue from that agreement was recognized upfront in the same manner as direct purchase and lease transactions. Substantially all of our subsequent PPAs have been accounted for as operating leases with the related revenue under those agreements recognized ratably over the PPA term as electricity revenue. We recognize the cost of revenue, primarily product costs and maintenance service costs, over the shorter of the estimated useful life of the Energy Server or the term of the PPA.

We past, we and our third-party equity investors (together, the "Equity Investors") contribute contributed funds into a limited liability investment entity (the "Investment Company") that owns and is parent to the Operating Company (together, the "PPA Entities"). These PPA Entities constitute VIEs under U.S. GAAP. We have considered the provisions within the contractual agreements which grant us power to manage and make decisions affecting the operations of these VIEs. We consider that the rights granted to the Equity Investors under the contractual agreements are more protective in nature rather than participating. Therefore, we have determined under the power and benefits criterion of ASC 810, *Consolidations* that we are the primary beneficiary of these VIEs. As the primary beneficiary of these VIEs, we consolidate in our consolidated financial statements the financial position, results of operations and cash flows of the PPA Entities, and all intercompany balances and transactions between us and the PPA Entities are eliminated in the consolidated financial statements.

In accordance with our Portfolio Financings, the Operating Company acquires Energy Servers from us for cash payments that are made on a similar schedule as if the Operating Company were a customer purchasing an Energy Server from us outright. In the consolidated financial statements, the sale of Energy Servers by us to the Operating Company are treated as intercompany transactions and as a result eliminated in consolidation. The acquisition of Energy Servers by the Operating Company is accounted for as a non-cash reclassification from inventory to Energy Servers within property, plant and equipment, net on our consolidated balance sheets. In arrangements qualifying for sales-type leases, we reduce these recorded assets by amounts received from U.S. Treasury Department cash grants and from similar state incentive rebates.

The Operating Company sells the electricity to end customers under PPAs. Cash generated by the electricity sales, as well as receipts from any applicable government incentive program, is used to pay operating expenses (including the management and services we provide to maintain the Energy Servers over the term of the PPA) and to service the non-recourse debt with the remaining cash flows distributed to the Equity Investors. In transactions accounted for as sales-type leases, we recognize subsequent customer billings as electricity revenue over the term of the PPA and amortize any applicable government incentive program grants as a reduction to depreciation expense of the Energy Server over the term of the PPA. In transactions accounted for as operating leases, we recognize subsequent customer payments and any applicable government incentive program grants as electricity revenue and service revenue over the term of the PPA.

Upon sale or liquidation of a PPA Entity, distributions would occur in the order of priority specified in the contractual agreements.

We have established six different PPA Entities to date. The contributed funds are restricted for use by the Operating Company to the purchase of our Energy Servers manufactured by us in our normal course of operations. All six PPA Entities established in the past utilized their entire available financing capacity and have completed the purchase

of their Energy Servers. Any debt incurred by the Operating Companies ~~is~~ was non-recourse to us. Under these structures, each Investment Company ~~is~~ was treated as a partnership for U.S. federal income tax purposes. Equity Investors ~~receive~~ received investment tax credits and accelerated tax depreciation benefits.

In June 2022 and November 2022, we sold PPA IIIa and PPA IV, respectively, which were accounted as our consolidated VIEs, as a result of the repowering of the Energy Servers. In August 2023, we paid off the outstanding balance and related accrued interest of the PPA V debt and released related debt service reserve. For details, please see Note 7 — *Outstanding Loans and Security Agreements, Non-recourse Debt Facilities* section. In August 2023, we sold PPA V, our last consolidated PPA Entity. The other three PPA Entities — PPA II, PPA IIIb and PPA VI — are not considered VIEs.

#### **PPA IIIa Repowering of the Energy Servers**

PPA IIIa was established in 2012 and we, through a special purpose subsidiary (the "Project Company"), had previously entered into certain agreements for the purpose of developing, financing, owning, operating, maintaining and managing a portfolio of 9.8 megawatts of the Energy Servers.

On March 31, 2022, we entered into a Membership Interest Purchase Agreement (the "MIPA") where we bought out the equity interest of the third-party investor, wherein the PPA IIIa became wholly owned by us (the "PPA IIIa Buyout").

Following the PPA IIIa Buyout and prior to June 14, 2022, we repaid all outstanding debt of the Project Company of \$30.6 million, and recognized loss on extinguishment of debt in an amount of \$4.2 million, which includes the write-off of the debt discount related to warrants of \$1.8 million and a make-whole payment of \$2.4 million associated with the debt extinguishment. Refer to Note 7 — *Outstanding Loans and Security Agreements, Non-recourse Debt Facilities* section.

On June 14, 2022, we sold our 100% interest in the Project Company to the financier through the MIPA. Simultaneously, we entered into an agreement with the Project Company to upgrade the old 9.8 megawatts of the old PPA IIIa Energy Servers (the "old Energy Servers") by replacing them with a newer generation of the new PPA IIIa Energy Servers ("new Energy Servers") and providing related installation services, which was financed by the financier (the "EPC Agreement"). The plan ~~is~~ was to remove the old PPA IIIa Energy Servers prior to installing the new PPA IIIa Energy Servers and return the old PPA IIIa Energy Servers to Bloom. We also amended and restated our operations and maintenance agreement with the Project Company to cover all the new PPA IIIa Energy Servers and the old PPA IIIa Energy Servers prior to their upgrade ("the O&M Agreement"). The operations and maintenance fees under the O&M Agreement are paid on a fixed dollar per kilowatt basis.

Certain power purchase agreements within the PPA IIIa portfolio were classified as sales-type leases under ASC 840, *Leases*, while some were classified as operating leases. ~~The Company~~ We elected the practical expedient package with the adoption of ASC 842, which allowed ~~the Company~~ us to carry forward the lease classification upon adoption of ASC 842 on January 1, 2020. The leases were modified prior to the sale of the PPA IIIa to the financier. Such modified leases were reassessed and determined to not be leases under ASC 842 because customers have no control over the identified assets. Accordingly, on the date of modification, the customer financing receivables were derecognized and recognized as property, plant, and equipment ("PPA (the "PPA IIIa PP&E").

Due to our repurchase option on the old PPA IIIa Energy Servers, ~~the Company~~ we concluded there was no transfer of control of the old PPA IIIa Energy Servers upon sale of the membership interest to the financier. Accordingly, ~~the Company~~ we continued to recognize the old PPA IIIa Energy Servers, despite the legal ownership of such assets under the MIPA. Upon reclassification of the lease assets to PP&E, ~~the Company~~ property, plant and equipment, net, we assessed the recorded assets for impairment. The carrying amount of the PPA IIIa PP&E was determined to be not recoverable as the net undiscounted cash flows ~~are~~ were less than the carrying amounts for PPA IIIa PP&E. Therefore, we recognized the asset impairment charge as electricity cost, consistent with depreciation expense classification for property, plant and equipment under leases.

The PPA IIIa Upgrade was substantially complete as in the fourth quarter of December 31, 2022 and fiscal 2022. It resulted in the following summarized impacts on our consolidated balance sheet as of December 31, 2022: (i) cash and cash equivalents increased by \$29.3 million mainly due to \$66.3 million cash receipts from the sale of new Energy Servers to the Project Company, offset by \$30.6 million for the repayment of outstanding debt and related accrued interest, (ii) both customer financing receivables, current and non-current, and property plant and equipment, net decreased by \$5.9 million, \$36.9 million and \$2.2 million, respectively, due to the impairment of \$44.8 million and accelerated depreciation of \$0.2 million of the existing old Energy Servers (we revised the expected useful life of the old Energy Servers from 15 years to approximately 0.5 years which resulted in recognized accelerated depreciation of \$0.2 million in electricity cost of revenue (see Note 6 - *Balance Sheet Components*)), (iii) inventories and deferred cost of revenue decreased by \$25.0 million, (iv) deferred revenue and customer deposits increased by \$3.4 million, (v) accounts receivable decreased by \$1.8 million and (vi) other liabilities increased by \$3.8 million.

Impacts on our consolidated statements of operations for the year ended December 31, 2023: (i) service revenue recognized of \$3.5 million related to the O&M Agreements, (ii) installation revenue recognized of \$0.4 million, and (iii) cost of installation revenue of \$0.1 million. The PPA IIIa Upgrade had the following impacts on our consolidated statements of operations for the year ended December 31, 2022 are summarized as follows: (i) product, installation and service revenue recognized of \$49.8 million, \$4.6 million, and \$0.7 million, respectively, as a result of the sale of the new PPA IIIa Energy Servers; (ii) cost of electricity revenue of \$45.0 million, including the write-off impairment of the old PPA IIIa Energy Servers of \$44.8 million and accelerated depreciation of \$0.2 million prior to the completion of installation; (iii) cost of product and installation revenue of \$21.8 million and \$3.2 million, respectively, due to the sale of the new PPA IIIa Energy Servers; and (iv) \$4.2 million of loss on extinguishment of debt.

Impacts on our consolidated statements of cash flows for the year ended December 31, 2022, are summarized as follows: net cash provided by financing activities decreased by \$32.6 million due to the repayment of debt of \$30.2 million and cash fee of \$2.4 million associated with debt extinguishment.

There was no impact on cash flows from financing activities for the year ended December 31, 2023.

#### **PPA IV Repowering of the Energy Servers**

PPA IV was established in 2014 and we, through ~~a~~ the Project Company, had previously entered into certain agreements for the purpose of developing, financing, owning, operating, maintaining and managing a portfolio of 19.3 megawatts of the Energy Servers.

On November 2, 2022, we entered into the MIPA where we bought out the equity interest of the third-party investor for \$4.0 million, wherein the PPA IV became wholly owned by us (the "PPA IV Buyout").

Following the PPA IV Buyout and prior to November 22, 2022, we repaid all outstanding debt of the Project Company of \$70.9 million and recognized a loss on extinguishment of debt in an amount of \$4.7 million, which includes the write-off of the debt discount of \$0.6 million and a make-whole payment of \$4.1 million associated with the debt

extinguishment. Refer to Note 7 — *Outstanding Loans and Security Agreements, Non-recourse Debt Facilities* section.

On November 22, 2022, we sold our 100% interest in the Project Company to the financier through the MIPA. Simultaneously, we entered into an agreement with the Project Company to upgrade the 19.3 megawatts of the old PPA IV Energy Servers by replacing them with the new PPA IV Energy Servers and providing related installation services, which was financed by the financier under the EPC Agreement. The old PPA IV Energy Servers will be removed prior to installing the new PPA IV Energy Servers, whereby upon completion of installation the old PPA IV Energy Servers will be returned to Bloom. We also amended and restated our O&M Agreement with the Project Company to cover all the new PPA IV Energy Servers and the old PPA IV Energy Servers prior to their upgrade. The operations and maintenance fees under the O&M Agreement are paid on a fixed dollar per kilowatt basis.

The power purchase agreements within the PPA IV portfolio were classified as operating leases under ASC 840 *Leases*. The Company elected the practical expedient package with the adoption of ASC 842, which allowed the Company to carry forward the lease classification upon adoption of ASC 842 on January 1, 2020. The leases were modified prior to the sale of the PPA IV to the financier. Such modified leases were reassessed and determined to not be leases under ASC 842 because customers have no control over the identified assets. Accordingly, on the date of modification, the operating leases were recognized as property, plant, and equipment (PPA (the "PPA IV PP&E").

Due to our repurchase option on the old PPA IV Energy Servers, the Company we concluded there was no transfer of control of the old PPA IV Energy Servers upon sale of the membership interest to the financier. Accordingly, the Company we continued to recognize the old PPA IV Energy Servers, despite the legal ownership of such assets under the MIPA. The Company We assessed the recorded assets for impairment. The carrying amount of the PPA IV PP&E was determined to be not recoverable as the net undiscounted cash flows are less than the carrying amounts for the PPA IV PP&E. Therefore, we recognized the asset impairment charge as electricity cost, consistent with depreciation expense classification for property, plant and equipment under leases.

The PPA IV Upgrade was in progress substantially complete as of December 31, 2022 and December 31, 2023. The Upgrade resulted in the following summarized impacts on our consolidated balance sheet as of December 31, 2022: (i) cash and cash equivalents increased by \$16.4 million mainly due to \$91.4 million cash receipts from the sale of new Energy Servers to the Project Company, offset by \$70.9 million for the repayment of outstanding debt and related accrued interest, (ii) property plant and equipment, net decreased by \$64.3 million, due to the impairment of \$64.0 million and accelerated depreciation of \$0.3 million of the existing old Energy Servers (we revised the expected useful life of the old Energy Servers from 15 years to approximately 0.5 years which resulted in recognized accelerated depreciation of \$0.3 million in electricity cost of revenue (see Note 6 - *Balance Sheet Components*)), (iii) contract assets increased by \$17.9 million, (iv) inventories and deferred cost of revenue decreased by \$37.4 million, (v) accrued expenses and other current liabilities increased by \$6.2 million and (vi) prepaid expenses and other current assets decreased by \$4.7 million.

Impacts on our consolidated statements of operations for the year ended December 31, 2023: (i) installation revenue recognized of \$10.0 million, (ii) service revenue recognized of \$1.8 million related to the O&M Agreements, (iii) electricity revenue recognized of \$6.1 million (iv) product revenue decreased by \$3.4 million due to the revenue adjustment, (v) cost of installation revenue of \$6.6 million, and (vi) cost of product revenue of \$0.1 million. The PPA IV Upgrade had the following impacts on our consolidated statements of operations for the year ended December 31, 2022 are summarized as follows: (i) product and electricity revenue recognized of \$102.3 million and \$1.4 million, respectively, as a result of the sale of new Energy Servers; (ii) cost of electricity revenue of \$64.3 million, including the write-off impairment of old Energy Servers of \$64.0 million and accelerated depreciation of \$0.3 million prior to the completion of installation; (iii) cost of product revenue of \$37.4 million, due to the sale of the new PPA IV Energy Servers; (iv) general and administrative expenses of \$4.7 million primarily due to the write-off impairment of prepaid insurance, and; (v) \$4.7 million of loss on extinguishment of debt.

As a result of the equity interest buyout from the third-party investor, noncontrolling interest related to PPA IV of \$23.7 million was eliminated and recorded as part of additional paid-in capital in our *Consolidated Statements* *consolidated statements of Stockholders' Equity (Deficit)* stockholders' equity (deficit).

Impacts on our consolidated statements of cash flows for the year ended December 31, 2022, are summarized as follows: net cash provided by financing activities decreased by \$74.6 million due to the repayment of debt of \$70.5 million and cash fee of \$4.1 million associated with debt extinguishment. There was no impact on cash flows from financing activities for the year ended December 31, 2023.

#### **PPA V Interest Buyout**

On November 2, 2022, we acquired all of Constellation Energy Generation, LLC's ("Constellation") interest in PPA V (the "2022 PPA V Buyout"), as set forth in the Purchase and Sale Agreement. The aggregate purchase price of the transaction amounted to \$8.0 million. After the acquisition our interest in PPA V increased from 10% to 70%.

On August 10, 2023, we acquired all of Solar TC Corp's ("Intel") interest in PPA V, as set forth in the Purchase and Sale Agreement (the "2023 PPA V Buyout"). The aggregate purchase price of the transaction amounted to \$6.9 million. After the acquisition, PPA V became wholly owned by us.

The change changes in our ownership interest in PPA V was were accounted for as an equity transaction transactions in accordance with ASC 810, *Consolidation* *Consolidations* ("ASC 810"). The carrying amount amounts of the noncontrolling interest was adjusted were eliminated to reflect the change changes in its our ownership interest in PPA V, and the difference differences between the fair value values of the consideration considerations paid and the amount by which carrying amounts of the noncontrolling interest is adjusted was immediately prior to the 2022 PPA V Buyout on November 2, 2022 and immediately prior to the 2023 PPA V Buyout on August 10, 2023 of \$48.1 million and \$11.5 million, respectively, were recognized as additional paid-in capital in our *Consolidated Statements* *consolidated statements of Stockholders' Equity (Deficit)* stockholders' equity (deficit).

#### **As PPA V Repowering of December 31, 2022 the Energy Servers**

PPA V was established in 2015 and we, through the Project Company, had previously entered into certain agreements for the purpose of developing, financing, owning, operating, maintaining and managing a portfolio of 37.1 megawatts of the Energy Servers.

On August 24, 2023, we consolidated entered into the MIPA with the financier. Following the 2023 PPA V Buyout and prior to signing the MIPA, we repaid all of the outstanding debt of the Project Company of \$119.0 million, including accrued interest of \$0.5 million, and recognized a loss on extinguishment of debt in an amount of \$1.4 million, represented in its entirety by the derecognition of the related debt issuance costs. Refer to Note 7 — *Outstanding Loans and Security Agreements, Non-recourse Debt Facilities* section.

On August 25, 2023, we sold our financial statements as we determined that we still retain controlling financial 100% interest in the Project Company to the financier through the MIPA. Simultaneously, we entered into an agreement with the Project Company to upgrade the 37.1 megawatts of the old PPA V Energy Servers by replacing them with the new PPA V Energy Servers and to provide related installation services, which was financed by the financier (i.e., EPC Agreement). We also amended and restated our O&M Agreement

with the Project Company to cover all the new PPA V Energy Servers and the old PPA V Energy Servers prior to their upgrade. The operations and maintenance fees under the O&M Agreement are paid on a fixed dollar per kilowatt basis.

Due to our repurchase option on the old PPA V Energy Servers, we concluded there was no transfer of control of the old PPA V Energy Servers upon sale of the membership interest to the financier. Accordingly, we continued to recognize the old PPA Energy Servers, despite the legal ownership of such assets having been transferred under the MPA. We assessed the recorded assets for impairment. The carrying amount of the PPA V property, plant and equipment was determined to be not recoverable as the net undiscounted cash flows were less than the carrying amounts for PPA V property, plant and equipment. Therefore, we recognized the asset impairment charge as electricity cost, consistent with our depreciation expense classification for property, plant and equipment under leases.

The PPA V Upgrade was complete in the first quarter of fiscal 2024, and resulted in the following summarized impacts on our consolidated statements of operations for the year ended December 31, 2023: (i) product revenue and installation revenue recognized of \$176.2 million and \$14.8 million, respectively, as a result of the sale of the new PPA V Energy Servers; (ii) electricity revenue recognized of \$6.1 million related to the old PPA V Energy Servers and the release of deferred incentive revenue of \$5.0 million, (iii) service revenue recognized of \$2.6 million related to the O&M Agreements (iv) cost of electricity revenue of \$125.6 million, primarily including the impairment of the old PPA V Energy Servers of \$123.7 million and accelerated depreciation of \$0.4 million prior to the completion of installation; (v) cost of product revenue and cost of installation revenue of \$75.3 million and \$13.2 million, respectively, due to the sale of the new PPA V Energy Servers; (vi) general and administrative expenses of \$6.4 million due to the impairment of non-recoverable production insurance; (vii) loss on extinguishment of debt of \$1.4 million, (viii) interest expense of \$0.3 million, and (ix) net loss attributable to noncontrolling interest of \$1.0 million.

Impacts on our consolidated statements of cash flows for the year ended December 31, 2023, are summarized as follows: net cash provided by financing activities decreased by \$118.5 million due to the repayment of debt related to PPA V, and are its primary beneficiary, and therefore have the power acquisition of all of interest in PPA V from Intel for \$6.9 million net of distributions to direct activities which are most significant to this entity. Intel's noncontrolling interest of \$2.3 million.

#### PPA Entities' Entity's Activities Summary

The table below shows the details of the three one Investment Company VIEs that were was active during the year ended December 31, 2022 December 31, 2023 and their its cumulative activities from inception to the years indicated (dollars in thousands):

	PPA IIIa	PPA IV	PPA V
<b>Overview:</b>			
Maximum size of installation (in megawatts)	10	21	40
Installed size (in megawatts)	10	19	37
Term of power purchase agreements (in years)	15	15	15
First system installed	Feb-13	Sep-14	Jun-15
Last system installed	Jun-14	Mar-16	Dec-16
Initial income (loss) and tax benefits allocation to Equity Investor	99%	90%	99%
Initial cash allocation to Equity Investor	99%	90%	90%
Income (loss), tax and cash allocations to Equity Investor after the flip date	5%	No flip	No flip
Equity Investor(s) <sup>1</sup>	US Bank	Constellation <sup>4</sup>	Constellation <sup>4</sup> and Intel
Put option date <sup>2</sup>	1st anniversary of flip point	N/A	N/A
Company cash contributions	\$ 32,223	\$ 11,669	\$ 27,932
Company non-cash contributions <sup>3</sup>	8,655	—	—
Equity Investor cash contributions	36,967	84,782	227,344
Debt financing	44,968	99,000	131,237
<b>Activity as of December 31, 2022:</b>			
Distributions to Equity Investor	4,897	15,017	30,786
Debt repayment—principal	44,968	99,000	139,795
<b>Activity as of December 31, 2021:</b>			
Distributions to Equity Investor	4,897	12,848	26,601
Debt repayment—principal	13,899	25,045	132,587
<b>Activity as of December 31, 2020:</b>			
Distributions to Equity Investor	4,847	8,852	24,809
Debt repayment—principal	10,513	21,163	16,475
<sup>1</sup> Investor name represents ultimate parent of subsidiary financing the project. Bloom purchased the equity interest in each of the PPAs from each respective Equity Investor during fiscal year 2022. Refer to the sections entitled PPA IIIa Repowering of Energy Servers, PPA IV Repowering of Energy Servers and PPA V Interest Buyout for further details.			
<sup>2</sup> Investor right on the certain date, upon giving us advance written notice, to sell the membership interests to us or resign or withdraw from the investment partnership.			
<sup>3</sup> Non-cash contributions consisted of warrants that were issued by us to respective lenders to each PPA Entity, as required by such entity's credit agreements. The corresponding values are amortized using the effective interest method over the debt term.			
<sup>4</sup> Formerly known as Exelon Corporation.			

PPA V			
<b>Overview:</b>			
Maximum size of installation (in megawatts)		40	
Installed size (in megawatts)		37	
Term of power purchase agreements (in years)		15	
First system installed		Jun-15	
Last system installed		Dec-16	
Initial income (loss) and tax benefits allocation to Equity Investor		99%	
Initial cash allocation to Equity Investor		90%	
Income (loss), tax and cash allocations to Equity Investor after the flip date		No flip	
<b>Equity Investors:</b>			
Company cash contributions	\$	27,932	
Equity Investor cash contributions		227,344	
Debt financing		131,237	
<b>Activity as of December 31, 2023:</b>			
Distributions to Equity Investor		227,344	
Debt repayment—principal		267,226	
<b>Activity as of December 31, 2022:</b>			
Distributions to Equity Investor		30,786	
Debt repayment—principal		139,795	
<b>Activity as of December 31, 2021:</b>			
Distributions to Equity Investor		26,601	
Debt repayment—principal		132,587	
1 Investor names represent ultimate parents of subsidiary financing the project. Bloom purchased the equity interest in PPA V from Equity Investors in fiscal 2022 and 2023. Refer to the sections entitled <i>PPA V Interest Buyout</i> and <i>PPA V Repowering of the Energy Servers</i> for further details.			
2 Formerly known as Exelon Corporation.			
<b>PPA Entities' Entity's Aggregate Assets and Liabilities</b>			
Generally, the assets of an operating company owned by an investment company can be used to settle only the operating company obligations, and the operating company creditors do not have recourse to us. The following are the aggregate carrying values of our VIEs' assets and liabilities in our consolidated balance sheets, after eliminations of intercompany transactions and balances, including as of December 31, 2022 for each of the PPA Entities in the PPA V transaction and as of December 31, 2021 for each of the PPA Entities in the PPA IIIa transaction, the PPA IV transaction and the PPA V transaction December 31, 2022 (in thousands):			
December 31,			
2022			
2021			
<b>Assets</b>			
Current assets:			
Cash and cash equivalents	\$	5,008	\$ 1,541
Restricted cash		550	3,078
Accounts receivable		2,072	5,112
Customer financing receivable		—	5,784
Prepaid expenses and other current assets		1,927	3,071
Total current assets		9,557	18,586
Property and equipment, net		133,285	228,546
Customer financing receivable		—	39,484
Restricted cash		8,000	23,239
Other long-term assets		1,869	2,362
Total assets	\$	152,711	\$ 312,217
<b>Liabilities</b>			
Current liabilities:			

Accrued expenses and other current liabilities	\$ 1,037	\$ 194
Deferred revenue and customer deposits	662	662
Non-recourse debt	13,307	17,483
Total current liabilities	15,006	18,339
Deferred revenue and customer deposits	4,748	5,410
Non-recourse debt	112,480	217,417
Total liabilities	\$ 132,234	\$ 241,166

December 31,  
2022

### Assets

#### Current assets:

Cash and cash equivalents	\$ 5,008
Restricted cash	550
Accounts receivable	2,072
Prepaid expenses and other current assets	1,927
Total current assets	9,557
Property and equipment, net	133,285
Restricted cash	8,000
Other long-term assets	1,869
Total assets	\$ 152,711

### Liabilities

#### Current liabilities:

Accrued expenses and other current liabilities	\$ 1,037
Deferred revenue and customer deposits	662
Non-recourse debt	13,307
Total current liabilities	15,006
Deferred revenue and customer deposits	4,748
Non-recourse debt	112,480
Total liabilities	\$ 132,234

We Before the sale on August 24, 2023, we consolidated the PPA Entity V as a VIE in the PPA V transaction, as we have had determined that we are were the primary beneficiary of this VIE. This PPA Entity contains V contained debt that is was non-recourse to us and owns owned the Energy Server assets for which we do did not have title.

We believe that by presenting assets and liabilities separate from the PPA Entities, we provide a better view of the true operations of our core business. The table below provides detail into the assets and liabilities of Bloom Energy separate from the PPA Entities. The table provides our stand-alone assets and liabilities, those of the PPA Entities combined, and our consolidated balances as of December 31, 2022 and 2021 (in thousands):

	December 31, 2022			December 31, 2021		
	Bloom Energy	PPA Entities	Consolidated	Bloom Energy	PPA Entities	Consolidated
<b>Assets</b>						
Current assets	\$ 1,046,406	\$ 9,557	\$ 1,055,963	\$ 787,834	\$ 18,586	\$ 806,420
Long-term assets	747,510	143,154	890,664	625,520	293,631	919,151
Total assets	\$ 1,793,916	\$ 152,711	\$ 1,946,627	\$ 1,413,354	\$ 312,217	\$ 1,725,571
<b>Liabilities</b>						
Current liabilities	\$ 514,224	\$ 1,699	\$ 515,923	\$ 315,792	\$ 856	\$ 316,648
Current portion of debt	12,716	13,307	26,023	8,348	17,483	25,831
Long-term liabilities	635,561	4,748	640,309	669,759	5,410	675,169
Long-term portion of debt	273,076	112,480	385,556	283,482	217,417	500,899
Total liabilities	\$ 1,435,577	\$ 132,234	\$ 1,567,811	\$ 1,277,381	\$ 241,166	\$ 1,518,547

## 12.11. Related Party Transactions

On September 23, 2023, all 13,491,701 shares of the Series B RCPS (i.e., the Second Tranche Shares) were automatically converted into shares of our Class A common stock. For more information on the Second Tranche Closing, see Note 17 — *SK ecpant Strategic Investment*. Consequently, SK ecpant became a principal owner of an aggregate of 23,491,701 shares of our Class A common stock, including (i) 10,000,000 shares held with sole voting and investment power (as a result of the conversion of 10,000,000 shares of our Series A RCPS into 10,000,000 shares of our Class A common stock on November 8, 2022) and (ii) 13,491,701 shares held with shared voting and investing power with Econovation LLC, 51.67% and 48.33% of which is owned by SK ecpant and Blooming Green Energy, respectively, as the assignee of the Second Tranche Shares. SK ecpant is considered to be a related party as of September 23, 2023, and became entitled to nominate a member to the Board of Directors of Bloom. As of December 31, 2023, SK ecpant's beneficial ownership of our Class A common stock represents 10.5% of our outstanding Class A common stock.

Our operations ~~include~~ included the following related party transactions (in thousands):

	Years Ended December 31,		
	2022	2021	2020
Total revenue from related parties	\$ 36,281	\$ 16,038	\$ 7,562
Interest expense to related parties	—	—	2,513

	Years Ended December 31,		
	2023	2022	2021
Total revenue from related parties <sup>1</sup>	\$ 487,240	\$ 36,281	\$ 16,038
Cost of product revenue <sup>2</sup>	133	—	—
General and administrative expenses <sup>3</sup>	812	—	—
Interest expense <sup>4</sup>	84	—	—

<sup>1</sup>Includes revenue from SK ecpant for the year ended December 31, 2023, which became a related party on September 23, 2023, however we had transactions with SK ecpant in prior periods (see Note 17 — *SK ecpant Strategic Investment*). Revenue from related parties for the years ended December 31, 2022 and 2021 relate to Korean JV in its entirety.

<sup>2</sup>Includes expenses billed by SK ecpant to Korean JV for headcount support, maintenance and other services.

<sup>3</sup>\$0.6 million relate to rent expenses per operating lease agreements entered between Korean JV and SK ecpant, \$0.2 million relate to miscellaneous expenses billed by SK ecpant to Korean JV.

<sup>4</sup>Interest expense per two term loans entered between Korean JV and SK ecpant in fiscal 2023 (see Note 7 — *Outstanding Loans and Security Agreements*).

Below is the summary of outstanding related party balances as of December 31, 2023 and December 31, 2022 (in thousands):

	December 31,	
	2023	2022
Accounts receivable	\$ 262,031	\$ 4,257
Contract assets	6,872	—
Deferred cost of revenue, current	875	—
Prepaid expenses and other current assets (Note 17)	2,257	—
Operating lease right-of-use assets <sup>1</sup>	2,031	—
Other long-term assets (Note 17)	9,069	—
Accounts payable	77	—
Accrued expenses and other current liabilities	3,427	—
Deferred revenue and customer deposits, current	1,707	—
Operating lease liabilities, current <sup>2</sup>	440	—
Deferred revenue and customer deposits, long-term	6,709	—
Operating lease liabilities, non-current <sup>3</sup>	1,617	—
Non-recourse debt <sup>4</sup> (Note 7)	4,627	—

<sup>1</sup>Balances relate to operating leases entered between Korean JV and SK ecpant.

<sup>2</sup>Represent the total balance of two term loans entered between Korean JV and SK ecpant in fiscal 2023 (see Note 7 — *Outstanding Loans and Security Agreements*).

**Bloom Energy Japan Limited**

In May 2013, we entered into a joint venture with Softbank Corp. ("Softbank"), which was accounted for as an equity method investment. Under this arrangement, we sold the Energy Servers and provided maintenance services to the joint venture. On July 1, 2021 (the "BEJ Closing Date"), we acquired Softbank's 50% interest in the joint venture for a cash payment of \$2.0 million and subject to a \$3.6 million earn out. As of the BEJ Closing Date, Bloom Energy Japan Limited ("Bloom Energy Japan") is no longer considered a related party.

For the years year ended December 31, 2022, 2021 and 2020, December 31, 2021 we recognized related party total revenue of nil, \$1.6 million and \$3.4 million, respectively. million.

#### **SK ecoplant Joint Venture and Strategic Partnership**

In September 2019, we entered into a joint venture agreement with SK ecoplant to establish a light-assembly facility in the Republic of Korea for sales of certain portions of our Energy Server Servers for the stationary utility and commercial and industrial market in the Republic of Korea. Based on the expanded relationship between us and SK ecoplant, the joint venture in 2022 and 2023 was further extended. The joint venture is a VIE of Bloom and we consolidate it in our financial statements as we are the primary beneficiary and therefore have the power to direct activities which are most significant to the joint venture. For the years ended December 31, 2022 December 31, 2023, 2021 2022 and 2020 2021, we recognized related party revenue of \$37.3 million, \$36.3 million \$14.5 million and \$4.2 \$14.5 million, respectively. As of December 31, 2022 December 31, 2023 and 2021 2022, we had outstanding accounts receivable of \$19.6 million and \$4.3 million, and \$4.4 million, respectively.

On October 23, 2021, we expanded our existing relationship with SK ecoplant. In connection with the execution of the strategic partnership, we entered into the SPA pursuant to which we agreed to sell and issue to SK ecoplant 10,000,000 shares of Series A Redeemable Convertible Preferred Stock. In addition, SK ecoplant acquired an option to acquire a variable number of shares of our Class A Common Stock and acquired certain rights and provisions relating to the arrangement under this strategic partnership.

For additional information, see Note 17 ■ SK ecoplant Strategic Investment.

#### **Debt**

#### **12. Restructuring**

In September 2023, as a result of a review of current strategic priorities and resource allocation, we approved the Restructuring Plan intended to Related Parties

realign our operational focus to support our multi-year growth, scale the business, and improve our cost structure and operating margins. The Restructuring Plan included (i) an optimization of our workforce across multiple functions, (ii) a relocation of our Repair & Overhaul ("R&O") department from our manufacturing and warehousing facility in Newark, Delaware, to Mexico, and (iii) a closure of a manufacturing, warehousing, research and development ("R&D") facility in Sunnyvale, California (i.e., facility closure). We had no debt or convertible notes from investors considered began executing the Restructuring Plan in September 2023 and expect these efforts to continue in subsequent quarters. The restructuring activities are expected to be completed in the first half of fiscal 2024, subject to local law and consultation requirements, as well as our business needs.

The determination of when we accrue for involuntary termination benefits under restructuring plans depends on whether the termination benefits are provided under an ongoing benefit arrangement or under a one-time benefit arrangement. We account for one-time benefit arrangements in accordance with ASC 420, *Exit or Disposal Cost Obligations* ("ASC 420") and account for ongoing benefit arrangements in accordance with ASC 712, *Nonretirement Postemployment Benefits*. For involuntary termination benefits that are not provided under the terms of an ongoing benefit arrangement, the liability for the current fair value of expected future costs associated with a management-approved restructuring plan is recognized in the period in which the plan is communicated to the employees and the plan is not expected to change significantly. For ongoing benefit arrangements, inclusive of statutory requirements, employee termination costs are accrued when the existing situation or set of circumstances indicates that an obligation has been incurred, it is probable the benefits will be paid, and the amount can be reasonably estimated. The restructuring charges that have been incurred but not yet paid are recorded in accrued expenses and other current liabilities in our consolidated balance sheets, as they are expected to be settled within the next twelve months. Other costs associated with restructuring or exit activities may include contract termination costs, relocation costs and impairments of long-lived assets, which are expensed in accordance with ASC 420 and ASC 360, *Property, Plant and Equipment*.

According to the Restructuring Plan, 74 full-time employees and 48 contractors were separated from the Company in September 2023. An additional 71 full-time employees and 8 contractors separated from the Company in October 2023. Both full-time employees and contractors who were impacted by the restructuring were eligible to receive severance benefits.

On October 28, 2023, we communicated to additional 61 full-time employees about their forthcoming separation from the Company on January 2, 2024. These employees are sent on paid leave from the communication date through January 2, 2024, and are eligible for one-time employee termination benefits represented by the base salary they earn through the term of the leave.

In fiscal 2023, we incurred \$9.3 million in restructuring costs recorded as severance expenses of \$5.3 million, facility closure costs of \$2.6 million, and other restructuring costs of \$1.4 million. We expect to incur another \$7.6 million in restructuring costs in subsequent quarters, out of which we expect \$3.5 million will relate to relocation costs, \$3.3 million will relate to the facility closure costs, and \$0.8 million will relate to other one-time employee termination benefits. However, the actual timing and amount of costs associated with these restructuring actions may differ from our current expectations and estimates and such differences may be material.

The following table presents our current liability as accrued for restructuring charges on our consolidated balance sheets. The table sets forth an analysis of the components of the restructuring charges and payments made against the accrual for the year ended December 31, 2023 (in thousands):

	Year Ended December 31, 2023			
	Facility Closure	Severance	Other	Total
Balance at December 31, 2022	\$ —	\$ —	\$ —	\$ —
Restructuring accruals	2,611	5,306	1,249	9,166

Payments	(34)	(4,842)	(497)	(5,373)
Balance at December 31, 2023	\$ 2,577	\$ 464	\$ 752	\$ 3,793

Facility closure costs recorded in fiscal 2023 in accordance with ASC 420 related parties as to the closure of December 31, 2022 a manufacturing, warehousing, R&D facility in Sunnyvale, California, which is planned to be consolidated with our manufacturing facility in Fremont, California. At December 31, 2023, \$2.6 million of accrued facility closure costs were included in accrued expenses and 2021 other current liabilities in our consolidated balance sheets.

Severance expense recorded in fiscal 2023 in accordance with ASC 420 was a result of the separation of 145 full-time employees and 56 contractors associated with the Restructuring Plan. At December 31, 2023, \$0.5 million of accrued severance-related costs were included in accrued expenses and other current liabilities in our consolidated balance sheets.

Other costs are represented by (1) \$0.2 million of performance bonuses, (2) \$0.2 million of stock-based compensation expense, and (3) \$1.0 million of other one-time employee termination benefits. On December 31, 2023, \$0.8 million of accrued other costs were included in accrued expenses and other current liabilities in our consolidated balance sheets, respectively.

The following table summarizes restructuring costs included in the accompanying consolidated statements of operations (in thousands):

	Year Ended December 31, 2023
Cost of product revenue	\$ 2,976
Cost of installation revenue	71
Cost of service revenue	521
Operating expenses:	
Research and development	1,609
Sales and marketing	1,679
General and administrative	2,467
<b>Total</b>	<b>\$ 9,323</b>

### 13. Commitments and Contingencies

#### Commitments

**Purchase Commitments with Suppliers and Contract Manufacturers** In order to reduce manufacturing lead-times and to ensure for an adequate supply of inventories, we have agreements with our component suppliers and contract manufacturers to allow long lead-time component inventory procurement based on a rolling production forecast. We are contractually obligated to purchase long lead-time component inventory procured by certain manufacturers in accordance with our forecasts. We can generally give notice of order cancellation at least 90 days prior to the delivery date. However, we occasionally issue purchase orders to our component suppliers and third-party manufacturers that may not be cancellable. As of December 31, 2022 December 31, 2023 and December 31, 2021, December 31,

2022, we had no material open purchase orders with our component suppliers and third-party manufacturers that are not cancellable.

**Performance Guarantees** We guarantee the performance of the Energy Servers at certain levels of output and efficiency to its our customers over the contractual term. We monitor the need for any accruals arising from such guarantees, which are calculated as the difference between committed and actual power output or between natural gas consumption at warranted efficiency levels and actual consumption, multiplied by the contractual rates with the customer. Amounts payable under these guarantees are accrued in periods when the guarantees are not met and are recorded contra as service revenue in the consolidated statements of operations. We paid \$12.1 \$25.9 million and \$9.5 \$12.1 million for the years ended December 31, 2022 December 31, 2023 and 2021, respectively, for such performance guarantees.

**Under the terms of the PPA I transaction, customers agreed to purchase power from our Energy Servers at negotiated rates, generally for periods of up to 15 years. We were responsible for all operating costs necessary to maintain, monitor and repair the Energy Servers, including the fuel necessary to operate the systems under PPA I. The risk associated with the future market price of fuel purchase obligations was mitigated with commodity contract futures which expired in March 2022. For additional information, see Note 5 - Fair Value.**

**Letters of Credit** In 2019, pursuant to the PPA II upgrade of the Energy Servers, we agreed to indemnify our financing partner for losses that may be incurred in the event of certain regulatory, legal or legislative developments and established a cash-collateralized LC letter of credit facility for this purpose. There were no letters As of credit or pledged funds associated with the PPA IIIa December 31, 2023 and PPA IV Upgrades. As of December 31, 2022, the balance of this cash-collateralized LC letter of credit was \$40.4 million and \$69.1 million, respectively.

In August 2023, as part of which \$40.6 the PPA V Upgrade, the debt service reserve of \$8.6 million and \$28.5 million is recognized as short-term and long-term was reclassified from restricted cash respectively to cash and cash equivalents at the time of repayment of the 3.04% Senior Secured Notes due June 2031. For additional information, please see Note 7 – Outstanding Loans and Security Agreements and Note 10 – Portfolio Financings. The restricted cash held in PPA V as of December 31, 2022, was \$8.6 million.

In addition, we have other outstanding letters of credit issued to our customers and other counterparties in the U.S. and international locations under different performance and financial obligations. These letters of credit are collateralized through cash deposited in the controlled bank accounts with the issuing banks and are classified as restricted cash in our consolidated balance sheets. In September 2023, we canceled certain existing cash-collateralized letters of credit with an approximate value of \$60.4 million issued to our

customers in the Republic of Korea under long-term service agreements and replaced them with surety bonds on a non-collateralized basis. As of December 31, 2021 December 31, 2023 and December 31, 2022, the balance balances of this the cash-collateralized LC was \$99.4 letters of credit issued to our customers and other counterparties in the U.S. and international locations were \$32.6 million and \$84.3 million, of which \$41.7 million and \$57.7 million is recognized as short-term and long-term restricted cash, respectively.

**Pledged Funds** In 2019, pursuant to the PPA IIb upgrade of the Energy Servers, we established a restricted cash fund of \$20.0 million, which had been pledged for a seven-year period to secure our operations and maintenance obligations with respect to the totality of our obligations to the financier. All or a portion of such funds would be released if we meet certain credit rating and/or market capitalization milestones prior to the end of the pledge period. If we do not meet the required criteria within the first five-year period, the funds would still be released to us over the following two years as long as the Energy Servers continue to perform in compliance with our warranty obligations. As of December 31, 2022 December 31, 2023 and 2021, December 31, 2022, the balance of the long-term restricted cash fund was \$6.7 \$7.6 million and \$6.7 \$7.9 million, respectively.

#### Contingencies

**Indemnification Agreements** We enter into standard indemnification agreements with our customers and certain other business partners in the ordinary course of business. Our exposure under these agreements is unknown because it involves future claims that may be made against us but have not yet been made. To date, we have not paid any claims or been required to defend any action related to our indemnification obligations. However, we may record charges in the future as a result of these indemnification obligations.

**Delaware Economic Development Authority** In March 2012, we entered into an agreement with the Delaware Economic Development Authority to provide a grant of \$16.5 million \$16.5 million to us as an incentive to establish a new manufacturing facility in Delaware and to provide employment for full time workers at the facility over a certain period of time. The approved grant contains consisted of two types components — a performance grant of milestones \$12.0 million that we must complete was received in 2012-2013 and was tied to retain the entire amount of the grant proceeds. The first milestone was total compensation paid to provide employment for 900 full time workers in Delaware by the end of the first recapture period of September 30, 2017. The second milestone was to pay these full-time workers a cumulative total of \$108.0 million in compensation by September 30, 2017. There are two additional recapture periods at which time we must continue to employ 900 full time workers, and a supplier incentive grant of \$4.5 million that we would have received if we had employed 900 full time employees by pre-established dates. We forfeited the cumulative entire \$4.5 million supplier incentive component of the grant. We forfeited and repaid two portions of the performance grant based on our achievement of one out of three milestones for the total compensation paid by us is required to be at least \$324.0 million by September 30, 2023. As of December 31, 2022 and 2021, we had 634 and 484 full time workers, in Delaware and paid \$251.2 million and \$191.4 as follows:

- \$108 million in cumulative total compensation respectively. We have so far received \$12.0 over the four-year period ended September 30, 2017, which we did not meet, requiring us to repay \$1.5 million of the grant,
- \$144 million in total compensation over the four-year period ended September 30, 2021, which we did not meet, requiring us to repay \$1.0 million of the grant, and
- \$72 million in total compensation over the two-year period ended September 30, 2023, which is contingent upon meeting we met, so no repayment was required.

We account for grants by analogizing to the milestones through September 30, 2023. In the event that we do not meet the milestones, we may have to repay the Delaware Economic Development Authority, up to an additional \$2.5 million on September 30, 2023 grant accounting model under IAS 20, *Accounting for Government Grants and Disclosure of Government Assistance*. We repaid \$1.5 million and \$1.0 million recognize grant funding with conditions as a reduction of expenses the related costs for which the grant is intended to compensate in 2017 the period during which the related qualifying expenses are incurred and 2021, respectively, as the grant conditions are fulfilled. Any amount received in advance of fulfilling such conditions is recorded in accrued expenses and other current liabilities in our consolidated balance sheets, if the conditions are expected to be met within the next twelve months, and in other long-term liabilities in our consolidated balance sheets, if the conditions are expected to be met in more than twelve-month period.

As of December 31, 2022 the grant became current and, we have recorded \$9.5 million of grant related liability in accrued expenses and other current liabilities for future repayments repayment of this the grant. As of December 31, 2021 September 30, 2023, we have recorded \$9.5 million concluded there was reasonable assurance that we had met the grant requirements, and \$9.5 million was recognized in other long-term liabilities the consolidated statements of operations as a reduction in (i) cost of product revenue of \$5.3 million, (ii) cost of service revenue of \$2.9 million, (iii) general and administrative expenses of \$0.6 million, (iv) research and development expenses of \$0.5 million, and (v) sales and marketing expenses of \$0.2 million for potential future repayments of this grant. the year ended December 31, 2023.

**Investment Tax Credits** Our Energy Servers are eligible for federal ITCs that accrued to qualified property under Internal Revenue Code Section 48 when placed into service. However, the ITC program has operational criteria that extend for five years. If the energy property is disposed of or otherwise ceases to be qualified investment credit property before the close of the five-year recapture period is fulfilled, it could result in a partial reduction of the incentives. Energy Servers are purchased by the PPA Entities, other financial sponsors, or customers and, therefore, these parties bear the risk of repayment if the assets placed in service do not meet the ITC operational criteria in the future although in certain limited circumstances we do provide indemnification for such risk.

**Legal Matters** We are involved in various legal proceedings that arise in the ordinary course of business. We review all legal matters at least quarterly and assess whether an accrual for loss contingencies needs to be recorded. We record an accrual for loss contingencies when management believes that it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. Legal matters are subject to uncertainties and are inherently unpredictable, so the actual liability in any such matter may be materially different from our estimates. If an unfavorable resolution were to occur, there exists the possibility of a material adverse impact on our consolidated financial condition, results of operations or cash flows for the period in which the resolution occurs or in future periods.

In March 2019, the Lincolnshire Police Pension Fund filed a class action complaint in the Superior Court of the State of California, County of Santa Clara, against us, certain members of our senior management, certain of our directors and the underwriters in our July 25, 2018 IPO alleging violations under Sections 11 and 15 of the Securities Act of 1933, as amended (the "Securities Act"), for alleged misleading statements or omissions in our Registration Statement on Form S-1 filed with the SEC in connection with the IPO. Two related class action cases were subsequently filed in the Santa Clara County Superior Court against the same defendants containing the same allegations; Rodriguez vs Bloom Energy et al. was filed on April 22, 2019 and Evans vs Bloom Energy et al. was filed on May 7, 2019. These cases have been consolidated. Plaintiffs' consolidated amended complaint was filed with the court on September 12, 2019. On October 4, 2019, defendants moved to stay the lawsuit pending the federal district court action discussed below. On December 7, 2019, the Superior Court issued an order staying the action through resolution of the parallel federal litigation mentioned below. We believe the complaint to be without

merit and in contravention of our forum selection clause in our Restated Certificate of Incorporation and we intend to defend this action vigorously. We are unable to estimate any range of reasonably possible losses.

In May 2019, Elissa Roberts filed a class action complaint in the federal district court for the Northern District of California against us, certain members of our senior management team, and certain of our ~~directors~~ directors' alleging violations under Sections 11 and 15 of the Securities Act for alleged misleading statements or omissions in our Registration Statement on Form S-1 filed with the SEC in connection with the IPO. On September 3, 2019, the court appointed a lead plaintiff and lead plaintiffs' counsel. On November 4, 2019, plaintiffs filed an amended complaint adding the underwriters in the IPO and our auditor as defendants for the Section 11 claim, as well as adding claims under Sections 10(b) and 20(a) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), against us, and certain members of our senior management team. The amended complaint alleged a class period for all claims from the time of our IPO until September 16, 2019. On April 21, 2020, plaintiffs filed a second amended complaint, which continued to make the same claims and added allegations pertaining to the restatement and, as to claims under the Exchange Act, extended the putative class period through February 12, 2020. On July 1, 2020, we and the other defendants filed motions to dismiss the second amended complaint. On September 29, 2021, the court entered an order dismissing with leave to amend (1) five of seven statements or groups of statements alleged to violate Sections

11 and 15 of the Securities Act and (2) all allegations under the Exchange Act. All allegations against our auditors were also dismissed. Plaintiffs elected not to amend the complaint and instead on October 22, 2021 filed a motion for entry of final judgment in favor of our auditors so that plaintiffs could appeal the dismissal of those claims. The court denied that motion on December 1, 2021 and in response plaintiffs filed a motion asking the court to certify an interlocutory appeal as to the accounting claims. The court denied plaintiffs' motion on April 14, 2022. The claims for violation of Sections 11 and 15 of the Securities Act that were not dismissed by the court entered the discovery phase.

On January 6, 2023, Bloom and the plaintiffs' entered into an agreement in principle to settle the claims against Bloom, its executives and directors, and the IPO underwriters for a payment of \$3 million, which ~~will we expect to~~ be funded entirely by our insurers. If the settlement becomes effective, ~~we expect it will~~ to result in a dismissal with prejudice of all claims against us, our executives and directors, and the underwriters. The settlement does not constitute an acknowledgement of liability or wrongdoing. ~~This settlement is conditioned on On June 30, 2023, Bloom and the execution of plaintiff's executed~~ a definitive settlement agreement containing the foregoing terms and customary terms for class action settlements, and on the same date, filed the settlement agreement with the court to seek its approval. The judge issued a preliminary approval of the settlement by the court. ~~If the court does not approve on October 31, 2023. Notice of the settlement together with requested Plaintiff attorney fees has been sent to the defined class of Bloom stockholders and all of its material terms, or a final fairness hearing on May 2, 2024 will occur before the settlement does not otherwise become final or effective, proceedings in the action will continue. is final.~~

In June 2021, we filed a petition for writ of mandate and a complaint for declaratory and injunctive relief in the Santa Clara Superior Court against the City of Santa Clara for failure to issue building permits for two of our customer installations and asking the court to require the City of Santa Clara to process and issue the building permits. In October 2021, we filed an amended petition and complaint that asserts additional constitutional and tort claims based on the City's failure to timely issue the Energy Server permits. Discovery has commenced and we are aggressively pursuing all claims. On February 4, 2022, the City of Santa Clara filed a demurrer seeking to dismiss all of the Company's claims. The trial judge rejected the demurrer on all claims except one, and allowed Bloom ~~to~~ leave to amend that claim. The second amended petition was filed on July 5, 2022. The City of Santa Clara demurred only to the amended cause of action seeking damages for tortious conduct. The trial judge granted that demurrer and struck the tort claim on October 27, 2022; the writ of mandate and constitutional claims were allowed to proceed. The parties are currently briefing the writ of mandate claims which seek immediate issuance of the building permits. ~~Those claims are scheduled for hearing on April 28, 2023. Discovery is continuing on On April 21, 2023, the constitutional claims. If we are unable parties executed a settlement agreement which allows our two pending customer installations to secure proceed under building permits for these customer and requires the City of Santa Clara to amend its zoning code so that future installations in a timely fashion, our customers will terminate their contracts with us and select another energy provider. In addition, if we are no longer able to install our of Bloom Energy Servers in Santa Clara under require only building permits, we may not be able to secure future customer bookings for installation in the City of Santa Clara. permits.~~

In February 2022, Plansee SE/Global Tungsten & Powders Corp. ("Plansee/GTP"), a former supplier, filed a request for expedited arbitration with the World Intellectual Property Organization Arbitration and Mediation Center in Geneva Switzerland ("WIPO"), for various claims allegedly in relation to an Intellectual Property and Confidential Disclosure Agreement between Plansee/GTP and Bloom Energy Corporation. Plansee/GTP's statement of claims includes allegations of infringement of U.S. Patent Nos. 8,802,328, 8,753,785 and 9,434,003. On April 3, 2022, we filed a complaint against Plansee/GTP in the Eastern District of Texas to address the dispute between Plansee/GTP and Bloom Energy Corporation in a proper forum before a U.S. Federal District Court. Our complaint seeks the correction of inventorship of U.S. Patent Nos. 8,802,328, 8,753,785 and 9,434,003 (the "Patents-in-Suit"); declaratory judgment of invalidity, unenforceability, and non-infringement of the Patents-in-Suit; and declaratory judgment of no misappropriation. Further, our complaint seeks to recover damages we have suffered in relation to Plansee/GTP's business dealings that, as alleged, constitute acts of unfair competition, tortious interference contract, breach of contract, violations of the Racketeer Influenced and Corrupt Organizations (RICO) Act and violations of the Clayton Antitrust Act. On June 9, 2022, Plansee/GTP filed a motion to dismiss the complaint filed in the Eastern District of Texas and compel arbitration (or alternatively to stay). We filed our opposition on June 30, 2022, Plansee/GTP filed its reply on ~~July 14,~~

~~2022~~ July 14, 2022 and we filed our sur-reply on July 22, 2022. On February 9, 2023, Magistrate Judge Payne issued a report and recommendation to stay the district court action pending an arbitrability determination by the arbitrator for each claim. ~~Activity~~

~~On February 23, 2023, we filed an amended complaint adding additional causes of action and filed objections to the Magistrate's report and recommendation. On April 26, 2023, Judge Gilstrap overruled our objections to the Magistrate's report and recommendation and stayed the district court action pending arbitrability determinations by the arbitrator in the WIPO proceeding. The arbitration ~~has~~ been held in abeyance awaiting the decision of the Eastern District Court's determination of Texas. A hearing by the arbitrator in WIPO on arbitrability took place on June 27, 2023. On October 2, 2023, the motion to dismiss. The arbitrator ~~has~~ informed the parties that ~~activities~~ in the WIPO proceeding issued a ruling concluding that all the parties' claims were arbitrable. On November 18, 2023, the arbitrator bifurcated the arbitration into a first phase that ~~will~~ remain dormant until Judge Gilstrap rules upon any objections filed focus on Bloom's claims directed to improper inventorship of the Patents-in-Suit and Bloom's defective product claims. Briefing on the first phase ~~will~~ take place throughout 2024 with regard a potential evidentiary hearing to the Magistrate's report and recommendation. Discovery has commenced be scheduled in the District Court action and the parties have exchanged discovery requests. The parties have commenced claim construction exchanges under the docket control order in preparation for a Markman hearing currently scheduled for May 11, 2023. Given that the cases are still in their early stages, we 2025. We are unable to predict the ultimate outcome of the arbitration and district court action at this time, and accordingly are not able to estimate a range of reasonably possible losses. time.~~

#### 14. Segment Information

Our chief operating decision makers ("CODM"), the Chief Executive Officer and the Chief Financial Officer, review financial information presented on a consolidated basis for the purposes of allocating resources and evaluating financial performance. The CODM ~~allocate~~ allocates resources and make operational decisions based on direct involvement

with our operations and product development efforts. We are managed under a **functionally-based** organizational structure with the head of each function reporting to the Chief Executive Officer. The CODM **assesses** performance, including incentive compensation, based upon consolidated operations performance and financial results on a consolidated basis. As such, we have a single operating unit structure and are a single reporting segment.

## 15. Income Taxes

The components of loss before the provision for income taxes are as follows (in thousands):

	Years Ended December 31,			Years Ended December 31,	2023	2022	2021
	2022	2021	2020				
	United States	United States	United States				
United States	\$ (320,107)	\$ (195,208)	\$ (179,657)				
Foreign	6,118	2,885	826				
Total	\$ (313,989)	\$ (192,323)	\$ (178,831)				

The provision for income taxes is comprised of the following (in thousands):

	Years Ended December 31,			Years Ended December 31,	2023	2022	2021
	2022	2021	2020				
	Current:	Current:	Current:				
Current:	Federal	Federal	Federal				
Federal	Federal	\$ —	\$ —				
State	State	374	107	21			
Foreign	Foreign	1,158	1,012	472			
Total current	Total current	1,532	1,119	493			
Deferred:	Deferred:						
Federal	Federal	—	—	—			
Federal	Federal	—	—	—			
State	State	—	—	—			
Foreign	Foreign	(435)	(73)	(237)			
Total deferred	Total deferred	(435)	(73)	(237)			
Total provision for income taxes	Total provision for income taxes	\$ 1,097	\$ 1,046	\$ 256			

A reconciliation of the U.S. federal statutory income tax rate to our effective tax rate is as follows (in thousands):

		Years Ended December 31,					
		2022	2021	2020	2023	2022	2021
Tax at federal statutory rate	Tax at federal statutory rate	\$ (65,922)	\$ (40,387)	\$ (37,552)			
Tax at federal statutory rate							
Tax at federal statutory rate							
State taxes, net of federal effect	State taxes, net of federal effect	374	107	21			
Impact on noncontrolling interest		2,872	6,074	4,522			
Impact of noncontrolling interest							
Elimination of acquiree deferred taxes	Elimination of acquiree deferred taxes	—	2,149	—			
Non-U.S. tax effect	Non-U.S. tax effect	(387)	412	78			
Nondeductible expenses and losses	Nondeductible expenses and losses	2,258	1,311	908			
Stock-based compensation	Stock-based compensation	7,019	5,307	5,956			
Loss on debt extinguishment	Loss on debt extinguishment	—	—	214			
U.S. tax on foreign earnings (GILTI)	U.S. tax on foreign earnings (GILTI)	2,525	59	203			
(Gain) loss on SK Equity Transaction	(Gain) loss on SK Equity Transaction	(3,932)	2,292	—			
Acquisition contingent liability	Acquisition contingent liability	—	(762)	—			
Change in valuation allowance	Change in valuation allowance	56,290	24,484	25,906			
Provision for income taxes	Provision for income taxes	\$ 1,097	\$ 1,046	\$ 256			

For the year ended December 31, 2023, the Company recognized a provision for income taxes of \$1.9 million on a pre-tax loss of \$306.0 million, for an effective tax rate of (0.6%). For the year ended December 31, 2022, we recognized a provision for income taxes of \$1.1 million on a pre-tax loss of \$314.0 million, for an effective tax rate of (0.3%). For the year ended December 31, 2021, we recognized a provision for income taxes of \$1.0 million on a pre-tax loss of \$192.3 million, for an effective tax rate of (0.5%). For the year ended December 31, 2020, we recognized a provision for income taxes of \$0.3 million on a pre-tax loss of \$178.8 million, for an effective tax rate of (0.1%). The effective tax rate for 2023, 2022 and 2021 is lower than the statutory federal tax rate primarily due to a full valuation allowance against U.S. deferred tax assets.

Significant components of our deferred tax assets and liabilities consist of the following (in thousands):

		December 31,			
		2022	2021		
		December 31,			
		December 31,			
		2023	2023	2023	2022
Tax credits and net operating loss carryforwards	Tax credits and net operating loss carryforwards	\$ 558,779	\$ 562,384		
Lease liabilities	Lease liabilities	157,890	151,937		
Depreciation and amortization	Depreciation and amortization	27,681	9,516		
Deferred revenue	Deferred revenue	18,992	23,208		
Accruals and reserves	Accruals and reserves	21,084	14,524		
Research and development expenditures	Research and development expenditures				
capitalization	capitalization	28,965	—		
Stock-based compensation	Stock-based compensation	22,675	20,138		
Disallowed interest expenses	Disallowed interest expenses	29,159	26,730		
Investment in PPA entities	Investment in PPA entities	4,354	—		
Other items - deferred tax assets		1,519	1,528		
Other items					
— deferred tax assets					
Gross deferred tax assets	Gross deferred tax assets	871,098	809,965		
Valuation allowance	Valuation allowance	(758,242)	(689,257)		
Net deferred tax assets	Net deferred tax assets	112,856	120,708		
Investment in PPA entities		—	(7,911)		
Managed services - deferred costs		(18,974)	(20,935)		
Managed services — deferred costs					
Managed services — deferred costs					
Managed services — deferred costs					

Right-of-use assets and leased assets	Right-of-use assets and leased assets	(90,682)	(89,165)
Other items - deferred tax liability		(2,049)	(1,742)
Other items			
— deferred tax liability			
Gross deferred tax liabilities	Gross deferred tax liabilities	(111,705)	(119,753)
Net deferred tax asset	Net deferred tax asset	\$ 1,151	\$ 955

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

A valuation allowance is provided for the amount of deferred tax assets that, based on available evidence, is not more-likely-than-not to be realized. Management believes that, based on available evidence, both positive and negative, it is not more likely than not that the net U.S. deferred tax assets will be utilized. As a result, a full valuation allowance has been recorded.

The valuation allowance for deferred tax assets was \$758.2 million and \$689.3 million as of December 31, 2022 December 31, 2023 and 2021, 2022, respectively. The net change in the total valuation allowance for the years ended December 31, 2022 December 31, 2023 and 2021 2022 was an increase of \$73.4 million and an increase of \$69.0 million, and a increase of \$74.3 million, respectively.

At December 31, 2022 December 31, 2023, we had federal and California net operating loss carryforwards of \$2.1 billion and \$1.4 billion, respectively, to reduce future taxable income. The expiration of federal and California net operating loss carryforwards is summarized as follows (in billions):

	Federal	California
Expire in 2025 - 2027	\$ 0.1	\$ —
Expire in 2028 - 2032	0.7	0.6
Expire beginning in 2033	0.9	0.8
Carryforward indefinitely	0.4	—
<b>Total</b>	<b>\$ 2.1</b>	<b>\$ 1.4</b>

	Federal	California
Expire in 2024 — 2028	\$ 0.2	\$ 0.1
Expire in 2029 — 2033	0.7	0.6
Expire beginning in 2034	0.8	0.8
Carryforward indefinitely	0.4	—
<b>Total</b>	<b>\$ 2.1</b>	<b>\$ 1.5</b>

At December 31, 2021 December 31, 2023, we also had other state net operating loss carryforwards of \$365.3 million, that will begin began to expire in 2023, fiscal 2024. In addition, at December 31, 2023, we had approximately \$31.0 million of federal research credit, \$6.6 million of federal investment tax credit, and \$17.4 \$19.1 million of state research credit carryforwards.

The expiration of the federal and California credit carryforwards is summarized as follows (in millions):

	Federal	California
Expire in 2025 - 2027	\$ 3.1	\$ —
Expire in 2028 - 2032	7.8	—
Expire beginning in 2033	26.7	—
Carryforward indefinitely	—	17.4
<b>Total</b>	<b>\$ 37.6</b>	<b>\$ 17.4</b>

	Federal	California
Expire in 2024 — 2028	\$ 4.3	\$ —
Expire in 2029 — 2033	7.9	—
Expire beginning in 2034	33.5	—
Carryforward indefinitely	—	19.1
<b>Total</b>	<b>\$ 45.7</b>	<b>\$ 19.1</b>

We have not reflected deferred tax assets for the federal and state research credit carryforwards as the entire amount of the carryforwards represent unrecognized tax benefits.

Internal Revenue Code Section 382 ("Section 382") limits the use of net operating loss and tax credit carryforwards in certain situations in which changes occur in our capital stock ownership. Any annual limitation may result in the expiration of net operating losses and credits before utilization. If we should have an ownership change, as defined by the tax law, utilization of the net operating loss and credit carryforwards could be significantly reduced. We completed a Section 382 analysis through **December 31, 2022** **December 31, 2023**. Based on this analysis, Section 382 limitations will not have a material impact on our net operating loss and credit carryforwards related to any ownership changes.

During the year ended **December 31, 2022** **December 31, 2023**, the amount of uncertain tax positions increased by **\$6.4** **\$9.8** million. We have not recorded any uncertain tax liabilities associated with our tax positions.

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

Years Ended December 31,			Years Ended December 31,		
2022      2021      2020			2023      2022      2021		
Unrecognized tax benefits	Unrecognized tax benefits		Years Ended December 31,		
beginning balance	beginning balance		Years Ended December 31,		
			Years Ended December 31,		
			Years Ended December 31,		
			Years Ended December 31,		
			Years Ended December 31,		
			2023	2022	2021
Unrecognized tax benefits					
beginning balance					
Unrecognized tax benefits					
beginning balance					
Gross decrease for tax positions of prior year					
Gross increase for tax positions of prior year					
Gross increase for tax positions of current year					
Unrecognized tax benefits					
end balance					

Unrecognized tax benefits	Unrecognized tax benefits		Years Ended December 31,		
beginning balance	beginning balance		Years Ended December 31,		
			Years Ended December 31,		
			Years Ended December 31,		
			Years Ended December 31,		
			Years Ended December 31,		
			2023	2022	2021
Unrecognized tax benefits					
beginning balance					
Unrecognized tax benefits					
beginning balance					
Gross decrease for tax positions of prior year					
Gross increase for tax positions of prior year					
Gross increase for tax positions of current year					
Unrecognized tax benefits					
end balance					

Unrecognized tax benefits	Unrecognized tax benefits		Years Ended December 31,		
beginning balance	beginning balance		Years Ended December 31,		
			Years Ended December 31,		
			Years Ended December 31,		
			Years Ended December 31,		
			Years Ended December 31,		
			2023	2022	2021
Unrecognized tax benefits					
beginning balance					
Unrecognized tax benefits					
beginning balance					
Gross decrease for tax positions of prior year					
Gross increase for tax positions of prior year					
Gross increase for tax positions of current year					
Unrecognized tax benefits					
end balance					

Unrecognized tax benefits	Unrecognized tax benefits		Years Ended December 31,		
beginning balance	beginning balance		Years Ended December 31,		
			Years Ended December 31,		
			Years Ended December 31,		
			Years Ended December 31,		
			Years Ended December 31,		
			2023	2022	2021
Unrecognized tax benefits					
beginning balance					
Unrecognized tax benefits					
beginning balance					
Gross decrease for tax positions of prior year					
Gross increase for tax positions of prior year					
Gross increase for tax positions of current year					
Unrecognized tax benefits					
end balance					

If fully recognized in the future, there would be no impact to the effective tax rate, and **\$44.7 million** **\$54.1 million** would result in adjustments to the valuation allowance. We do not have any tax positions that are expected to significantly increase or decrease within the next 12 months.

Interest and penalties, to the extent there are any, would be included in income tax expense. There were no material interest or penalties accrued during or for the years ended December 31, 2022 December 31, 2023 and 2021, 2022.

We are subject to taxation in the United States U.S. and various states and foreign jurisdictions. We currently have an income Our 2020 tax examination year that was under audit by the IRS has been closed in progress, and we believe that adequate amounts have been reserved. 2023 without a material impact on our financial position. All of our tax years will remain open for examination by federal and state authorities for three and four years from the date of utilization of any net operating losses and tax credits.

The Tax Cuts and Jobs Act of 2017 ("Tax Act") includes a provision referred to as Global Intangible Low-Taxed Income ("GILTI") which generally imposes a tax on foreign income in excess of a deemed return on tangible assets. Guidance issued by the Financial Accounting Standards Board in January 2018 allows companies to make an accounting policy election to either (i) account for GILTI as a component of tax expense in the period in which the tax is incurred ("period cost method"), or (ii) account for GILTI in the measurement of deferred taxes ("deferred method"). We elected to account for the tax effects of this provision using the period cost method.

The Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act") was enacted in the United States on March 27, 2020. The CARES Act includes several U.S. income tax provisions related to, among other things, net operating loss carrybacks, alternative minimum tax credits, modifications to the net interest deduction limitations, and technical amendments regarding the income tax depreciation of qualified improvement property placed in service after December 31, 2017. The CARES Act did not have a material impact on our financial results for the year ended December 31, 2022 and 2021.

On August 16, 2022, the U.S. government enacted the IRA. The IRA establishes a new corporate alternative minimum tax based on financial statement income adjusted for certain items. The new minimum tax is effective for tax years beginning after December 31, 2022. The enactment of the IRA did not have a material impact to the Company's financial statements our tax expense for the years ended December 31, 2022 December 31, 2023 and 2021, 2022, but we are currently assessing the impact of the production and tax credit-related IRA provisions on our business for future periods.

Our The accumulated undistributed foreign earnings of the Company as of December 31, 2022 December 31, 2023 have been subject to either the deemed one-time mandatory repatriation under the Tax Act or the current year income inclusion under GILTI regime for U.S. tax purposes. If we were to make actual distributions of some or all of these earnings, including earnings accumulated after December 31, 2017, we would generally incur no additional U.S. income tax but could incur U.S. state income tax and foreign withholding taxes. We have not accrued for these potential U.S. state income tax and foreign withholding taxes because we intend to permanently reinvest our foreign earnings in our international operations. However, any additional income tax associated with the distribution of these earnings would be immaterial.

## 16. Net Loss per Share Available to Common Stockholders

Net loss per share (basic) available to common stockholders is calculated by dividing net loss available to common stockholders by the weighted-average shares of common stock outstanding for the period. Net loss per share is the same for each class of common stock as they are entitled to the same liquidation and dividend rights. As a result, net loss per share (basic) and net loss per share (diluted) available to common stockholders are the same for both Class A and Class B common stock and are combined for presentation. On July 27, 2023, each share of our Class B common stock automatically converted into one share of our Class A common stock.

Net loss per share (diluted) is computed by using (i) the if-converted method when calculating the potentially dilutive effect, if any, of our convertible notes, notes, and our redeemable convertible preferred stock, and (ii) the treasury stock method when calculating the potentially dilutive effect, if any, of our outstanding stock options and awards, and shares issued in conjunction with the Company's ESPP. Net loss per share (diluted) available to common stockholders is then calculated by dividing the resulting adjusted net loss available to common stockholders by the combined weighted-average number of fully diluted common shares outstanding. There were no adjustments to net loss available to common stockholders (diluted). Equally, there were no adjustments to the weighted average number of outstanding shares of common stock (basic) in arriving at the weighted average number of outstanding shares (diluted), as such adjustments would have been antidilutive.

The following table sets forth the computation of our net loss per share available to common stockholders, basic and diluted (in thousands, except per share amounts):

		Years Ended				
		December 31,				
		Years Ended				
		December 31,				
		Years Ended				
		December 31,				
Numerator:		2022			2023	
Net loss available to Class					2022	
A and Class B common						
stockholders		\$ (301,708)			\$ (164,473)	
		\$ (157,574)				
Net loss available to						
common stockholders						
Net loss available to						
common stockholders						
Net loss available to						
common stockholders						
Denominator:		2022			2021	

Weighted average shares of common stock, basic and diluted	185,907	173,438	138,722
Net loss per share available to Class A and Class B common stockholders, basic and diluted			
	\$ (1.62)	\$ (0.95)	\$ (1.14)
Weighted average shares of common stock, basic and diluted			
Weighted average shares of common stock, basic and diluted			

The following common stock equivalents (in thousands) were excluded from the computation of our net loss per share available to common stockholders, diluted, for the years presented as their inclusion would have been antidilutive (in thousands):

	Years Ended December 31,				Years Ended December 31, 2022	2021		
	2022 2021 2020			2023				
	Convertible notes	Convertible notes	Convertible notes					
Convertible notes	14,187	14,187	29,729					
Convertible notes								
Convertible notes								
Redeemable convertible preferred stock	8,521	82	—					
Redeemable convertible preferred stock								
Stock options and awards	5,683	7,018	6,109					
Stock options and awards								
	49,133							
	28,391	21,287	35,838					
	49,133							
	49,133							

As of December 31, 2022, pursuant to the notice received from SK ecoplant of its intent to exercise its option to purchase additional shares of our Class A common stock, (see Note 5 - Fair Value), there were an additional 13,491,701 common stock equivalents that were excluded from the table above.

## 17. SK ecoplant Strategic Investment

In October 2021, we expanded our existing relationship with SK ecoplant. As part of this arrangement, we amended the previous Preferred Distribution Agreement (the "Restated PDA") and the Joint Venture Agreement ("JVA") with SK ecoplant. The restated Restated PDA establishes SK ecoplant's purchase commitments for our Energy Servers for the next three years three-year period on a take or pay take-or-pay basis as well as the basis for determining the prices at which the Energy Servers and related components will be sold. The restated JVA increases the scope of assembly done by the joint venture facility in the Republic of Korea, which was established in 2019, for the procurement of local parts for our Energy Servers and the assembly of certain portions of the Energy Servers for the South Korean market. The joint venture is a VIE of Bloom and we consolidate it in our financial statements as we are the primary beneficiary and therefore have the power to direct activities which are most significant to the joint venture.

The following are the aggregate carrying values of the Korean joint venture's assets and liabilities in our consolidated balance sheets, after eliminations of intercompany transactions and balances, as of December 31, 2022 and **in October 2021**, (in thousands):

	December 31,	
	2022	2021
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 2,591	\$ 2,955
Accounts receivable	4257	4362
Inventories	13,412	4,363
Prepaid expenses and other current assets	2,645	99
Total current assets	22,905	11,779
Property and equipment, net	1,141	1,101
Operating lease right-of-use assets	2,390	569
Other long-term assets	47	231
Total assets	<u><u>\$ 26,483</u></u>	<u><u>\$ 13,680</u></u>
<b>Liabilities</b>		
Current liabilities:		
Accounts payable	\$ 5,607	\$ 3,006
Accrued expenses and other current liabilities	1,355	567
Deferred revenue and customer deposits	2	475
Operating lease liabilities	393	175
Total current liabilities	7,357	4,223
Operating lease liabilities	2,000	402
Total liabilities	<u><u>\$ 9,357</u></u>	<u><u>\$ 4,625</u></u>

We also entered into a new Commercial Cooperation Agreement (the "CCA") regarding initiatives pertaining to the hydrogen market and general market expansion for our products.

Simultaneous with the execution of the above agreements, in September 2023, we entered into the Amended and Restated JVA and the Share Purchase Agreement (together, the "Amended JV Agreements") with SK ecoplant which changed the share of our voting rights in the Korean JV to 40% and increased the scope of assembly done by the joint venture facility in the Republic of Korea to full assembly. Neither the Amended JV Agreements, nor the fact that SK ecoplant is considered to be our related party after the conversion of Series B RCPS into shares of our Class A common stock (for additional information, please see Note 11 — *Related Party Transactions*)

changed our status as the primary beneficiary of the Korean JV. Therefore, we continue to consolidate this VIE in our financial statements as of December 31, 2023.

The following are the aggregate carrying values of the Korean JV's assets and liabilities in our consolidated balance sheets, after eliminations of intercompany transactions and balances, as of December 31, 2023 and 2022 (in thousands):

	December 31,	
	2023	2022
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 3,003	\$ 2,591
Accounts receivable	19,567	4,257
Inventories	8,156	13,412
Prepaid expenses and other current assets	644	2,645
Total current assets	31,370	22,905
Property and equipment, net	2,519	1,141
Operating lease right-of-use assets	2,138	2,390
Other long-term assets	46	47
Total assets	<u><u>\$ 36,073</u></u>	<u><u>\$ 26,483</u></u>
<b>Liabilities</b>		
Current liabilities:		
Accounts payable	\$ 3,480	\$ 5,607

Accrued expenses and other current liabilities	2,347	1,355
Deferred revenue and customer deposits	—	2
Operating lease liabilities	440	393
Total current liabilities	6,267	7,357
Operating lease liabilities	1,617	2,000
Non-recourse debt	4,627	—
Total liabilities	\$ 12,511	\$ 9,357

In September 2023, and December 2023, we entered into the First and the Second Amendments to the Restated PDA, respectively (the "First Amended Restated PDA" and the "Second Amended Restated PDA", respectively). The First Amended Restated PDA amends the delivery terms. The Second Amended Restated PDA extends the initial term of the Restated PDA to December 31, 2027 and increases SK ecoplant's purchase commitments for Bloom Energy products.

The Second Amended Restated PDA adds a new minimum purchase commitment of 250 megawatts and extends the timing of delivery of the remaining take-or- pay commitment under the original agreement. For the four-year period from January 1, 2024 to December 31, 2027, the total purchase commitment under the Second Amended Restated PDA is 500 megawatts, including a recommitment of 250 megawatts from the Restated PDA and an additional 250 megawatts commitment.

Under the Second Amended Restated PDA SK ecoplant can fulfill its volume commitments with both our Energy Servers and the Electrolyzer and this enables SK ecoplant to pursue opportunities globally outside of the Republic of Korea. The purchase commitments are expressed on a quarterly and annual basis. Should SK ecoplant fail to meet these purchase commitments, this would constitute an event of default and we would be entitled to damages equivalent to the lost profit.

#### **The Initial Investment**

In October 2021, we entered into the SPA pursuant to which we agreed to sell and issue to SK ecoplant 10,000,000 shares of Series A RCPS par value \$0.0001 per share, at a purchase price of \$25.50 per share for an aggregate purchase price of \$255.0 million. On December 29, 2021,

December 29, 2021, the closing of the sale of the Series A RCPS was completed, and we issued the 10,000,000 shares of the Series A RCPS (the "Initial Investment").

We determined the fair value of the RCPS on the date of issuance thereof to be \$218.0 million. We determined that the sale of the RCPS should be recorded at fair value. Accordingly, we allocated the excess of the cash proceeds received of \$255.0 million plus the change in fair value of the RCPS between October 23, 2021, and December 29, 2021, of \$9.7 million, over the fair value of the RCPS on December 29, 2021, and the fair value of the Option on October 23, 2021, to the PDA. This excess amounted to \$37.0 million and will be recognized as revenue over the take or pay period based on an estimate of the revenue we expect to receive under the PDA. Accordingly, during the year ended December 31, 2022 and 2021, we recognized Product Revenue of \$9.6 million and \$2.8 million, respectively, in connection with this arrangement. The unrecognized amount of \$24.6 million and \$34.2 million included \$10.0 million and \$7.8 million in current deferred revenue and customer deposits and \$14.6 million and \$26.4 million in non-current deferred revenue and customer deposits on the consolidated balance sheet as of December 31, 2022 and 2021, respectively.

As of December 31, 2021, the RCPS has been presented outside of permanent equity in the mezzanine section of the consolidated balance sheets because there are certain redemption provisions upon liquidation, dissolution, or deemed liquidation events (which include a change in control and the sale or other disposition of all or substantially all of our assets), which are considered contingent redemption provisions that are not solely within our control.

We incurred transaction costs of \$9.8 million in connection with this arrangement. We allocated the transaction costs between the RCPS, and the Option based on their relative fair values. Accordingly, an amount of \$9.4 million is set off against the carrying amount of the RCPS with the balance of \$0.4 million included in other income (expense), net in our consolidated statements of operations.

On November 8, 2022, each share of RCPS was converted into 10,000,000 shares of Class A Common Stock.

In addition to the Initial Investment, the SPA provided SK ecoplant with an option to acquire a variable number of shares of Class A Common Stock common stock (the "Option"). The number of shares SK ecoplant may acquire under the Option (the "Option Shares") is calculated as the lesser of (i) 11,000,000 shares of Class A Common Stock plus the number of shares of Class A Common Stock that SK ecoplant must hold to become our largest shareholder by no less than 1% of our issued and outstanding capital stock as of the issuance date of the Option Shares; and (ii) 15% of our issued and outstanding capital stock as of the issuance date of the Option Shares. The exercise price of the Option is calculated as the higher of (i) \$23.00 per share and (ii) 115% of the volume-weighted average closing price of the 20 consecutive trading day period immediately preceding the exercise of the Option. According to the SPA, SK ecoplant was entitled to exercise the Option through August 31, 2023, and the transaction must have been completed as of by November 30, 2023.

The sale of Series A RCPS was recorded at its fair value of \$218.0 million on the date of issuance. Accordingly, we allocated the excess of the cash proceeds received of \$255.0 million plus the change in fair value of the Series A RCPS between October 23, 2021, and December 29, 2021, of \$9.7 million, over the fair value of the Series A RCPS on December 29, 2021, and the fair value of the Option on October 23, 2021, to the PDA. This excess amounted to \$37.0 million and was recorded in deferred revenue and customer deposits. Accordingly, during the years ended December 31, 2022 and 2021, we recognized product revenue of \$9.6 million and \$2.8 million, respectively, in connection with this arrangement. No product revenue was recognized during the year ended December 31, 2023 in connection with this arrangement. As of December 31, 2022, the unrecognized amount of \$24.6 million included \$10.0 million in current deferred revenue and customer deposits and \$14.6 million in non-current deferred revenue and customer deposits on the consolidated balance sheets. As of December 31, 2023, the unrecognized amount of deferred revenue and customer deposits was reduced to zero as a result of the Second Tranche Closing (see details below in section "The Second Tranche Closing").

Restated PDA, JVA, CCA and the SPA entered into with SK ecoplant concurrently should be were evaluated as a combined contract in accordance with ASC 606 and, to the extent applicable for separated components, under the guidance of Topic 815 - Derivatives and Hedging and applicable subsections and ASC 480, - Distinguishing Liabilities from Equity. Equity.

We concluded that the Option was a freestanding financial instrument that should have been separately recorded at fair value on the date the SPA was executed. We determined the fair value of the Option on that date to be \$9.6 million.

On August 10, 2022, pursuant to the SPA, SK ecoplant notified us of its intent to exercise its option to purchase additional shares of our Class A common stock, pursuant to a Second Tranche Exercise Notice (as defined in the SPA) electing to purchase 13,491,701 shares at a purchase price of \$23.05 per share. Upon receipt of SK's notice the purchase price and the number of shares of Class A Common Stock that SK will purchase under the Option were fixed. The payment for the Second Tranche Shares was agreed to be due the later of (i) December 6, 2022 and (ii) upon clearance under the HSR of the sale of the Second Tranche Shares as contemplated by the Second Tranche Exercise Notice. The Option was fairly valued as of the notice date at \$4.2 million, and gain on revaluation of \$9.0 million was recorded under other (expense) income, (expense), net in our consolidated statements of operations. Upon the receipt of the notice from SK ecoplant the Option met the criteria of equity award and was classified as a forward contract as part of additional paid-in capital.

**HSR approval** On November 8, 2022, each share of the Series A RCPS was received in November 2022, converted into 10,000,000 shares of Class A common stock.

On December 6, 2022, SK and Bloom mutually agreed to delay the Second Tranche Closing Date for the purchase of the 13,491,701 shares of Class A Common Stock of the Issuer until March 31, 2023, unless an earlier date is mutually agreed upon and subject to and assuming the satisfaction of applicable regulatory clearance. The mutual agreement to modify the Second Closing Date closing date did not change the accounting or valuation of the equity-classified forward recorded.

#### **The Second Tranche Closing**

On March 20, 2023, SK ecoplant entered into the Amended SPA with us, pursuant to which on March 23, 2023, we issued and sold to SK ecoplant 13,491,701 shares of non-voting Series B RCPS, par value \$0.0001 per share, at a purchase price of \$23.05 per share for cash proceeds of \$311.0 million, excluding issuance cost of \$0.5 million.

The Amended SPA triggered the modification of the equity-classified forward contract on Class A common stock, which resulted in the derecognition of the pre-modified fair value of the forward contract given to SK ecoplant of \$76.2 million. We valued the forward contract as the difference between our Class A common stock trading price adjusted by a discount for lack of marketability ("DLOM") as of the date of Amended SPA (the "Valuation Date") and the present value of the strike price, with further reduction associated with the expected outcome of the Second Tranche Closing. The derecognition of the pre-modified fair value was recorded in additional paid-in capital in our consolidated balance sheets as of December 31, 2023.

The Series B RCPS was accounted for as a stock award with liability and equity components. The liability component of the Series B RCPS was recognized at the redemption value of \$311.0 million, less issuance costs of \$0.5 million, and was recorded in current liabilities in our consolidated balance sheets as of December 31, 2023. The equity component of the Series B RCPS (the "Conversion Option") was valued as a European-type call option under the guidance of ASC 718 by applying the Black-Scholes valuation model using inputs of the strike price, maturity, risk-free rate, and volatility. In addition, DLOM was applied to the Class A common stock price. The Conversion Option was recognized at its fair value of \$16.1 million on March 20, 2023 and recorded in additional paid-in capital in our consolidated balance sheets as of December 31, 2023.

On March 20, 2023, in connection with the Amended SPA we also entered into the Loan Agreement, pursuant to which we had the option to draw on a loan from SK ecoplant with a maximum principal amount of \$311.0 million, a maturity of five years and an interest rate of 4.6%, should SK ecoplant have sent a redemption notice to us under the Amended SPA (i.e., loan commitment asset). We concluded that the loan commitment was a freestanding financial instrument as of the Valuation Date, as such its fair value was based on the difference between the present value of cash flows associated with a loan with a market-participant based interest rate (i.e., the rate for which the value of the hypothetical loan agreement equals the face value of the Loan Agreement) and the cash flows associated with the loan committed to by SK ecoplant, and applied a redemption probability to the difference. The Series B RCPS redemption probability was obtained from a lattice model used to value the Series B preferred stock. As of December 31, 2023, the loan commitment asset from SK ecoplant was derecognized as a result of automatic conversion of all shares of the Series B RCPS into shares of our Class A common stock.

The Amended SPA and the Loan Agreement provided us with cash proceeds of \$311.0 million and a loan commitment asset of \$52.8 million from SK ecoplant for total consideration of \$363.8 million. In return, SK ecoplant received consideration of \$403.3 million, consisting of the release from the obligation to close on the original transaction fair valued at \$76.2 million, the obligation from us to issue the Series B RCPS at redemption value of \$311.0 million, and the option to convert the Series B RCPS to Class A common stock, which had an estimated fair value of \$16.1 million. The excess consideration provided by us amounted to \$39.5 million, which resulted in a reduction of our deferred revenue and customer deposits by \$24.6 million related to the Initial Investment, as of December 31, 2023. The net excess consideration of \$14.9 million was recognized as \$8.2 million in prepaid expenses and other current assets and \$6.7 million was classified as other long-term assets in our consolidated balance sheets as of March 31, 2023. The deferred expense is recognized as contra-revenue based on the remaining purchase commitments under the Second Amended Restated PDA. During the year ended December 31, 2023, the deferred expense recognized as contra-revenue was \$3.5 million. As a result, as of December 31, 2023, we recognized the net excess consideration of \$11.4 million, of which \$2.3 million was classified as prepaid expenses and other current assets and \$9.1 million was classified as other long-term assets, in our consolidated balance sheets.

On September 23, 2023, all 13,491,701 shares of the Series B RCPS were automatically converted into shares of our Class A common stock pursuant to the Certificate of Designation, dated as of March 20, 2023, setting forth the rights, preferences, privileges, and restrictions of the Series B RCPS, as amended by the Certificate of Amendment to the Certificate of Designation, dated as of April 18, 2023. As a result of the conversion: (i) the liability component of the Series B RCPS of \$310.5 million was reclassified to additional paid-in capital, less par value of the issued \$13,491,701 shares of our Class A common stock, and (ii) the loan commitment asset was recorded at its fair value of \$52.8 million, of which \$5.3 million was classified as current and \$47.5 million was classified as non-current in our consolidated balance sheets, and was expensed immediately and recognized in interest expense in our consolidated statements of operations.

Upon conversion of all Series B RCPS into shares of our Class A common stock, SK ecoplant is considered to be a related party. For additional information, please see Note 11 — Related Party Transactions.

#### **18. Subsequent Events**

There have been no material subsequent events that occurred during the period subsequent to the date of these consolidated financial statements that would require adjustment to our disclosure in the consolidated financial statements as presented.

#### **ITEM 9 — CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE**

None.

## ITEM 9A ■ CONTROLS AND PROCEDURES

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

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our reports that we file or submit under the Exchange Act, is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer (our principal executive officer) and Chief Financial Officer (our principal financial officer) as appropriate, to allow for timely decisions regarding required disclosure.

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act), as of **December 31, 2022** **December 31, 2023**. Based on such evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that as of **December 31, 2022** **December 31, 2023**, our disclosure controls and procedures were effective.

### ***Inherent Limitations on Effectiveness of Internal Controls***

Our management, including the Chief Executive Officer and Chief Financial Officer, does not expect that our disclosure controls or our internal controls over financial reporting will prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. The design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Further, because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, have been detected. The design of any system of controls is based in part on certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Projections of any evaluation of the effectiveness of controls to future periods are subject to risks. Over time, controls may become inadequate because of changes in business conditions or deterioration in the degree of compliance with policies or procedures.

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

During the three months ended **December 31, 2022** **December 31, 2023**, there were no changes in our internal control over financial reporting, which were identified in connection with management's evaluation required by paragraphs (d) of Rules 13a-15 and 15d-15 under the Exchange Act, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

### ***Management's Report on Internal Control over Financial Reporting***

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of consolidated financial statements for external reporting purposes in accordance with U.S. GAAP.

Management assessed the effectiveness of our internal control over financial reporting as of **December 31, 2022** **December 31, 2023**, the end of our fiscal year. Management based its assessment on the framework established in the **2013 Internal Control ■ Integrated Framework** issued by the Committee of Sponsoring Organizations of the Treadway Commission ("2013 COSO framework"). Management's assessment included evaluation of elements such as the design and operating effectiveness of key financial reporting controls, process documentation, accounting policies, and our overall control environment. This assessment is supported by testing and monitoring performed by our internal audit and finance personnel utilizing the 2013 COSO framework.

Based on its assessment, management has concluded that our internal control over financial reporting was effective as of the end of fiscal **2022** **2023** to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external reporting purposes in accordance with U.S. GAAP.

The effectiveness of our internal control over financial reporting as of the end of fiscal **2022** **2023** has been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report, which is included elsewhere herein.

## ITEM 9B ■ OTHER INFORMATION

### ***(a) Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers***

On February 15, 2024, the Company announced that Gregory Cameron, President and Chief Financial Officer, would be leaving the Company to pursue other opportunities following a transitional period. The Company has begun a search for its next Chief Financial Officer. The Company also announced that effective immediately, Satish Chitoori, age 52, currently the Company's SVP, Chief of Procurement and Supply Chain, would assume some of Mr. Cameron's duties, becoming Chief Operations Officer, and leading manufacturing, supply chain, and the customer installation group. Mr. Chitoori will report to KR Sridhar, the Company's Founder, Chief Executive Officer, Chairman and Director.

### ***(b) Trading Plans***

During the fourth quarter ended December 31, 2023, KR Sridhar, Chairman and Chief Executive Officer, adopted a trading arrangement intended to satisfy the affirmative defense provisions of Rule 10b5-1(c). The plan was adopted on December 3, 2023 and the plan ends on December 31, 2024. The aggregate amount of shares that may be sold under the plan is a) up to 220,000 shares, subject to certain pricing conditions, and b) the number of shares necessary to cover withholding taxes resulting from the vesting of RSUs or PSUs in 2024.

## ITEM 9C ■ DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

### Part III

#### ITEM 10 ■ DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Except as indicated below, the information required by this Item 10 is incorporated herein by reference to our Proxy Statement for the 2023 2024 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the year ended December 31, 2022, December 31, 2023 (the "2023 2024 Annual Meeting"), including under the headings "Corporate Governance," "Information about Our Executive Officers," "Business Ethics and Compliance," and "Delinquent Section 16(a) Reports," if applicable.

We have adopted a Global Code of Business Conduct and Ethics (the "Code of Conduct") that applies to all of our and our subsidiaries' directors, officers, employees, and contractors, including our principal executive, principal financial and principal accounting officers, or persons performing similar functions. Our Code of Conduct is posted on our website located at <https://investor.bloomenergy.com> under "Corporate Governance". We intend to disclose future amendments to certain provisions of the Code of Conduct, and waivers of the Code of Conduct granted to executive officers and directors, on the website within four business days following the date of the amendment or waiver.

#### ITEM 11 ■ EXECUTIVE COMPENSATION

The information required by this Item 11 is incorporated herein by reference to our Proxy Statement for the 2023 2024 Annual Meeting, including under the headings "Executive Compensation", "Compensation Committee Interlocks and Insider Participation", and "Compensation Committee Report".

#### ITEM 12 ■ SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this Item 12 is incorporated herein by reference to our Proxy Statement for the 2023 2024 Annual Meeting, including under the headings "Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters" and "Equity Compensation Plan Information".

#### ITEM 13 ■ CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this Item 13 is incorporated herein by reference to our Proxy Statement for the 2023 2024 Annual Meeting, including under the headings "Related-Party Transactions" and "Director Independence".

#### ITEM 14 ■ PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this Item 14 is incorporated herein by reference to our Proxy Statement for the 2023 2024 Annual Meeting, including under the heading "Principal Accountant Fees and Services".

### Part IV

#### ITEM 15 ■ EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as part of this report:

##### 1. Financial Statements

See "Index to Consolidated Financial Statements and Supplementary Data" within the Consolidated Financial Statements herein.

##### 2. Financial Statement Schedules

All financial statement schedules have been omitted since the required information was not applicable or was not present in amounts sufficient to require submission of the schedules, or because the information required is included in the consolidated financial statements or the accompanying notes.

##### 3. Exhibits

See the following Index to Exhibits.

#### Index to Exhibits

The exhibits listed below are filed or incorporated by reference as part of this Annual Report on Form 10-K.

Exhibit Number	Description	Incorporated by Reference			
		Form	File No.	Exhibit	Filing Date
3.1	Restated Certificate of Incorporation	10-Q	001-38598	3.1	9/7/2018

<a href="#">3.2</a>	Certificate of Amendment to the Restated Certificate of Incorporation of Bloom Energy Corporation	10-Q	001-38598	3.1	8/9/2022
<a href="#">3.3</a>	Amended and Restated Bylaws, effective November 8, 2022	8-K	001-38598	3.1	2/17/2023
<a href="#">3.4</a>	Certificate of Designation of Series A Redeemable Convertible Preferred Stock	8-K	001-38598	3.1	12/30/2021
<a href="#">4.1</a>	Form of Common Stock Certificate of the Registrant	S-1/A	333-225571	4.1	7/9/2018
<a href="#">4.2</a>	Agreement and Warrant to Purchase Series F Preferred Stock by and between PE12GVVC (US Direct) Ltd. and the Registrant, dated July 1, 2014	S-1	333-225571	4.11	6/12/2018
<a href="#">4.3</a>	Agreement and Warrant to Purchase Series F Preferred Stock by and between PE12PXVC (US Direct) Ltd. and the Registrant, dated July 1, 2014	S-1	333-225571	4.12	6/12/2018
<a href="#">4.4</a>	Warrant to Purchase Preferred Stock by and between Atel Ventures, Inc., in its capacity as Trustee for its assignee affiliated funds, and the Registrant, dated December 31, 2012	S-1	333-225571	4.13	6/12/2018
<a href="#">4.5</a>	Plain English Warrant Agreement by and between Triplepoint Capital LLC, a Delaware limited liability company, and the Registrant, dated September 27, 2012	S-1	333-225571	4.14	6/12/2018
<a href="#">4.6</a>	Form of Holder Voting Agreement, between KR Sridhar and certain parties thereto	S-1/A	333-225571	4.26	7/9/2018
<a href="#">4.7</a>	Description of Company's securities registered pursuant to Section 12 of the Securities Exchange Act of 1934, as amended	10-K	001-38598	4.7	2/25/2022

Exhibit Number	Description	Incorporated by Reference			
		Form	File No.	Exhibit	Filing Date
<a href="#">3.1</a>	Restated Certificate of Incorporation	10-Q	001-38598	3.1	9/7/2018
<a href="#">3.2</a>	Certificate of Amendment to the Restated Certificate of Incorporation of Bloom Energy Corporation	10-Q	001-38598	3.1	8/9/2022
<a href="#">3.3</a>	Amended and Restated Bylaws, as effective August 9, 2023	8-K	001-38598	3.1	8/11/2023
<a href="#">3.4</a>	Certificate of Retirement for Class B Common Stock	10-Q	001-38598	3.2	11/8/2023
<a href="#">3.5</a>	Certificate of Elimination of Certificate of Designations of Series B Convertible Preferred Stock	10-Q	001-38598	3.3	11/8/2023
<a href="#">3.6</a>	Certificate of Withdrawal of Certificate of Designation of Series A Redeemable Convertible Preferred Stock	10-Q	001-38598	3.3	5/9/2023
<a href="#">4.1</a>	Form of Common Stock Certificate of the Registrant	S-1/A	333-225571	4.1	7/9/2018
<a href="#">4.2</a>	Description of Company's securities registered pursuant to Section 12 of the Securities Exchange Act of 1934, as amended	10-K	001-38598	4.7	2/25/2022
<a href="#">4.3</a>	Indenture, dated as of August 11, 2020, between Bloom Energy Corporation and U.S. Bank National Association, as trustee	8-K	001-38598	4.1	8/11/2020
<a href="#">4.4</a>	Form of certificate representing the 2.50% Green Convertible Senior Notes due 2025 (included as Exhibit A to Exhibit 4.1 hereto)	8-K	001-38598	4.1	8/11/2020
<a href="#">4.5</a>	Indenture, dated as of May 16, 2023, between Bloom Energy Corporation and U.S. Bank Trust Company, National Association, as trustee	8-K	001-38598	4.1	5/16/2023
<a href="#">4.6</a>	Form of certificate representing the 3.00% Green Convertible Senior Notes due 2028 (included as Exhibit A to Exhibit 4.1)	8-K	001-38598	4.1	5/16/2023
<a href="#">4.7</a>	Irrevocable Proxy of SK ecoplant Co., LTD.				Filed herewith

<a href="#">4.8</a>	Form of Indenture for Senior Secured Notes due 2027	10-Q	001-38598	4.4	5/11/2020
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<a href="#">4.9</a>	Form of 10.25% Senior Secured Notes due 2027	10-Q	001-38598	4.5	5/11/2020							
<a href="#">4.10</a>	Form of Security Agreement for Senior Secured Notes due 2027	10-Q	001-38598	4.6	5/11/2020							
<a href="#">4.11</a>	Indenture, dated as of August 11, 2020, between Bloom Energy Corporation and U.S. Bank National Association, as trustee	8-K	001-38598	4.1	8/11/2020							
<a href="#">4.12</a>	Form of certificate representing the 2.50% Green Convertible Senior Notes due 2025 (included as Exhibit A to Exhibit 4.11 hereto)	8-K	001-38598	4.2	8/11/2020							
<a href="#">10.1</a>	<a href="#">10.1</a> ^ 2002 Equity Incentive Plan and form of agreements used thereunder	S-1	333-225571	10.2	6/12/2018	<a href="#">10.1</a>		2012 Equity Incentive Plan and form of agreements used thereunder	S-1	333-225571	10.3	6/12/2018
<a href="#">10.2</a>	<a href="#">10.2</a> ^ 2012 Equity Incentive Plan and form of agreements used thereunder	S-1	333-225571	10.3	6/12/2018	<a href="#">10.2</a>	^ 2018 Equity Incentive Plan and form of agreements used thereunder	S-1/A	333-225571	10.4	7/9/2018	
<a href="#">10.3</a>	<a href="#">10.3</a> ^ 2018 Equity Incentive Plan and form of agreements used thereunder	S-1/A	333-225571	10.4	7/9/2018	<a href="#">10.3</a>	^ Amended and Restated 2018 Employee Stock Purchase Plan	8-K	001-38598	10.1	5/16/2022	
<a href="#">10.4</a>	<a href="#">10.4</a> ^ Amended and Restated 2018 Employee Stock Purchase Plan	8-K	001-38598	10.1	5/16/2022	<a href="#">10.4</a>	^ Ground Lease by and between 1743 Holdings, LLC and the Registrant dated as of March 2012	S-1	333-225571	10.8	6/12/2018	

<a href="#">10.5</a>	<a href="#">10.5</a>	Lease, dated as of December 23, 2020, between Google LLC and Registrant	10-K	001-38598	10.5	2/26/2021	<a href="#">10.5</a>		Net Lease Agreement, dated as of April 4, 2018, by and between the Registrant and 237 North First Street Holdings, LLC	S-1	333-225571	10.29	6/12/2018
<a href="#">10.6</a>	<a href="#">10.6</a>	Ground Lease by and between 1743 Holdings, LLC and the Registrant dated as of March 2012	S-1	333-225571	10.8	6/12/2018	<a href="#">10.6</a>		Form of Indemnification Agreement	10-Q	001-38598	10.1	9/7/2018
<a href="#">10.7</a>	<a href="#">10.7</a>	Net Lease Agreement, dated as of April 4, 2018, by and between the Registrant and 237 North First Street Holdings, LLC	S-1	333-225571	10.29	6/12/2018	<a href="#">10.7</a>	^	Preferred Distributor Agreement by and between Registrant and SK Engineering & Construction Co., Ltd dated November 14, 2018	10-K	001-38598	10.28	3/22/2019
<a href="#">10.8</a>	<a href="#">10.8</a>	Grant Agreement by and between the Delaware Economic Development Authority and the Registrant, dated March 1, 2012	S-1	333-225571	99.1	6/12/2018	<a href="#">10.8</a>	^	Third Amended and Restated Purchase, Use and Maintenance Agreement between Registrant and 2016 ESA Project Company, LLC, dated as of September 26, 2018	10-K	001-38598	10.29	3/22/2019
<a href="#">10.9</a>	<a href="#">10.9</a>	^ Form of Indemnification Agreement	10-Q	001-38598	10.1	9/7/2018	<a href="#">10.9</a>	*	Amendment No. 1 to Third Amended and Restated Purchase, Use and Maintenance Agreement by and between Registrant and 2016 ESA Project Company, LLC dated as of September 28, 2018	10-K	001-38598	10.30	3/22/2019
<a href="#">10.10</a>	<a href="#">10.10</a>	^ Form of Offer Letter	10-K	001-38598	10.27	3/22/2019	<a href="#">10.10</a>	*	Amendment No. 2 to Third Amended and Restated Purchase, Use and Maintenance Agreement by and between Registrant and 2016 ESA Project Company, LLC dated as of December 19, 2018	10-K	001-38598	10.31	3/22/2019
<a href="#">10.11</a>	<a href="#">10.11</a>	* Preferred Distributor Agreement by and between Registrant and SK Engineering & Construction Co., Ltd dated November 14, 2018	10-K	001-38598	10.28	3/22/2019	<a href="#">10.11</a>		Equity Capital Contribution Agreement between the Company, SP Diamond State Class B Holdings, LLC, Diamond State Generation Partners, LLC, and Diamond State Generation Holdings, LLC, dated June 14, 2019	10-Q	001-38598	10.1	8/14/2019

10.12	10.12*	Third Amended and Restated Purchase, Use and Maintenance Agreement between Registrant and 2016 ESA Project Company, LLC, dated as of September 26, 2018	10-K	001-38598	10.29	3/22/2019	10.12		Third Amended and Restated Limited Liability Company Agreement of Diamond State Generation Holdings LLC dated June 14, 2019	10-Q	001-38598	10.2	8/14/2019
10.13	10.13	Amendment No. 1 to Third Amended and Restated Purchase, Use and Maintenance Agreement by and between Registrant and 2016 ESA Project Company, LLC dated as of September 28, 2018	10-K	001-38598	10.30	3/22/2019	10.13*	Fuel Cell System Supply and Installation Agreement between the Company and Diamond State Generation Partners LLC, dated June 14, 2019	10-Q	001-38598	10.3	8/14/2019	
10.14	10.14	Amendment No. 2 to Third Amended and Restated Purchase, Use and Maintenance Agreement by and between Registrant and 2016 ESA Project Company, LLC dated as of December 19, 2018	10-K	001-38598	10.31	3/22/2019	10.14*	Amended and Restated Master Operations and Maintenance Agreement between the Company and Diamond State Generation Partners LLC, dated June 14, 2019	10-Q	001-38598	10.4	8/14/2019	

<a href="#">10.15</a>	<a href="#">10.15</a> <sup>*</sup>	Equity Capital Contribution Agreement between the Company, SP Diamond State Class B Holdings, LLC, Diamond State Generation Partners, LLC, and Diamond State Generation Holdings, LLC, dated June 14, 2019	10-Q	001-38598	10.1	8/14/2019	<a href="#">10.15</a> <sup>*</sup>	Repurchase Agreement between the Company and Diamond State Generation Partners LLC, dated June 14, 2019	10-Q	001-38598	10.5	8/14/2019
<a href="#">10.16</a>	<a href="#">10.16</a> <sup>*</sup>	Third Amended and Restated Limited Liability Company Agreement of Diamond State Generation Holdings LLC dated June 14, 2019	10-Q	001-38598	10.2	8/14/2019	<a href="#">10.16</a> <sup>*</sup>	Third Amended and Restated Limited Liability Company Agreement of Diamond State Generation Partners, LLC dated June 14, 2019	10-Q	001-38598	10.6	8/14/2019
<a href="#">10.17</a>							<a href="#">10.17</a> <sup>*</sup>	Annex 1 (Definitions) to Equity Capital Contribution Agreement (Ex 10.1) and Limited Liability Agreements (Exs. 10.2 and 10.6)	10-Q	001-38598	10.7	8/14/2019
<a href="#">10.18</a>							<a href="#">10.18</a> <sup>*</sup>	Purchase, Use and Maintenance Agreement between the Company and 2018 ESA Project Company, LLC dated June 28, 2019	10-Q	001-38598	10.8	8/14/2019
<a href="#">10.19</a>							<a href="#">10.19</a> <sup>*</sup>	Annexes to Purchase, Use and Maintenance Agreement between the Company and 2018 ESA Project Company, LLC dated June 28, 2019	10-Q	001-38598	10.9	8/14/2019

<a href="#">10.17</a>	* Fuel Cell System Supply and Installation Agreement between the Company and Diamond State Generation Partners LLC, dated June 14, 2019	10-Q	001-38598	10.3	8/14/2019
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<a href="#">10.18</a>	* Amended and Restated Master Operations and Maintenance Agreement between the Company and Diamond State Generation Partners LLC, dated June 14, 2019	10-Q	001-38598	10.4	8/14/2019									
<a href="#">10.19</a>	* Repurchase Agreement between the Company and Diamond State Generation Partners LLC, dated June 14, 2019	10-Q	001-38598	10.5	8/14/2019									
<a href="#">10.20</a>	* Third Amended and Restated Limited Liability Company Agreement of Diamond State Generation Partners, LLC dated June 14, 2019	10-Q	001-38598	10.6	8/14/2019	<a href="#">10.20</a>	*	Bloom Energy Corporation 2021 Deferred Compensation Plan		10-K	001-38598	10.26	2/26/2021	
<a href="#">10.21</a>	* Annex 1 (Definitions) to Equity Capital Contribution Agreement (Ex 10.1) and Limited Liability Agreements (Exs. 10.2 and 10.6)	10-Q	001-38598	10.7	8/14/2019	<a href="#">10.21</a>	*	Fourth Amended and Restated Limited Liability Company Agreement of Diamond State Generation Partners, LLC dated as of December 23, 2019		10-K	001-38598	10.32	3/31/2020	

10.22	10.22	*	Purchase, Use and Maintenance Agreement between the Company and 2018 ESA Project Company, LLC dated June 28, 2019	10-Q	001-38598	10.8	8/14/2019	10.22	^	Fuel Cell System Supply and Installation Agreement between Bloom Energy Corporation and Diamond State Generation Partners, LLC dated as of December 23, 2019	10-K	001-38598	10.33	3/31/2020
10.23	10.23	*	Annexes to Purchase, Use and Maintenance Agreement between the Company and 2018 ESA Project Company, LLC dated June 28, 2019	10-Q	001-38598	10.9	8/14/2019	10.23	*	Second Amended and Restated Administrative Services Agreement by and between Bloom Energy Corporation and Diamond State Generation Partners, LLC dated as of December 23, 2019	10-K	001-38598	10.34	3/31/2020
10.24	10.24	^	Bloom Energy Corporation 2021 Deferred Compensation Plan	10-K	001-38598	10.26	2/26/2021	10.24	*	Equity Capital Contribution Agreement with respect to Diamond State Generation Partners, LLC by and among Bloom Energy Corporation, Diamond State Generation Holdings, LLC, SP Diamond State Class B Holdings LLC, Assured Guaranty Municipal Corp. and Diamond State Generation Partners LLC, dated as of December 23, 2019	10-K	001-38598	10.35	3/31/2020
10.25	10.25	*	Fourth Amended and Restated Limited Liability Company Agreement of Diamond State Generation Partners, LLC dated as of December 23, 2019	10-K	001-38598	10.32	3/31/2020	10.25	*	Second Amended and Restated Master Operations and Maintenance Agreement between Bloom Energy Corporation as Operator and Diamond State Generation Partners, LLC dated as of December 23, 2019	10-K	001-38598	10.36	3/31/2020
10.26	10.26	*	Fuel Cell System Supply and Installation Agreement between Bloom Energy Corporation and Diamond State Generation Partners, LLC dated as of December 23, 2019	10-K	001-38598	10.33	3/31/2020	10.26	*	First Amendment to Repurchase Agreement between the Company and Diamond State Generation Partners LLC, dated June 14, 2019	10-K	001-38598	10.37	3/31/2020

10.27	10.27*	Second Amended and Restated Administrative Services Agreement by and between Bloom Energy Corporation and Diamond State Generation Partners, LLC dated as of December 23, 2019	10-K	001-38598	10.34	3/31/2020	10.27*	Offer Letter between the Company and Gregory Cameron, dated March 20, 2020	8-K	001-38598	10.1	4/2/2020	
10.28	10.28*	Equity Capital Contribution Agreement with respect to Diamond State Generation Partners, LLC by and among Bloom Energy Corporation, Diamond State Generation Holdings, LLC, SP Diamond State Class B Holdings LLC, Assured Guaranty Municipal Corp. and Diamond State Generation Partners LLC, dated as of December 23, 2019	10-K	001-38598	10.35	3/31/2020	10.28		Note Purchase Agreement among the Registrant, the guarantor named therein, and the purchasers listed therein, dated as of March 30, 2020	10-Q	001-38598	10.3	5/11/2020

10.29	10.29	*	Second Amended and Restated Master Operations and Maintenance Agreement between Bloom Energy Corporation as Operator and Diamond State Generation Partners, LLC dated as of December 23, 2019	10-K	001-38598	10.36	3/31/2020	10.29	^	Amendment Support Agreement by and among the Registrant and the investors named therein, dated as of March 31, 2020	10-Q	001-38598	10.4	5/11/2020
10.30	10.30		First Amendment to Repurchase Agreement between the Company and Diamond State Generation Partners LLC, dated June 14, 2019	10-K	001-38598	10.37	3/31/2020	10.30		Amended and Restated Purchase, Use and Maintenance Agreement between the Company and 2018 ESA Project Company, LLC dated June 30, 2020	10-Q/A	001-38598	10.2	8/5/2020
10.31				10.31				10.31		Preferred Distributor Agreement by and between Registrant and SK D&D Co., Ltd dated January 30, 2019	10-K	001-38598	10.44	2/26/2021
10.32				10.32	*			10.32	*	Lease Agreement between Pacific Commons Owner, LP, and Bloom Energy Corporation entered into as of March 13, 2021	10-Q	001-38598	10.1	5/6/2021
10.33	10.33	^	Offer Letter between the Company and Gregory Cameron, dated March 20, 2020	8-K	001-38598	10.1	4/2/2020	10.33	*	Offer Letter between the Registrant and Guillermo Brooks dated May 31, 2021	10-Q	001-38598	10.1	8/6/2021

<a href="#">10.34</a>	<a href="#">10.34</a>	Note Purchase Agreement among the Registrant, the guarantor named therein, and the purchasers listed therein, dated as of March 30, 2020	10-Q	001-38598	10.3	5/11/20	<a href="#">10.34</a>		Third Amendment to Net Lease Agreement, dated as of June 6, 2021, by and between the Registrant and SPUS9 at First Street, LP	10-Q	001-38598	10.2	8/6/2021
<a href="#">10.35</a>			<a href="#">10.35</a>					Purchase, Engineering, Procurement and Construction Contract between the Registration, RAD 2021 Bloom ESA Funds I — V, and RAD Bloom Project Holdco LLC, dated as of June 25, 2021	10-Q	001-38598	10.3	8/6/2021	
<a href="#">10.36</a>			<a href="#">10.36</a>					Operations and Maintenance Agreement between the Registrant and RAD Bloom Project Holdco LLC, dated as of June 25, 2021	10-Q	001-38598	10.4	8/6/2021	
<a href="#">10.35</a>		Amendment Support Agreement by and among the Registrant and the investors named therein, dated as of March 31, 2020	10-Q	001-38598	10.4	5/11/20							
<a href="#">10.36</a>	*	Amended and Restated Purchase, Use and Maintenance Agreement between the Company and 2018 ESA Project Company, LLC dated June 30, 2020	10-Q/A	001-38598	10.2	8/5/2020							

10.37	10.37	*	Preferred Distributor Agreement by and between Registrant and SK D&D Co., Ltd dated January 30, 2019	10-K	001-38598	10.44	2/26/2021	10.37	*	Form of Employment, Change in Control and Severance Agreement	10-Q	001-38598	10.5	8/6/2021
10.38	10.38		Lease Agreement between Pacific Commons Owner, LP, and Bloom Energy Corporation entered into as of March 13, 2021	10-Q	001-38598	10.1	5/6/2021	10.38	*	Form of Preferred Stock Unit Agreement under 2018 Equity Incentive Plan	10-K	001-38598	10.46	2/25/2022
10.39	10.39	^	Offer Letter between the Registrant and Guillermo Brooks dated May 31, 2021	10-Q	001-38598	10.1	8/6/2021	10.39	^	Securities Purchase Agreement, dated October 23, 2021, by and among the Company and SK ecoplant Co., Ltd.	8-K	001-38598	10.1	10/25/2021
10.40	10.40		Third Amendment to Net Lease Agreement, dated as of June 6, 2021, by and between the Registrant and SPUS9 at First Street, LP	10-Q	001-38598	10.2	8/6/2021	10.40	^	Amended and Restated Preferred Distributor Agreement, dated October 23, 2021, by and among the Registrant, Bloom SK Fuel Cell, LLC, and SK ecoplant Co., Ltd.	10-Q	001-38598	10.2	11/5/2021

10.41	10.41	*	Purchase, Engineering, Procurement and Construction Contract between the Registrant, RAD 2021 Bloom ESA Funds I - V, and RAD Bloom Project Holdco LLC, dated as of June 25, 2021	10-Q	001-38598	10.3	8/6/2021	10.41		Amendment to the Joint Venture Agreement, dated October 23, 2021, by and between the Registrant and SK ecoplant Co., Ltd.	10-Q	001-38598	10.3	11/5/2021
10.42	10.42	*	Operations and Maintenance Agreement between the Registrant and RAD Bloom Project Holdco LLC, dated as of June 25, 2021	10-Q	001-38598	10.4	8/6/2021	10.42	*	Investor Agreement, dated December 29, 2021, by and among the Registrant and SK ecoplant Co., Ltd.	8-K	001-38598	10.1	12/30/2021
10.43	10.43	^	Form of Employment, Change in Control and Severance Agreement	10-Q	001-38598	10.5	8/6/2021	10.43		Master Supply Agreement, dated December 24, 2021, by and between Registrant and SK E&C BETEK Corporation	10-K	001-38598	10.51	2/25/2022
10.44	10.44	^	Form of Preferred Stock Unit Agreement under 2018 Equity Incentive Plan	10-K	001-38598	10.46	2/25/2022	10.44		Form of Confirmation of Call Option Transaction, between Bloom Energy Corporation and each Option Counterparty	8-K	001-38598	10.1	5/16/2023
10.45	10.45		Securities Purchase Agreement, dated October 23, 2021, by and among the Company and SK ecoplant Co., Ltd.	8-K	001-38598	10.1	10/25/2021	10.45	*	Amendments to Securities Purchase Agreement and Investor Agreement, dated March 20, 2023, between the Company and SK ecoplant Co., Ltd.	8-K	001-38598	10.1	3/23/2023

10.46	10.46	*	Amended and Restated Preferred Distributor Agreement, dated October 23, 2021, by and among the Registrant, Bloom SK Fuel Cell, LLC, and SK ecoplant Co., Ltd.	10-Q	001-38598	10.2	11/5/2021	10.46		Shareholder's Loan Agreement dated as of March 20, 2023, between the Company and SK ecoplant Co., Ltd.	8-K	001-38598	10.2	3/23/2023
10.47	10.47		Amendment to the Joint Venture Agreement, dated October 23, 2021, by and between the Registrant and SK ecoplant Co., Ltd.	10-Q	001-38598	10.3	11/5/2021	10.47		First Amendment to the Amended and Restated Preferred Distributor Agreement dated September 29, 2023	8-K	001-38598	10.1	12/22/2023
10.48	10.48		Investor Agreement, dated December 29, 2021, by and among the Registrant and SK ecoplant Co., Ltd.	8-K	001-38598	10.1	12/30/2021	10.48	*	Second Amendment to the Amended and Restated Preferred Distributor Agreement dated December 21, 2023	8-K	001-38598	10.2	12/22/2023
10.49	10.49	*	Master Supply Agreement, dated December 24, 2021, by and between Registrant and SK E&C BETEK Corporation	10-K	001-38598	10.51	2/25/2022	10.49	^	Offer Letter between the Company and Aman Joshi, dated January 5, 2024	8-K	001-38598	10.1	1/9/2024
10.5								10.5	^	Separation and General Release Agreement, dated January 8, 2024	8-K	001-38598	10.2	1/9/2024
21.1	21.1		List of Subsidiaries				Filed herewith	21.1		List of Subsidiaries				Filed herewith

<a href="#">23.2</a>	<a href="#">23.2</a>	Consent of Independent Registered Public Accounting Firm, Deloitte & Touche LLP		Filed herewith	<a href="#">23.2</a>		Consent of Independent Registered Public Accounting Firm, Deloitte & Touche LLP				Filed herewith
<a href="#">31.1</a>	<a href="#">31.1</a>	Certification of the Chief Executive Officer pursuant to Rule 13a-14(a) and 15d-14(a) of the Securities and Exchange Act of 1934, as amended, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002		Filed herewith	<a href="#">31.1</a>		Certification of Chief Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) of the Securities and Exchange Act of 1934, as amended, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002				Filed herewith
<a href="#">31.2</a>				<a href="#">31.2</a>			Certification of Chief Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) of the Securities and Exchange Act of 1934, as amended, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002				Filed herewith
<a href="#">32.1</a>				<a href="#">32.1</a>	** Certifications of the Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002					Furnished herewith	

<a href="#">31.297</a>	Policy on Recoupment and Forfeiture of Incentive Compensation Following a Restatement (Officers)	Certification of the Chief Financial Officer pursuant to Rule 13a-14(a) and 15d-14(a) of the Securities and Exchange Act of 1934, as amended, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002				Filed herewith
<a href="#">32.1</a>	Certification of the Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002				Furnished herewith	
101.INS	XBRL Instance Document- the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document				Filed herewith	
101.SCH	Inline XBRL Taxonomy Extension Schema Document				Filed herewith	
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document				Filed herewith	
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document				Filed herewith	
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document				Filed herewith	
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document				Filed herewith	
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)					

<sup>^</sup> Management contracts or compensation plans or arrangements in which directors or executive officers are eligible to participate.

<sup>\*</sup> Certain identified information has been omitted by means of marking such information with asterisks in reliance on Item 601(b)(10)(iv) of Regulation S-K because it is both (i) not material and (ii) the type that the registrant treats as private or confidential.

<sup>\*\*</sup> The certifications furnished in Exhibit 32.1 hereto are deemed to accompany this Annual Report on Form 10-K and will not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liability of that section, nor shall it be deemed incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended.

#### ITEM 16 ■ FORM 10-K SUMMARY

None.

#### SIGNATURES

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

#### BLOOM ENERGY CORPORATION

Date: February 21, 2023

By: /s/ KR Sridhar

KR Sridhar

Founder, Chief Executive Officer, Chairman and Director  
(Principal Executive Officer)

Date: February 21, 2023

By: /s/ Gregory Cameron

Gregory Cameron

President and Chief Financial Officer  
(Principal Financial and Accounting Officer)

#### POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints KR Sridhar and Gregory Cameron, and each of them individually, as his or her attorney-in-fact, each with full power of substitution, for him or her in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with exhibits thereto and all other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that said attorney-in-fact, or his substitute or substitutes, may do or cause to be done by virtue hereof. Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed by the following persons on behalf of the registrant in the capacities and on the dates indicated.

Date: February 21, 2023 15, 2024

/s/ KR Sridhar

KR Sridhar

Founder, Chief Executive Officer, Chairman and Director

(Principal Executive Officer)

Date: February 21, 2023 15, 2024

/s/ Gregory Cameron

Gregory Cameron

President and Chief Financial Officer

(Principal Financial and Accounting Officer)

Date: February 21, 2023 15, 2024

/s/ Michael Boskin

Michael Boskin

Director

Date: February 21, 2023 15, 2024

/s/ Mary K. Bush

Mary K. Bush

Director

Date: February 21, 2023 15, 2024

/s/ John T. Chambers

John T. Chambers

Director

Date: February 21, 2023 15, 2024

/s/ Jeffrey Immelt

Jeffrey Immelt

Director

Date: February 21, 2023 15, 2024

/s/ Cynthia J. Warner

Cynthia J. Warner

Director

Date: February 15, 2024

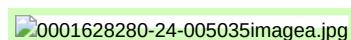
/s/ Eddy Zervigon

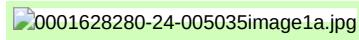
Eddy Zervigon

Director

148144

EXHIBIT 4.7

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## Exhibit 21.1

## Bloom Energy Corporation

## Subsidiaries\*

<u>Name of Subsidiary</u>	<u>Jurisdiction</u>
2015 ESA HoldCo, LLC	Delaware
2015 ESA InvestCo, LLC	Delaware
2015 ESA Project Company, LLC	Delaware
Clean Technologies 2015, LLC	Delaware
Clean Technologies II, LLC	Delaware
Diamond State Generation Holdings, LLC	Delaware
Bloom Energy (India) Pvt. Ltd	India

\*Pursuant to Item 601(b)(21)(ii) of Regulation S-K, the names of other subsidiaries of Bloom Energy Corporation are omitted because, considered in the aggregate, they would not constitute a significant subsidiary as of the end of the year covered by this Annual Report on Form 10-K.

## EXHIBIT 23.2

## CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement No. 333-260464 on Form S-3 and Registration Statement Nos. 333-269891, 333-266703, 333-263054, 333-253625, 333-237538 and 333-226369 on Form S-8 of our reports dated February 23, 2023February 15, 2024, relating to the consolidated financial statements of Bloom Energy Corporation and the effectiveness of Bloom Energy Corporation's internal control over financial reporting appearing in this Annual Report on Form 10-K for the year ended December 31, 2022December 31, 2023.

/s/ Deloitte & Touche LLP

San Jose, California  
February 21, 2023 15, 2024

**EXHIBIT 31.1**

**CERTIFICATIONS OF CHIEF EXECUTIVE OFFICER  
PURSUANT TO RULE 13a-14(a) AND RULE 15d-14(a)  
OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED,  
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, KR Sridhar, certify that:

1. I have reviewed this Annual Report on Form 10-K for the year ended **December 31, 2022** **December 31, 2023** of Bloom Energy Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February **21, 2023** **15, 2024**

By: /s/ KR Sridhar

KR Sridhar

Founder, Chief Executive Officer, Chairman and Director  
(Principal Executive Officer)

**EXHIBIT 31.2**

**CERTIFICATIONS OF CHIEF FINANCIAL OFFICER  
PURSUANT TO RULE 13a-14(a) AND RULE 15d-14(a)  
OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED,  
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Gregory Cameron, certify that:

1. I have reviewed this Annual Report on Form 10-K for the year ended **December 31, 2022** **December 31, 2023** of Bloom Energy Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February **21, 2023** **15, 2024**

By: /s/ Gregory Cameron

Gregory Cameron  
President and Chief Financial Officer  
(Principal Financial and Accounting Officer)

## EXHIBIT 32.1

### CERTIFICATIONS OF CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

The following certifications are hereby made in connection with the Annual Report on Form 10-K for the year ended **December 31, 2022** **December 31, 2023** of Bloom Energy Corporation (the "Company") as filed with the Securities and Exchange Commission on the date hereof (the "Report"):

I, KR Sridhar, President and Chief Executive Officer, hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

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

Date: February **21, 2023** **15, 2024**

By: /s/ KR Sridhar

KR Sridhar  
Founder, Chief Executive Officer, Chairman and Director  
(Principal Executive Officer)

I, Gregory Cameron, Executive Vice President and Chief Financial Officer, hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

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

Date: February 21, 2023 15, 2024

By: /s/ Gregory Cameron

Gregory Cameron  
President and Chief Financial Officer  
(Principal Financial and Accounting Officer)

EXHIBIT 97

## BLOOM ENERGY CORPORATION

### **POLICY ON RECOUPMENT AND FORFEITURE OF INCENTIVE COMPENSATION FOLLOWING A RESTATEMENT (OFFICERS)**

Adopted October 31, 2023

Effective as of October 2, 2023

#### **1. Recoupment of Incentive-Based Compensation**

It is the policy of Bloom Energy Corporation (the "Company") that, in the event the Company is required to prepare an accounting restatement of the Company's financial statements due to material non-compliance with any financial reporting requirement under the federal securities laws (including any such correction that is material to the previously issued financial statements, or that would result in a material misstatement if the error were corrected in the current period or left uncorrected in the current period), the Company will require the return, repayment or forfeiture, on a reasonably prompt basis, of any Incentive-Based Compensation Received by any of the Company's current or former "executive officers" as defined under Rule 10D-1 and the Company's current or former Chief Accounting Officer (each a "Covered Individual") during the three completed fiscal years immediately preceding the date on which the Company is required to prepare the accounting restatement described in this Policy, all as determined pursuant to Rule 10D-1, and any transition period of less than nine months that is within or immediately following such three fiscal years (the "Recovery Period").

In each such instance, the amount required to be returned, repaid or forfeited shall be the amount of Incentive-Based Compensation Received by the Covered Individual during the Recovery Period that exceeds the amount that would have been Received if determined or calculated based on the Company's restated financial results. For Incentive-Based Compensation based on stock price or total shareholder return, where the amount of erroneously awarded compensation is not subject to mathematical recalculation directly from the information in an accounting restatement, the Board of Directors of the Company (the "Board") will determine the amount based on a reasonable estimate of the effect of the accounting restatement on the relevant stock price or total shareholder return. In all cases, the calculation of the excess amount of Incentive-Based Compensation to be recovered will be determined without regard to any taxes paid with respect to such compensation.

The Company need not recover the excess amount of Incentive-Based Compensation if and to the extent that the Board determines that such recovery is impracticable, subject to and in accordance with any applicable exceptions under the New York Stock Exchange listing rules, and not required under Rule 10D-1, including if the Board determines that the direct expense paid to a third party to assist in enforcing this Policy would exceed the amount to be recovered after making a reasonable attempt to recover such amounts.

Each award agreement or other document setting forth the terms and conditions of any annual incentive or other performance-based award granted to a Covered Individual shall be

deemed to include the provisions of this Policy. The Company is authorized to take appropriate steps to implement this Policy with respect to Incentive-Based Compensation arrangements with Covered Individuals.

For purposes of this Policy, the term "Incentive-Based Compensation" means any compensation granted, earned, or vested based in whole or in part on the Company's attainment of a financial reporting measure that was Received by a person (i) on or after October 2, 2023 and after the person began service as a Covered Individual, and (ii) who served as a Covered Individual at any time during the performance period for the Incentive-Based Compensation. A financial reporting measure is (i) any measure that is determined and presented in accordance with the accounting principles used in preparing the Company's financial statements and any measure derived wholly or in part from such a measure, and (ii) any measure based in whole or in part on the Company's stock price or total shareholder return. Incentive-Based Compensation is deemed to be "Received" in the fiscal period during which the relevant financial reporting measure is attained, regardless of when the compensation is actually paid or awarded.

## 2. General Matters Pertaining to this Policy

The Company may effect any recoupment or recovery pursuant to Section 1 of this Policy by requiring payment of such amount(s) to the Company, by set-off, by reducing future compensation, or by such other means or combination of means as the Board determines to be appropriate.

Any right of recoupment, recovery or forfeiture pursuant to this Policy is in addition to, and not in lieu of, any other remedies or rights of recoupment that may be available to the Company pursuant to the terms of any other policy (including, for avoidance of doubt, the Company's Policy on Recoupment and Forfeiture of Incentive Compensation), any employment agreement or plan or award terms, and any other legal remedies available to the Company; provided that the Company shall not recoup amounts pursuant to such other policy, terms or remedies to the extent it is recovered pursuant to this Policy. The Company shall not indemnify any Covered Individual against any liability or loss (including without limitation the loss of any Incentive-Based Compensation pursuant to this Policy, any payment or reimbursement for the cost of third-party insurance purchased by any Covered Individual to fund potential recovery obligations under this Policy, or any judgments, fines, taxes, penalties or amounts paid in settlement by or on behalf of any Covered Individual) incurred by such Covered Individual in connection with or as a result of any action taken by the Company to enforce this Policy (a "Clawback Proceeding"), or provide any indemnification or advancement of expenses (including attorneys' fees) incurred by such Covered Individual in connection with any such Clawback Proceeding.

This Policy is administered by the Board, subject to ratification by the independent members of the Board with respect to application of this Policy to the Company's Chief Executive Officer. The Board shall make all determinations regarding the application and operation of this Policy in its sole discretion, and all such determinations shall be final and binding. With respect to recoupment of any Incentive-Based Compensation, this Policy is intended to comply with, and as applicable to be administered and interpreted consistent with, and subject to the exceptions set forth in, Listing Standard 303A.14 adopted by the New York

Stock Exchange to implement Rule 10D-1 under the Securities Exchange Act of 1934, as amended (collectively, "Rule 10D-1"). Notwithstanding the foregoing, the Board may amend or change the terms of this Policy at any time for any reason, including as required to comply with Rule 10D-1 and any other rules, regulations and listing standards. Further, the exercise by the Board of any rights pursuant to this Policy shall be without prejudice to any other rights that the Company or the Board may have with respect to any Covered Individual subject to this Policy.

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