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 year ended: December 31, 2019

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**
(Sate or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)
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 Securities Exchange Act

Title of Each Class[(1)]	Trading Symbol	Name of each exchange on which registered
Class A Common Stock $0.0001 par value	BE	New York Stock Exchange

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

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

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

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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 is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☑

The aggregate market value of the registrant's Class A common stock held by non-affiliates of the registrant was $659.7 million based upon the closing price of $12.27 per share of our Class A common stock on the New York Stock Exchange on June 28, 2019 (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 5% of more of the outstanding Class A common stock have been excluded in that such persons may be deemed to be affiliates. The determination of affiliate status if not necessarily a conclusive determination for other purposes.

The number of shares of the registrant's common stock outstanding as of March 16, 2020 was as follows:

Class A Common Stock $0.0001 par value 90,231,067 shares

Class B Common Stock $0.0001 par value 34,872,888 shares

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's proxy statement for the 2020 Annual Meeting of Stockholders (2020 Proxy Statement) are incorporated into Part III hereof. The 2020 Proxy Statement will be filed with the U.S. Securities and Exchange Commission within 120 days after the registrant's year ended December 31, 2019.

Bloom Energy Corporation
Annual Report on Form 10-K for the Years Ended December 31, 2019
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Unless the context otherwise requires, the terms "we," "us," "our," "Bloom Energy," 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, and Section 21E of the Securities Exchange Act of 1934, as amended, . 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 the potential impact of our restatement, the impact of the COVID-19 pandemic, expected operating results, business strategies, the sufficiency of our cash and our liquidity, projected costs and cost reductions, development of new products and improvements to our existing products, the impact of recently adopted accounting pronouncements, our manufacturing capacity and manufacturing costs, the adequacy of our agreements with our suppliers, legislative actions and regulatory compliance, 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 obligations as they come due, trends in average selling prices, the success of our power purchase agreement entities, expected 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 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, expansion into new markets, our ability to expand our business with our existing customers, our ability to increase efficiency of our product, our ability to decrease the cost of our product, our future operating results and financial position, our business strategy and plans and our objectives for future operations.

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 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 Item 1A - Risk Factors and elsewhere in this Annual Report on Form 10-K.

Explanatory Note

General

On February 11, 2020, our management, in consultation with the Audit Committee of our Board of Directors, determined that Bloom's previously issued consolidated financial statements as of and for the year ended December 31, 2018, as well as the unaudited interim financial statements for the three-month period ended March 31, 2019, the three- and six-month periods ended June 30, 2019 and 2018 and the three- and nine-month periods ended September 30, 2019 and 2018, should no longer be relied upon due to misstatements related to our Managed Services Agreements and similar arrangements, and we would restate such financial statements to make the necessary accounting corrections. The revenue for the Managed Services Agreements and similar transactions will now be recognized over the duration of the contract instead of upfront. In addition, management determined that the impact of these misstatements to periods prior to the three months ended June 30, 2018 was not material to warrant restatement of reported figures, however, our consolidated financial statements as of and for the year ended December 31, 2017, selected financial data as of and for the year ended December 31, 2016 and the relevant unaudited selected quarterly financial data for the three month period ended March 31, 2018 would be revised to correct these misstatements.

The misstatements are described in greater detail below.

Restatement Background

As described in our Current Report on Form 8-K filed with the Securities and Exchange Commission ("SEC") on February 12, 2020, there were certain misstatements in prior periods financial statements relating to the accounting treatment for our Managed Services Agreements. Under our Managed Services program, we sell our equipment to a bank financing party under a sale-leaseback agreement, which pays us for the Energy Server and takes title to the Energy Server. We then enter into a service contract with an end customer, who pays the bank a fixed, monthly fee for its use of the Energy Server and pays us for our maintenance and operation of the Energy Server.

The majority of these Managed Services Agreements and similar transactions were originally recorded as sales, subject to an operating lease, in which revenues and associated costs were recognized at the time of installation and acceptance of the Bloom Energy Server at the customer site.

In December 2019, in the course of reviewing a Managed Services transaction that closed on November 27, 2019 under a Managed Services Agreements financing (as reported in our Current Report on Form 8-K filed with the SEC on December 5, 2019), an issue was identified related to the accounting for our Managed Services Agreements transactions. The issue primarily related to whether the terms of our Managed Services Agreements and similar arrangements, including the events of default provisions, satisfied the requirements for sales under the revenue accounting standards or instead required us to follow lease accounting standards (ASC 840). Subsequently, it was determined that the previous accounting for the Managed Services Agreements and similar transactions resulted in material misstatements, as the Managed Services Agreements and similar transactions should have been accounted for as financing transactions under lease accounting standards.

The impact of the correction of the misstatement is to recognize amounts received from the bank financing party as a financing obligation, and the Energy Server is recorded within property, plant and equipment, net on our consolidated balance sheets. In addition, payments received by the bank from the customer now cover amounts owed to the bank based on the power generated by the systems. We recognize revenue for the electricity generated by the systems, based on these payments, and the corresponding financing obligation to the bank is also amortized as payments are received from the customer, with interest thereon being calculated on an effective interest rate basis. Depreciation expense is also recognized over the estimated useful life of the Energy Server.

In addition, another error was identified related to stock-based compensation costs associated with manufacturing employees that were previously expensed, but should have been capitalized as a component of Energy Server manufacturing costs to inventory, deferred cost of revenues, construction-in-progress and property, plant and equipment as per ASC 330 and SEC Staff Accounting Bulletin Topic 14. These costs will now be expensed on consumption of the related inventory and over the economic useful life of the property, plant and equipment, as applicable.

Also, as part of a review of historical revenue agreements as a result of the issues above, it was noted that the Company failed to identify embedded derivatives in certain revenue agreements for an escalator price protection ("EPP") feature given to its customers. As a result, the Company has recorded a derivative liability, with an offset to revenue, to account for the fair value of this feature at inception and will record the liability at its then fair value at each period end.

Finally, there were certain other immaterial misstatements identified or which had been previously identified which are also being corrected in connection with the restatement and/or revision of previously issued financial statements.

The correction of the misstatements resulted in a cumulative overstatement of revenue totaling $192.1 million through September 30, 2019, including $178.8 million relating to the cumulative period from April 1, 2018 through September 30, 2019 that is being restated in this Annual Report on Form 10-K, and $13.3 million relating to the cumulative period from January 1, 2016 through March 31, 2018 that is being revised in this Annual Report on Form 10-K. The corresponding cumulative overstatement of cost of revenue totaled $166.1 million through September 30, 2019, including $149.4 million relating to the cumulative period from April 1, 2018 through September 30, 2019 that is being restated in this Annual Report on Form 10-K, and additionally $16.7 million relating to the cumulative period from January 1, 2016 through March 31, 2018 that is being revised in this Annual Report on Form 10-K. We do not believe that the misstatements are material to any period prior to the three month period ended June 30, 2018.

Restatement, Revision and Recasting of Previously Issued Consolidated Financial Statements

This Annual Report on Form 10-K restates and revises previously filed amounts included in the 2018 Annual Report, including the consolidated financial statements as of December 31, 2018 and for the fiscal years ended December 31, 2018, 2017 and 2016.

The relevant unaudited Selected Quarterly Financial Data for the quarterly periods ended September 30, 2019, June 30, 2019, March 31, 2019, December 31, 2018, September 30, 2018, and June 30, 2018 has also been restated, and March 31, 2018 has been revised. Additionally, the 2019 unaudited Selected Quarterly Financial Data included in this Annual Report on Form 10-K have also been recast for the effects of ASC 606 which we adopted with effect from January 1, 2019, using the modified retrospective method.

See Note 2, *Restatement and Revision of Previously Issued Consolidated Financial Statements*, and Note 3, *Revenue Recognition,* and Note 18, *Unaudited Selected Quarterly Financial Data*, in Item 8, *Financial Statements and Supplementary Data* for additional information.

The restatement and revision resulted in the following impacts to our previously reported results *(in thousands, except per share data):*

	Nine Months Ended September 30,	Year Ended December 31,	
	2019	2018	2017
	Restatement Impact	Restatement Impact	Revision Impact
Total revenues	$ (70,156)	$ (109,390)	$ (10,373)
Gross profit (loss)	(17,233)	(11,320)	1,733
Net loss available to common stockholders (increase)	(36,793)	(31,787)	(13,763)
Basic and diluted loss per common share (increase)	(0.32)	(0.60)	(1.34)

Internal Control Considerations

In connection with the restatement, our management has assessed the effectiveness of our internal control over financial reporting. Based on this assessment, management identified a material weakness in our internal control over financial reporting resulting in the conclusion by our Chief Executive Officer and Chief Financial Officer that our internal control over financial reporting and our disclosure controls and procedures were not effective as of December 31, 2019. Management is taking steps to remediate the material weakness in our internal control over financial reporting, as described in Item 9A.

See Item 9A, *Controls and Procedures*, for additional information related to the identified material weakness in internal control over financial reporting and the related remediation measures.

Part I

ITEM 1 - BUSINESS

Overview

Bloom Energy’s mission is to make clean, reliable, and affordable energy for everyone in the world. Our product, the Bloom Energy Server, is a stationary power generation platform built for the digital age and capable of delivering highly reliable, always-on, 24x7 constant power that is also clean and sustainable. The Bloom Energy Server converts standard low-pressure natural gas or biogas into electricity through an electrochemical process without combustion, resulting in very high conversion efficiencies and lower harmful emissions than conventional fossil fuel generation. A typical configuration produces 250 kilowatts of power in a footprint roughly equivalent to that of half of a standard thirty-foot shipping container, or approximately 125 times more space-efficient than solar power generation. 250 kilowatts of power is roughly equivalent to the constant power requirement of a typical big box retail store. Any number of these Energy Server systems can be clustered together in various configurations to form solutions from hundreds of kilowatts to many tens of megawatts. These solutions can also be configured as Bloom Energy AlwaysON Microgrids, providing the capability to power facilities independently of the main electrical grid indefinitely.

Our team has decades of experience in the various specialized disciplines and systems engineering concepts embedded in this technology. We had 240 issued patents in the United States and 124 issued patents internationally as of December 31, 2019.

Our solution is capable of addressing customer needs across a wide range of industry verticals. The industries we currently serve consist of banking and financial services, cloud services, technology and data centers, communications and media, consumer packaged goods and consumables, education, government, healthcare, hospitality, logistics, manufacturing, real estate, retail and utilities.

We currently have installations in eleven states in the United States (California, Connecticut, Delaware, Maryland, Massachusetts, North Carolina, New Jersey, New York, Pennsylvania, Utah and Virginia) as well as in Japan, India and the Republic of Korea.

The United States is our largest market and installed base of Bloom Energy Servers. Some of our largest customers in the U.S. include AT&T, Caltech, Delmarva Power & Light Company, Equinix, The Home Depot, Kaiser Permanente, and The Wonderful Company. We also work actively with U.S. financing partners such as Southern PowerSecure Holdings, Inc. ("The Southern Company"), Duke Energy One, Inc., Key Equipment Finance, a division of KeyBank National Association, and Assured Guaranty Municipal Corporation. These finance partners purchase our systems and deploy the systems at end-customers’ facilities in order to provide the electricity as a service.

South Korea is a world leader in the deployment of fuel cells for utility-scale electric power generation with approximately 300 megawatts ("MW") deployed. We entered this market with a first deployment of an 8.35 MW Bloom Energy Server solution for a Korean utility that began commercial operation in 2018 and it now represents our second largest market. SK Engineering and Construction, a subsidiary of the SK Group, serves as the distributor of our systems in South Korea. We are operating smaller deployments in India and Japan with commercial customers and these markets are still developing.

Our headquarters is located at 4353 North First Street, San Jose, California 95134 and our telephone number is (408) 543-1500. Our website address is www.bloomenergy.com. The information contained on any website referred to in this Annual Report on Form 10-K does not form any part of this Annual Report on Form 10-K and is not incorporated by reference herein unless expressly noted.

Our History

We were incorporated in the state of Delaware on January 18, 2001 as Ion America Corporation. On September 20, 2006, we changed our name to Bloom Energy Corporation.

Our most significant deployment milestones to date include:

- **Our first commercial deployment:** 400 kilowatt deployment for a major internet company in August 2008;
- **Our first deployment under a PPA financing:** Completion of the first deployment that was financed pursuant to a PPA in October 2010;
- **The largest commercial customer deployment of fuel cell technology in the United States:** 10 megawatt deployment at a major consumer technology company’s data center completed in December 2012;

- **The first large scale deployment of fuel cell technology to provide mission critical, primary power to a data center, without traditional backup power from diesel generators, batteries and UPS systems:** 9.8 megawatt deployment in Utah in two phases completed in September 2013 and March 2015;
- **The largest utility scale deployment of fuel cell technology in the United States:** 30 megawatt deployment in Delaware for Delmarva completed in November 2013;
- **The first international deployments:** First site deployed in Japan to provide uninterruptible power completed in June 2013; first site deployed in India in the second quarter of 2016; first site deployed in South Korea and first Power Tower deployment in the fourth quarter of 2018; and
- **Major cumulative deployment milestones:** Cumulative deployment of 50 megawatts by September 2012, cumulative deployment of 100 megawatts by September 2013, cumulative deployment of 200 megawatts by June 2016, cumulative deployment of 300 megawatts by March 2018, 85th microgrid installed in May 2019, and cumulative deployment of 380 megawatts by December 2019.

In July 2018, we completed an initial public offering of our common shares and sold 20,700,000 shares of our Class A common stock into the market.

Industry Background

According to Marketline, the market for electric power is one of the largest sectors of the global economy with total revenues of $2.5 trillion in 2017, and is projected to grow to $3.4 trillion in 2022.

There are numerous challenges facing producers of electricity. We believe these challenges will be the foundation of a transformation in how electricity is produced, delivered and consumed. We believe this transformation will be similar to the seismic shifts seen in the computer and telecommunications industries - similar to its centralized mainframe computing and landline telephone systems' shift to the ubiquitous and highly personalized distributed technologies seen today.

Increasing capital costs to maintain and operate the existing electric grid. The electric power grid has suffered from insufficient investment in critical infrastructure as a result of complexities surrounding the ownership, operation and regulation of grid infrastructure, compounded by the challenges of large capital costs and lack of adequate innovation. We believe that U.S. electric utilities will be required to make substantial capital expenditures simply to maintain the electrical grid infrastructure.

Inherent vulnerability of existing grid design. The existing electric grid architecture features centralized, monolithic power plants and mostly above-ground transmission and distribution wires. The limits of this design, coupled with aging and underinvested infrastructure, leaves the grid vulnerable to natural disasters such as hurricanes, earthquakes, drought, wildfires, flooding and extreme temperature variations, which have increased in number and severity in recent years. In 2019, California’s major utilities shut off power to millions of people and businesses as part of their Public Power Safety Shutoff program to reduce the risk of their electric equipment sparking fires, which left some customers without power for nearly six days. These outages result in annual losses to American businesses of as much as $150 billion with weather-related disruptions costing the most per event. In addition to potential disruptions to the grid, there is also an increasing concern over the threat of cyber-attack and physical sabotage to the centralized grid infrastructure.

Intermittent generation sources such as wind and solar are negatively impacting grid stability. As the penetration of wind and solar resources increases, balancing real-time supply and demand becomes more challenging and costly. Due to these challenges, solutions are needed that provide constant base load 24x7 electric power that is reliable, clean and without the shortcomings of the existing grid infrastructure or intermittent sources such as wind and solar. This need is especially acute in the commercial and industrial customer segments, which represent 68% of global electricity consumption, according to Marketline, where cost and reliability can have a direct impact on profitability and business sustainability.

Increasing focus on reducing harmful emissions. The electric power sector, which today produces more greenhouse gases than any other sector of the global economy, is under increasing pressure to do its part to reduce such emissions. Policy initiatives to reduce harmful emissions from power generation are widespread, including the adoption of renewable portfolio standards or mandated targets for low- or zero-carbon power generation.

Lack of access to affordable and reliable electricity in developing countries. Building a centralized grid system, in addition to its inherent limitations, can also be infeasible in developing countries due to the lack of adequate capital for upfront investment. We believe these countries are likely to develop a hybrid solution consisting of both centralized and distributed electrical power infrastructure to accelerate the availability of power.

Our Solution

The Bloom Energy Server delivers reliable, resilient, clean and affordable energy, particularly in areas of high electricity costs, through its advanced distributed power generation system that is customizable, always-on and a source of primary base load power.

The Bloom Energy Server is based on our proprietary solid oxide fuel cell technology which converts fuel into electricity through an electrochemical process without combustion. The primary input to the system is standard low-pressure natural gas or biogas from local gas lines. The high-quality electrical output of our Energy Server is connected to the customer's main electrical feed thereby avoiding the transmission and distribution losses associated with a centralized grid system. Each Bloom Energy Server is modular and composed of independent 50-kilowatt power modules. A typical configuration includes multiple power modules in a single Energy Server and can produce 250 kilowatts of power in a footprint roughly equivalent to that of half a standard 30 foot shipping container, or approximately 125 times more space-efficient than solar power generation. Any number of these Energy Server systems can be clustered together in various configurations to form solutions from hundreds of kilowatts to many tens of megawatts. The Bloom Energy Server is easily integrated into corporate environments due to its aesthetically attractive design, compact space requirement, and minimal noise profile.

Our Value Proposition

Our value proposition has five key elements which allow us to deliver a better electron: reliability, resiliency, cost savings and predictability, sustainability and personalization. We provide a complete, integrated "behind-the-meter" solution including installation, equipment, service, maintenance and, in some cases, bundled fuel. The five elements of our value proposition emphasize those areas where there is a strong customer need and where we believe we can deliver superior performance.

Reliability. Our Energy Servers deliver always-on, 24x7 base load power with very high availability of power, mission-critical reliability and grid-independent capabilities. The Bloom Energy Server can be configured to eliminate the need for traditional backup power equipment such as diesel generators, batteries and uninterruptible power systems.

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. Importantly, our systems utilize the existing natural gas infrastructure which is a redundant underground mesh network.

Cost Predictability. 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 (other than the price of natural gas) over the long-term. 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. Moreover, we provide customers with a solution that includes all of the fixed equipment and maintenance costs for the life of the contract.

Sustainability. In operation, Bloom's Energy Servers uniquely address both the causes and consequences of climate change. Our projects lower carbon emissions by displacing less efficient grid alternatives. We improve air quality, often in vulnerable communities, by generating electricity without combustion, and our microgrid deployments provide critical resilience from grid instability, driven increasingly by climate related extreme weather events. Our products achieve this all while using no water during operation and at very high power density, which optimizes land use.

We are focused on constant product innovation, including the continued reduction of carbon emissions from our products and are engaged in multiple efforts to align Bloom's product roadmap with a zero emission trajectory. Already we are developing new applications and market opportunities in sectors with dirtier grids and higher marginal emissions displacement. We are focused on scaling use of renewable natural gas ("RNG") which is derived from biogas produced from decomposing organic waste from landfills, agricultural waste, and wastewater from treatment facilities, as fuel for our Energy Servers and building capacity within the market to further broader adoption. RNG is a biogas that has been upgraded to a quality similar to fossil natural gas and has a methane concentration of 90% or greater.

Additionally, we are pushing technology and business model boundaries to pioneer carbon emissions capture, utilization & storage ("CCUS") potential. Because carbon and nitrogen never mix in Bloom's Servers, it is both feasible and cost effective to capture CO_2 emissions, which can be stored in underground geologic formations or utilized in new products or processes. Finally, our research and development efforts continue to focus on preparing our Energy Servers to utilize renewable hydrogen fuel, a 100% clean fuel which is produced by breaking down water into hydrogen and oxygen using electrolysis. No new greenhouse gases would be produced when Energy Servers run on hydrogen, and using excess renewable capacity to create hydrogen would also help support further renewable adoption, compounding emissions benefits.

With our distributed, always-on, non-combustion process of generating clean electricity, Bloom works every day to reduce emissions, build resilience, and promote sustainable communities.

Personalization. The Bloom Energy Server is designed as a platform which can be customized to the needs of each customer to deliver the level of reliability, resiliency, sustainability, and cost predictability. For example, our Energy Server can be enhanced with AlwaysON Microgrid components to deliver higher levels of reliability and grid independent operation.

Technology

The fuel cells in our Energy Servers convert fuel, such as natural gas or biogas, 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 Bloom Energy Server. We combine a number of the fuel cells into a stack, and then combine a number of the stacks to form 50 kilowatt power modules (depending upon the generation required by the customer). Any number of these Energy Server systems can be arranged in various configurations to form solutions from hundreds of kilowatts to many tens of megawatts. Regardless of the starting size of a solution, further scaling can be accomplished after the initial solution deployment, creating on-going flexibility and scalability for the customer.

In a primary power configuration, the Bloom Energy Server is interconnected to the customer's electric grid connection. By regulation, the Bloom Energy Server must stop exporting power in case of a grid outage. However, Energy Servers can be upgraded to AlwaysON Microgrid solutions as add-on options at any point in time to enable continuous operation in the event of grid interruption. When in an always-on configuration, the Energy Server continually powers critical loads while the grid serves as a backup. Should there be a disruption to grid power, the critical load, which is already receiving primary power from the Energy Server, experiences no disruption. The combination of always-on power from our Energy Server, utilizing the natural gas infrastructure, and secondary feed from the independent electric grid results in a very highly available and reliable solution.

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 more than 46 PhDs. This team has continued to develop innovative technology improvements for our Energy Servers, achieving increased power density and electrical efficiency, reduced cost and improved reliability.

We have invested and will continue to invest a significant amount in research and development. See our discussion of research and development expenses in 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 the utility grid based on superior reliability, resiliency, cost savings, predictability and sustainability, all of which can be customized to the needs of individual customers. The customer has no single alternative solution that provides all of these important attributes in one platform. As we are able to drive our costs down, we expect our economic value proposition to continue to improve relative to grid power in additional markets.

Other sources of attributes competition include:

- *Intermittent solar power.* Solar power is intermittent and best suited for addressing peak power requirements, while Bloom provides stable base load generation. Storage technology is intended to address the intermittency of solar power, but the low power density and efficiency of solar technology makes the combined solution impractical for most commercial and industrial customers. As a point of comparison, our Energy Servers provide the same power output in 1/125th of the footprint of a solar installation, allowing us to serve far more of a customer's energy requirements based on a customer's available 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. Remote wind farms feeding into the grid are dependent upon the vulnerable transmission and distribution infrastructure to transport power to the point of consumption.

- *Traditional co-generation systems.* These systems deliver a combination of electric power and heat. We believe that we compete favorably because of our superior electrical efficiencies, significantly less complex deployment (avoiding heating systems integration), better performance on emissions and noise, superior availability, aesthetic appeal and reliability.
- *Traditional backup equipment.* As our Energy Servers deliver always-on power, they can obviate the need for traditional backup equipment such as diesel generators. We generally compete by offering a better integrated, more reliable and cost-effective solution versus these grid-plus-backup systems.
- *Other commercially available fuel cells.* Basic fuel cell technology is over 100 years old. The Bloom Energy Server uses advanced solid oxide fuel cell technology which produces electricity directly from oxidizing a fuel. The solid oxide fuel cell that 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 or natural gas 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 typically are used in on-board 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 hydrogen as an input source of energy or an external fuel reformer, which adds to the cost, complexity and electrical inefficiency of the product. As a result, they are not an economically viable option for stationary base load 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 kilowatts systems, and they are monolithic. Smaller sizes are 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 to 400 kilowatt range. PAFCs are best suited to combined heat and power output applications which require carefully matching and constant monitoring of power and heat requirements, often making the technology difficult to implement. Further disadvantages include low power density and poor system output stability.

Intellectual Property

Intellectual property is an essential differentiator for our business, and we seek protection for our intellectual property whenever possible. We rely upon a combination of patents, copyrights, trade secrets, and trademark laws, along with employee and third party non-disclosure agreements and other contractual restrictions to establish and protect our proprietary rights.
We have developed a significant patent portfolio to protect elements of our proprietary technology. As of December 31, 2019, we had 240 issued patents and 83 patent applications pending in the United States and we had an international patent portfolio comprised of 124 issued patents and 50 patent applications pending. Our U.S. patents are expected to expire between 2023 and 2036. While patents are an important 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 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 and in some locations abroad. "Bloom Energy" and the "BE" logo are our registered trademarks in certain countries for use with Energy Servers and our other products. We also hold registered trademarks for, among others, “Bloom Box," "Bloom Electrons," "BloomConnect," and “Energy Server" in certain countries. In an effort to protect our brand, as of December 31, 2019, we had 8 registered trademarks in the United States, 34 registered trademarks in Australia, the European Union, United Kingdom, Japan, South Korea, and Taiwan, and 3 pending applications in China.

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 "Item 1A. Risk Factors" including the following risks disclosed under the heading "Risks Related to Our Intellectual Property": *"Our failure to protect 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,"* and "*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."*

Manufacturing Facilities

Our primary manufacturing facilities for the fuel cells and Energy Servers assembly are in Newark, Delaware and Sunnyvale, California. The 226,600 square foot manufacturing facility that we own in Newark is 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. Additionally, we lease various manufacturing facilities in Sunnyvale and Mountain View, California. Our current lease for our Sunnyvale manufacturing facilities, entered into in April 2005, expires in 2020 and is in the process of being extended, and our current lease for our manufacturing facility in Mountain View, entered into in December 2011, expires in December 2020. Our California facilities comprise approximately 281,265 square feet of manufacturing space.

We believe our current manufacturing facilities are adequate to support our business for the next few years. Our Newark facility includes an additional 50 acres available for factory expansion and/or the co-location of supplier plants. Both of our two principal manufacturing facilities are powered by Bloom Energy Servers.

Supply Chain

Our supply chain has been developed, since our early days as a company, with a group of high quality suppliers that support automotive, semiconductor and other traditional manufacturing organizations. Many of the components that they produce for us are customized and have long lead time components. We have been working to mitigate these long lead times by developing second sources and have developed an active business continuity program. We, along with our suppliers, also purchase long lead items to assure component supply for continuity.

Services

We offer operations and maintenance services agreements for our Energy Servers which are renewable at the election of the customer on an annual basis. The customer agrees to pay an on-going service fee and in return Bloom monitors, maintains and operates the Bloom Energy Servers systems on the customer's behalf.

Our in-house service organization had 114 dedicated field service personnel in 17 locations as of December 31, 2019. Standard customer contracts include service covering all on-going system operation, maintenance, including the periodic refresh and replacement of power modules, and 24x7 remote monitoring and control.

Each Bloom Energy Server includes a secure connection to redundant Remote Monitoring and Control Center ("RMCC") facilities that are geographically well separated. There are two RMCC facilities which provide constant monitoring of over 500 system performance parameters and predictive factors. Using proprietary, internally developed software, the RMCC operators can optimize fleet performance remotely from either RMCC facility. As needed, operators can dispatch field services to the site to locally restore and enhance performance. The RMCC facilities communicate through a secure network and can operate together or independently to provide full services for the fleet.

We currently service and maintain all of our Energy Servers.

Customer Financing

We assist our customers by providing innovative financing options which, in addition to aiding in customer purchase, provides us an expanded addressable customer base. We have developed multiple options for our customers to acquire the power our Energy Servers produce. These offerings provide a range of options that include the purchase of our systems outright with operations and maintenance services contracts, or the purchase of electricity that our Energy Servers produce without any upfront costs through various financing vehicles including leases and power purchase agreements ("PPAs") that combine the cost of our systems, warranty and service, financing, and in some cases fuel into monthly payments based on the electricity produced.

Our largest PPA financing partner, through our Third-Party PPA Program, is the Southern Company, one of the largest utility companies in the United States. Other project financing partners include Key Bank, Wells Fargo, Credit Suisse, Duke Energy, and Constellation Energy (a subsidiary of Exelon Corporation).

Sales, Marketing and Partnerships

We market our Energy Servers primarily through a single direct sales organization supported by project finance, business development, government affairs and marketing teams. In addition to our internal resources, we work with multiple partners to generate customer leads and develop projects. In 2017, we announced our first distributorship agreement with SK Group, a company located in the Republic of Korea. Pursuant to this agreement, SK Engineering and Construction is a distributor of Bloom Energy Servers in the Republic of Korea.

Sustainability

Bloom Energy Servers reduce carbon emissions and save water compared to traditional coal power generation systems, and save water compared to traditional natural gas power generation systems. Thus, our primary sustainability goal is to maximize sales of Bloom Energy Servers and provide the longest and most economically sustainable life cycle possible for the fuel cells comprising our Bloom Energy Servers through reliability enhancement programs.

We seek to minimize our environmental footprint with research and development initiatives designed to extend system operating life while reducing consumption of new material in our Energy Servers. We have an end-to-end recycling approach to recover components from end-of-life units for reuse or recycling and we have dedicated facilities in our manufacturing locations in Delaware and California to inspect and dismantle components removed during scheduled maintenance. We have an audit program to identify improvement opportunities at suppliers and also work to reduce their one-way packaging to minimize materials going to landfills.

These initiatives in combination provide a robust and comprehensive sustainability strategy that focuses both externally on our impact on the wider environment and internally on responsible design, materials management and recycling.

Permits and Approvals

Each Bloom Energy Server installation must be designed, constructed and operated in compliance with applicable federal, state, international and local regulations, codes, standards, guidelines, policies and laws. To install and operate our systems, we, our customers and our partners are required to obtain applicable permits and approvals from local authorities for the installation of Bloom Energy Servers and for the interconnection systems with the local electrical utility.

Government Policies and Incentives

There are varying policy frameworks across the United States and abroad designed to support and accelerate the adoption of clean and/or reliable distributed power generation technologies such as Bloom Energy Servers. These policy initiatives come in the form of tax incentives, cash grants, performance incentives and/or specific gas or electric tariffs.

The U.S. federal government provided businesses with an Investment Tax Credit ("ITC") under Section 48 of the Internal Revenue Code, available to the owner of our Energy Server for systems purchased and placed into service. The credit was equal to 30% of expenditures for capital equipment and installation and the credit for fuel cells is capped at $1,500 per 0.5 kilowatt of capacity in 2019 and will decrease to 26% in 2020. For more information on the reinstated ITC, please see *Investment Tax Credits* in Note 1 of the Notes to the Consolidated Financial Statements**.**

Our Energy Servers are currently installed at customer sites in eleven states in the United States, each of which has its own enabling policy framework. Some states have utility procurement programs and/or renewable portfolio standards for which our technology is eligible. Our Energy Servers currently qualify for tax exemptions, incentives or other customer incentives in many states including the states of California, New Jersey, Connecticut and New York. These policy provisions are subject to change.

Although we generally are not regulated as a utility, federal, state, international and local government statutes and regulations concerning electricity heavily influence the market for our product and services. These statutes and regulations often relate to electricity pricing, net metering, incentives, taxation, competition with utilities and the interconnection of customer-owned electricity generation. 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 different 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 for the purchase of electricity.

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 local public utility commission or other regulatory body with jurisdiction over interconnection agreements. As such, no additional regulatory approvals are typically required once interconnection agreements are signed.

Product safety standards for stationary fuel cell generators have been established by the American National Standards Institute ("ANSI"). These standards are known as ANSI/CSA FC-1. Our products are designed to meet this standard. Further, we utilize the Underwriters' Laboratory, or UL, to certify compliance with the standard. 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 this standard.

Government Regulations

Our business is subject to a changing patchwork of 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 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. Currently, there is generally little guidance from these agencies on how certain environmental laws and regulations may or may not be applied to our technology. 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, ensuring we are in compliance with applicable environmental laws, such as the comprehensive Environmental Response, Compensation and Liability Act ("CERCLA") in the United States, requires significant time and management resources.

At the federal level, the Federal Energy Regulatory Commission ("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 our power purchase agreement entities ("PPA Entities") 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.

Several states in which we currently operate, including California, require permits for emissions of hazardous air pollutants based on the quantity of emissions, most of which require permits only for quantities of emissions that are higher than those observed from our Energy Servers. Other states in which we operate, including New York, New Jersey, and North Carolina, have specific exemptions for fuel cells. In addition, our project with Delmarva Power & Light Company is subject to laws and regulations relating to electricity generation, transmission, and sale in Delaware and at the federal level.

Although we generally are not regulated as a utility, federal, state, and local government statutes and regulations concerning electricity heavily influence the market for our product and services. These statutes and regulations often relate to electricity pricing, net metering, incentives, taxation, and the rules surrounding the interconnection of customer-owned electricity generation for specific technologies. In the United States, governments frequently modify these statutes and regulations. Governments, often acting through state utility or public service commissions, change and adopt different requirements for utilities and rates for commercial customers on a regular basis.

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

Backlog

The timing of delivery and installations of our products have a significant impact on the timing of the recognition of product revenue. Many factors can cause a lag between the time that a customer signs a purchase order 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, 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 obtaining financing. 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. 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.

See *Item 7, Management's Discussion & Analysis of Financial Condition and Results of Operations - Purchase Options -- Delivery and Installation* for additional information on backlog.

Legal Proceedings

From time to time, we are involved in various legal proceedings or subject to claims arising in the ordinary course of our business. Although the results of legal proceedings and claims cannot be predicted with certainty, we are not currently party to any legal proceedings the outcome of which, in the opinion of our management, 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. For a discussion of legal proceedings, see "Legal Matters" under Note 14, *Commitments and Contingencies*, in the notes to our consolidated financial statements.

Employees

As of December 31, 2019, we had 1,518 employees and contractors. We had approximately 1,252 full-time employees worldwide, of which 979 were located in the United States, 256 were located in India and 17 were located in other countries. We have never experienced a work stoppage, and we believe our relations with our employees to be good.

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.

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. We entered into the lease for our new corporate headquarters, consisting of 181,000 square feet of multi-floor office space, which commenced in January 2019 and expires in December 2028. Our headquarters is used for administration, research and development, and sales and marketing and also houses one of our RMCC facilities.

Please see Item 2 - "*Properties*" for additional information regarding our facilities.

Available Information

Our website address is www.bloomenergy.com and our investor relations website address is https://investor.bloomenergy.com. Information contained on our website is not a part of 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 Report 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 Securities Exchange Act of 1934, as amended, 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 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.

ITEM 1A - RISK FACTORS

Investing in our securities involves a high degree of risk. You should carefully consider the risks and uncertainties described below, 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. Many of these risks and uncertainties are beyond our control, and the occurrence of any of the events or developments described below, or of additional risks and uncertainties not presently known to us or that we currently deem immaterial, could materially and adversely affect our business, financial condition, operating results and prospects. In such an event, the market price of our Class A common stock could decline and you could lose all or part of your investment.

This Risk Factor section is divided by topic for ease of reference as follows: Risks Relating to Our Business, Industry and Sales; Risks Related to Our Products and Manufacturing; Risks Relating to Government Incentive Programs; Risks Related to Legal Matters and Regulations; Risks Relating to Our Intellectual Property; Risks Relating to Our Financial Condition and Operating Results; Risks Related to Our Liquidity; Risks Related to Our Operations; and Risks Related to Ownership of Our Common Stock.

Risks Relating to Our Business, Industry and Sales

The distributed generation industry is an emerging market and distributed generation may not receive widespread market acceptance.

The distributed generation industry is still relatively nascent in an otherwise mature and heavily regulated industry, and we cannot be sure that potential customers will accept distributed generation broadly, or our Energy Server products specifically. Enterprises may be unwilling to adopt our solution over traditional or competing power sources for any number of reasons including the perception that our technology is unproven, they lack confidence in our business model, the perceived unavailability of back-up service providers to operate and maintain the Energy Servers, and lack of awareness of our product or their perception of regulatory or political headwinds. Because this is an emerging industry, broad acceptance of our products and services is subject to a high level of uncertainty and risk. If the market develops more slowly than we anticipate, our business will be harmed.

Our limited operating history and our nascent industry make evaluating our business and future prospects difficult.

From our inception in 2001 through 2009, we were focused principally on research and development activities relating to our Energy Server technology. We did not deploy our first Energy Server and did not recognize any revenue until 2009. Since that initial deployment, our business has expanded significantly over a comparatively short time, given the characteristics of the electric power industry. As a result, we have a limited history operating our business at its current scale. Furthermore, our Energy Server is a new type of product in the nascent distributed energy industry. Consequently, 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 make a sale, we must typically provide a significant level of education to prospective customers regarding the use and benefits of our product and our technology. The period between initial discussions with a potential customer and the eventual sale of even a single product typically depends on a number of factors, including the potential customer's budget and decision as to the type of financing it chooses to use as well as the arrangement of such financing. Prospective customers often undertake a significant evaluation process which may further extend the sales cycle. Once a customer makes a formal decision to purchase our product, the fulfillment of the sales order by us requires a substantial amount of time. Generally, the time between the entry into a sales contract with a customer and the installation of our Energy Servers can range from nine to twelve months or more. This lengthy sales and installation cycle is subject to a number of significant risks over which we have little or no control. Because of both the long sales and long installation cycles, we may expend significant resources without having certainty of generating a sale.

These lengthy sales and installation cycles increase the risk that an installation may be delayed and/or may not be completed. In some instances, 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 between 10% and 20% 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 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 we do not recognize revenue on the sales of our products until installation and acceptance, a small fluctuation in the timing of the completion of our sales transactions could cause operating results to vary materially from period to period.

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

Our Energy Servers have significant upfront costs. In order to assist our customers in obtaining financing for our products, we have traditional lease programs with two leasing partners who have prequalified our product and provide financing for customers through various leasing arrangements. In addition to the traditional lease model, we also offer Power Purchase Agreement Programs, including Third-Party PPAs, in which financing the cost of the Energy Server is provided by an entity that owns the Energy Servers (an "Operating Company") and funded by a subsidiary investment entity (an "Investment Company") which is financed by us and/or in combination with Equity Investors. We refer to the Operating Company and its subsidiary Investment Company collectively as a PPA Entity. In recent periods, the substantial majority of our end customers have elected to finance their purchases, typically through Third Party PPAs.

We will need to grow committed financing capacity with existing partners or attract additional partners to support our growth. Generally, at any point in time, the deployment of a portion of our backlog is contingent on securing available financing. Our ability to attract third-party financing depends on many factors that are outside of our control, including the investors' ability to utilize tax credits and other government incentives, interest rate and/or currency exchange fluctuations, our perceived creditworthiness and the condition of credit markets generally. Our financing of customer purchases of our Energy Servers is subject to conditions such as the customer's credit quality and the expected minimum internal rate of return on the customer engagement, and if these conditions are not satisfied, we may be unable to finance purchases of our Energy Servers, which would have an adverse effect on our revenue in a particular period. If we are unable to help our customers arrange financing for our Energy Servers generally, our business will be harmed. Additionally, the Managed Services and Traditional Lease options, as with all leases, are also limited by the customer's willingness to commit to making fixed payments regardless of the performance of the Energy Servers or our performance of our obligations under the customer agreement.

Further, our sales process for transactions that require financing require that we make certain assumptions regarding the cost of financing capital. Actual financing costs may vary from our estimates due to factors outside of our control, including changes in customer creditworthiness, macroeconomic factors, the returns offered by other investment opportunities available to our financing partners, and other factors. If the cost of financing ultimately exceeds our estimates, we may be unable to proceed with some or all of the impacted projects or our revenue from such projects may be less than our estimates.

If we are unable to procure financing partners willing to finance such deployments or if the cost of such financing exceeds our estimates, our business would be negatively impacted.

The economic benefits of our Energy Servers to our customers depend on the cost of electricity available from alternative sources including local electric utility companies, which cost structure is subject to change.

We believe that a customer's decision to purchase our Energy Servers is significantly influenced by the 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. The economic benefit of our Energy Servers to our customers includes, among other things, the benefit of reducing such customer's payments to the local utility company. The rates at which electricity is available from a customer's local electric utility company is subject to change and any changes in such rates may affect the relative benefits of our Energy Servers. Even in markets where we are competitive today, rates for electricity could decrease and render our Energy Servers uncompetitive. Several factors could lead to a reduction in the price or future price outlook for grid electricity, including the impact of energy conservation initiatives that reduce electricity consumption, construction of additional power generation plants (including nuclear, coal or natural gas) and technological developments by others in the electric power industry which could result in electricity being available at costs lower than those that can be achieved from our Energy Servers. If the retail price of grid electricity does not increase over time at the rate that we or our customers expect, it could reduce demand for our Energy Servers and harm our business.

Further, the local electric utility may impose "departing load," "standby," or other charges, including power factor charges, on our customers in connection with their acquisition of our Energy Servers, the amounts of which are outside of our control and which may have a material impact on the economic benefit of our Energy Servers to our customers. 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 acquiring our Energy Servers could adversely affect the demand for our Energy Servers.

In some states and countries, the current low cost of grid electricity, even together with available subsidies, does not render our product economically attractive. If we are unable to reduce our costs to a level at which our Energy Servers would be competitive in such markets, or if we are unable to generate demand for our Energy Servers based on benefits other than electricity cost savings, such as reliability, resilience, or environmental benefits, our potential for growth may be limited.

Furthermore, an increase in the price of natural gas or curtailment of availability (e.g., as a consequence or physical limitations or adverse regulatory conditions for the delivery of production of natural gas) or the inability to obtain natural gas service could make our Energy Servers less economically attractive to potential customers and reduce demand.

We rely on interconnection requirements and net metering arrangements that are subject to change.

Because our Energy Servers are designed to operate at a constant output twenty-four hours a day, seven days a week, and our customers' demand for electricity typically fluctuates over the course of the day or week, there are often periods when our Energy Servers are producing more electricity than a customer may require, and such excess electricity must be exported to the local electric utility. Many, but not all, local electric utilities provide compensation to our customers for such electricity under "net metering" programs. Utility tariffs and fees, interconnection agreements and 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 net metering requirements or interconnection agreements in place in the jurisdictions in which we operate on in which we anticipate expanding into in the future could adversely affect the demand for our Energy Servers.

We currently face and will continue to face significant competition.

We compete for customers, financing partners, and incentive dollars with other electric power providers. Many providers of electricity, such as traditional utilities and other companies offering distributed generation products, have longer operating histories, have customer incumbency advantages, have access to and influence with local and state governments, and have access to more capital resources than do we. 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. 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 could come from a relatively small number of customers. As an example, in the year ended December 31, 2019, two customers, The Southern Company and SK (Korea) accounted for approximately 34% and 23% of our total revenue, respectively. In the year ended December 31, 2018, one customer, The Southern Company accounted for approximately 51% of our total revenue. A unit of The Southern Company wholly owns a Third-Party PPA, and that entity purchases Energy Servers which are then provided to various end customers under PPAs. The loss of any large customer order or any delays in installations of new Energy Servers with any large customer would materially and adversely affect our business results.

Risks Relating to Our Products and Manufacturing

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

We have been and will continue monitoring and adjusting as appropriate our operations in response to the COVID-19 pandemic. Although we have been able to maintain some of our operations as an "Essential Business" in California and Delaware, other operations have been delayed or suspended under applicable government orders and guidance. Our remaining operations could be delayed or suspended at any time in the event of changes to applicable government orders or the interpretation of existing orders.

Our headquarters and certain of our manufacturing facilities are located in Santa Clara County, California. On March 17, 2020, Santa Clara County became subject to a government mandated "shelter in place" order, which was superseded by an Executive Order issued by the Governor of California that extends indefinitely. Similarly, effective March 25, 2020, our manufacturing facilities in Newark, Delaware became subject to the Governor of Delaware's Declaration of a State of Emergency Due to a Public Health Threat initially issued on March 12, 2020 and in effect until further notice. Additionally our installation activities in all areas, but especially New York, Connecticut, New Jersey, California and Massachusetts, are adversely impacted by similar mandates in these jurisdictions. In response, we have closed our headquarters building and directed employees, unless they are directly supporting essential manufacturing production operations or maintenance activities, to work from their homes. This has caused and may continue to cause disruptions in certain of our operations, including our research and development, sales, marketing, installation and operations and maintenance activities. Although our affected manufacturing facilities continue to operate while these orders are in effect, we cannot provide assurances that the COVID-19 pandemic or additional governmental actions in response thereto will not further impact our operations (in California, Delaware or elsewhere). For example, if our management, employees, contractors, customers or affiliates, such as the third party general contractors with which we partner for installations, are affected by illness or by preventative measures such as social distancing, our operations, demand for our product, and installation, maintenance and oversight activities may be disrupted or we may be required to incur additional costs in order to maintain operations. In addition, to the extent that any of our employees separate from us in response to the pandemic or governmental responses to the pandemic, it may be difficult or impossible to replace them.

We are also experiencing delays from certain vendors and suppliers that have been affected more directly by COVID-19, which, in turn, could cause delays in the manufacturing and installation of our Energy Servers. It may not be possible to find replacement products or supplies, and ongoing delays could affect our business and growth. For example, our international operations, including in South Korea and India, have been disrupted by the COVID-19 pandemic and by governmental responses to the pandemic. In India, orders by the National Disaster Management Authority and the Ministry of Home Affairs issued March 24, 2020 have "prescribed a lockdown for containment of COVID-19 Epidemic in the country," according to the Press Information Bureau of the Government of India. These orders have had the effect of disrupting the supply chain on which we rely for certain parts critical to our manufacturing and maintenance capabilities, which impacts both our sale and installation of new products and our operations and maintenance of previously-sold Energy Servers. For example, both the primary and secondary sources of a particular part on which we rely are in India. We are working on measures to address or mitigate the effect of these circumstances, but we cannot guarantee that we will succeed in finding alternate suppliers that are able to meet our needs.

Even if we are able to identify alternate suppliers that are able to meet our needs, the international air and sea logistics systems have been heavily impacted by the COVID-19 pandemic. Air carriers have significantly reduced their passenger and air freight capacity, and many ports are either temporarily closed or have reduced their hours of operation. Actions by government agencies may further restrict the operations of freight carriers, which would negatively impact our ability to receive the parts and supplies we need to manufacture our Energy Servers or to deliver them to our customers.

Our 5% Notes and 6% Notes mature in December 2020. We have actively been working on extending the maturity date of these Notes or securing refinancing, and our efforts have been negatively impacted by the COVID-19 pandemic, which has decreased the availability of credit. If we are unable to secure an extension or refinancing for the 5% Notes and/or 6% Notes before they mature, we may have insufficient cash to repay such Notes and our financial condition could be adversely impacted.

We also rely on third party financing for our customer's purchases of our Energy Servers. If these financiers experience liquidity problems or elect to suspend or cancel investments in our projects, we may be unable to secure financing for our customer purchases, which in turn impacts our ability to deploy our Energy Servers and receive cash and recognize revenue. We have already experienced one delayed closing due to a financier's inability to close in light of its own liquidity concerns, and we may experience more.

Our installation operations have also been adversely impacted by the COVID-19 pandemic, and these adverse impacts may increase in severity or continue indefinitely, including following the lifting of "shelter in place" orders. For example, our projects have experienced delays and may continue to experience delays relating to, among other things, shortages in available labor for design, installation and other work; the effects on the COVID-19 pandemic on our suppliers in general but especially our general contractors, their sub-contractors, medium-voltage electrical gear suppliers, and a wide range of engineering and construction related specialist suppliers on whom we rely for successful and timely installations; the completion of work required by gas and electric utilities on which we are critically dependent; necessary civil and utility inspections; and the review of our permit submissions and issuance of permits with multiple authorities that have jurisdiction over our activities. Additionally we have experienced delays and interruptions to our installation activities where customers have shut down or otherwise limited access to their facilities. This may continue to affect our ability to install our systems or increase in severity as the pandemic continues to affect key markets such as New York, Connecticut, New Jersey, Massachusetts and California.

We are not the only business impacted by these shortages and delays, which means that we may in the future face increased competition for scarce resources, which may result in continuing delays or increases in the cost of obtaining such services, including increased labor costs and/or fees to expedite permitting. Additionally, while construction activities have to date been deemed "essential business" and allowed to proceed in many jurisdictions, we have experienced interruptions and delays caused by confusion related to exemptions for "essential business" amongst our suppliers and their sub-contractors. Future changes in applicable government orders or regulations, or changes in the interpretation of existing orders or regulations, could result in reductions in the scope of permitted construction activities or prohibitions on such activities. An inability to install our Energy Servers would negatively impact our acceptances, our cash and our revenue.

Additionally, our maintenance activities may be negatively impacted by COVID-19, including heightened health and safety protocols mandated by governmental orders or our customers that may increase our cost in performing such activities and/or delays or denials of access to customer sites to perform necessary maintenance activities on previously-sold Energy Servers. If we are delayed in, or unable to, performing scheduled or unscheduled maintenance, our previously-installed Energy Servers will 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 costs in the future.

We cannot predict at this time the full extent to which COVID-19 will impact our business, results and financial condition, which will depend on many factors. These include, among others, the extent of harm to public health, the willingness of our employees to travel and work in our manufacturing facilities and at installation sites even if permitted to do so, the disruption to the global economy and to our potential customer base, and impacts on liquidity and the availability of capital. We are staying in close communication with our manufacturing facilities, employees, customers, suppliers and partners, and acting to mitigate the impact of this dynamic and evolving situation, but there is no guarantee that we will be able to do so.

Our future success depends in part on our ability to increase our production capacity, and we may not be able to do so in a cost-effective manner.

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

- The expansion or construction of any manufacturing facilities will be subject to the risks inherent in the development and construction of new facilities, including risks of delays and cost overruns as a result of factors outside our control such as delays in government approvals, burdensome permitting conditions, and delays in the delivery of manufacturing equipment and subsystems that we manufacture or obtain from suppliers.
- In order for us to expand internationally, we have entered into joint venture agreements that have allowed us to add manufacturing capability outside of the United States. Adding manufacturing capacity in any international location will subject us to new laws and regulations including those pertaining to labor and employment, environmental and export import. In addition, it brings with it the risk of managing larger scale foreign operations.
- We may be unable to achieve the production throughput necessary to achieve our target annualized production run rate at our current and future manufacturing facilities.
- Manufacturing equipment may take longer and cost more to engineer and build than expected, and may not operate as required to meet our production plans.
- We may depend on third-party relationships in the development and operation of additional production capacity, which may subject us to the risk that such third parties do not fulfill their obligations to us under our arrangements with them.
- We may be unable to attract or retain qualified personnel.

If we are unable to expand our manufacturing facilities, we may be unable to further scale our business. If the demand for our Energy Servers 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 we are not able to continue to reduce our cost structure in the future, our ability to become profitable may be impaired.

We must continue to reduce the manufacturing costs for our Energy Servers to expand our market. Additionally, certain of our existing service contracts were entered into based on projections regarding service costs reductions that assume continued advances in our manufacturing and services processes which we may be unable to realize. While we have been successful in reducing our manufacturing and services costs to date, the cost of components and raw materials, for example, could increase in the future. Any such increases could slow our growth and cause our financial results and operational metrics to suffer. In addition, we may face increases in our other expenses including increases in wages or other labor costs as well as installation, marketing, sales or related costs. We may continue to make significant investments to drive growth in the future. In order to expand into new electricity 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 failure to achieve projected cost reductions could adversely affect our results of operations and financial condition and harm our business and prospects. If we are unable to reduce our cost structure in the future, we may not be able to achieve profitability, which could have a material adverse effect on our business and our prospects.

If our Energy Servers contain manufacturing defects, our business and financial results could be harmed.

Our Energy Servers are complex products and they may contain undetected or latent errors or defects. In the past, we have experienced latent defects only discovered once the Energy Server is 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 also introduce defects into our products. In addition, as we grow our manufacturing volume, the chance of manufacturing defects could increase. Any manufacturing defects or other failures of our Energy Servers to perform as expected could cause us to incur significant re-engineering costs, divert the attention of our engineering personnel from product development efforts, and significantly and adversely affect customer satisfaction, market acceptance, and our business reputation.

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

The performance of our Energy Servers 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 supply and utility processes which vary by region and may be subject to seasonal fluctuations, have affected the performance of our Energy Servers and are not always possible to predict until the Energy Server is in operation. Although we believe we have designed new generations of Energy Servers to better withstand the variety of field conditions we have encountered, as we move into new geographies and deploy new service configurations, we may encounter new and unanticipated field conditions. Adverse impacts on performance may require us to incur significant 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 are inaccurate or we do not meet service and performance warranties and guaranties, or is 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 operations and maintenance service agreements on an annual basis, for up to 30 years, at prices predetermined at the time of purchase of the Energy Server. We also provide performance warranties and guaranties covering the efficiency and output performance of our Energy Servers. 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 and their components, including assumptions regarding improvements in power module life that may fail to materialize. We do not have a long history with a large number of field deployments, and our estimates may prove to be incorrect. Failure to meet these performance warranties and guaranty levels may require us to replace the Energy Servers at our expense 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 maintenance service 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 our estimates, the accuracy of which may be hindered due to our limited history operating at our current scale.

As of December 31, 2019, we had a total of 35 megawatts in total deployed early generation servers, including our first and second generation servers, out of our total installed base of 456 megawatts. None of these early generation servers are recognized as our property, plant and equipment. We expect that our deployed early generation Energy Servers, if not upgraded with our more current generation power modules, may continue to perform at a lower output and efficiency level and, as a result, the maintenance costs may exceed the contracted prices that we expect to generate if our customers continue to renew their maintenance service agreements with respect to those servers. Further, the Energy Servers held on our consolidated financial statements, including those acquired through our Managed Services and PPA programs, could be impaired or have their useful life shortened in the future if adequate maintenance services are not performed or if a determination is made to upgrade the Energy Servers.

Our business is subject to risks associated with construction, utility interconnection, 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 generally do not recognize revenue on the sales of our Energy Servers until installation and acceptance except where a third party is responsible for installation (such as in our sales in the Republic of Korea), our financial results depend to a large extent on the timeliness of the installation of our Energy Servers. Furthermore, in some cases, the installation of our Energy Servers 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 Energy Servers at a particular site is also generally subject to oversight and regulation in accordance with national, state, and local laws and ordinances relating to building codes, safety, environmental protection, and related matters, 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 require periodic renewal. It is difficult and costly to track the requirements of every individual authority having jurisdiction over our installations, to design our Energy Servers to comply with these varying standards, and to obtain all applicable approvals and permits. We cannot predict whether or when all permits required for a given project will be granted or whether the conditions associated with the permits will be achievable. The denial of a permit or utility connection essential to a project or the imposition of impractical conditions would impair our ability to develop the project. In addition, we cannot predict whether the permitting process will be lengthened due to complexities and appeals. Delay in the review and permitting process 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 Energy Servers 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 of natural gas. For more information regarding these restrictions, please see the risk factor entitled "*As a fossil fuel-based technology, 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*." 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 have a material adverse effect on our results and could cause operating results to vary materially from period to period.

Furthermore, we rely on the ability of our third-party general contractors to install Energy Servers 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 us being required to comply with additional rules (including rules unique to our customers), working conditions, site remediation, and other union 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.

Any significant disruption in the operations at our manufacturing facilities could delay the production of our Energy Servers, which would harm our business and results of operations.

We manufacture our Energy Servers 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 or catastrophic weather or geologic events. For example, several of our manufacturing facilities are located in an area prone to earthquakes. In the event of a significant disruption to our manufacturing process, we may not be able to easily shift production to other facilities or to make up for lost production, which could result in harm to our reputation, increased costs, and lower revenues.

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

We rely on a limited number of third-party suppliers for some of the raw materials and components for our Energy Servers, including certain rare earth materials and other materials that may be of limited supply. If our suppliers provide insufficient inventory at the level of quality required to meet customer demand 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 Energy Servers or our Energy Servers may be available only at a higher cost or after a long delay. Such delays could prevent us from delivering our Energy Servers to our customers within required time frames and cause order cancellations. 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 in the past to develop 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. Accordingly, the number of suppliers we have for some of our components and materials is limited and, in some cases, sole sourced. 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, 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 our planned sales and services operations, which would negatively impact our sales volumes and cash flows.

Moreover, we have in the past and may in the future experience unanticipated disruptions to operations or other difficulties with our supply chain or internalized supply processes due to exchange rate fluctuations, volatility in regional markets from where materials are obtained (particularly China and Taiwan), changes in the general macroeconomic outlook, global trade disputes, political instability, expropriation or nationalization of property, public health emergencies such as the recent Covid-19 viral outbreak, civil strife, strikes, insurrections, acts of terrorism, acts of war, or natural disasters. 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 Energy Servers or increase their costs or service costs of our existing portfolio of Energy Servers under maintenance services agreements. If we cannot obtain substitute materials or components on a timely basis or on acceptable terms, we could be prevented from delivering our Energy Servers to our customers within required time frames, which could result in sales and installation delays, cancellations, penalty payments, or damage to our 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 or exceed those quality standards could cause delays in the delivery of our products, cause unanticipated servicing costs, and cause damage to our reputation.

Our ability to develop new products and enter into new markets could be negatively impacted if we are unable to identify suppliers to deliver new materials and components on a timely basis.

We continue to develop products for emerging markets and, as we move into those markets, must qualify new suppliers to manufacture and deliver the necessary components required to build and install those new products. Identifying new manufacturing partners is a lengthy process and is subject to significant risks and uncertainties. If we are unable to identify reliable manufacturing partners in a new market, our ability to expand our business could be limited and our financial conditions and results of operations could be harmed.

We have, in some instances, entered into long-term supply agreements that could result in insufficient inventory 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 did not need or that was 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 Energy Servers 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.

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

Our business is dependent on the availability of raw materials and components for our Energy Servers, particularly electrical components common in the semiconductor industry, specialty steel products / processing and raw materials. Tariffs imposed on steel and aluminum imports have increased the cost of raw materials for our Energy Servers and decreased the available supply. Additional new tariffs or other trade protection measures which 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.

To the extent practicable, given the limitations in supply chain previously discussed, although we currently maintain alternative sources for raw materials, our business is subject to the risk of price fluctuations and periodic delays in the delivery of certain raw materials, which tariffs may exacerbate. Disruptions in the supply of raw materials and components could temporarily impair our ability to manufacture our Energy Servers for our customers or require us to pay higher prices in order to obtain these raw materials or components from other sources, which could affect our business and our results of operations. While it is too early to predict how the recently enacted tariffs on imported steel will impact our business, 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 (or to comply properly) 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 are approved for "zone to zone" transfers between our California and Delaware facilities. 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 with respect to the foreign trade zone 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.

Risks Relating to Government Incentive Programs

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

The U.S. federal government and some state and local governments provide incentives to 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. In addition, some countries outside the U.S. also provide incentives to end users and purchasers of our Energy Servers. We currently have operations and sell our Energy Servers in Japan, China, India, and the Republic of Korea (collectively, our "Asia Pacific region"), where Renewable Portfolio Standards ("RPS") are in place to promote the adoption of renewable power generation, including fuel cells. 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. Some states have utility procurement programs and/or renewable portfolio standards for which our technology is eligible. Our Energy Servers are currently installed in eleven U.S. states, each of which may have its own enabling policy framework. We rely on these governmental rebates, tax credits, and other financial incentives to significantly lower the effective price of the Energy Servers to our customers in the U. S. and the Asia Pacific region. Our financing partners and Equity Investors in Bloom Electrons programs may also take advantage of these financial incentives, lowering the cost of capital and energy to our customers. However, these incentives or RPS 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.

For example, the previous federal ITC, a federal tax incentive for fuel cell production, expired on December 31, 2016. Without the availability of the ITC benefit incentive, we lowered the price of our Energy Servers to ensure the economics to our customers would remain the same as it was prior to losing the ITC benefit, adversely affecting our gross profit. While the ITC was reinstated by the U.S Congress on February 9, 2018 and made retroactive to January 1, 2017, under current law it will phase out on December 31, 2022, as noted below:

- the 30% ITC credit was reinstated retroactive to January 1, 2017;
- installations that commence construction before January 1, 2020 are eligible for a 30% credit;
- installations that commence construction in 2020 are eligible for a 26% credit;
- installations that commence construction in 2021 are eligible for a 22% credit; and
- installations have to be placed in service by January 1, 2024 or the installations become ineligible for the credit.

The ITC program has operational criteria that extend for five years. If the energy property is disposed 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. In the case of Energy Servers purchased by PPA Entities, the PPA Entities bear the risk of repayment if the assets placed in service do not meet the ITC operational criteria in the future.

As another example, the California Self Generation Incentive Program ("SGIP") is a program administered by the California Public Utilities Commission ("CPUC") which provides incentives to investor-owned utility customers that install eligible distributed energy resources. In July 2016, the CPUC modified the SGIP to provide a smaller allocation of the incentives available to generating technologies such as our Energy Servers and a larger allocation to storage technologies. As modified, the SGIP will require all eligible power generation sources consuming natural gas to use a minimum 50% biogas to receive SGIP funds in 2019 and 100% in 2020. In addition, the CPUC provided a further limitation on the available allocation of funds that any one participant may claim under the SGIP. The SGIP has been extended until January 1, 2026. Our customer sites accepted benefiting from the SGIP represented approximately 3% and 4% of total sites accepted for the years ended December 31, 2019 and 2018, respectively.

Changes in federal, state, or local programs or the RPS in the Asia Pacific region could reduce demand for our Energy Servers, impair sales financing, and adversely impact our business results. The continuation of these programs depends upon political support which to date has been bipartisan and durable. Nevertheless, one set of political activists aggressively seeks to eliminate these programs while another set seeks to deny access to these programs for any technology that relies on natural gas, regardless of the technology’s positive contribution to reducing air pollution, reducing carbon emissions or enabling electric service to be more reliable and resilient.

We rely on tax equity financing arrangements to realize the benefits provided by investment tax credits and accelerated tax depreciation and in the event these programs are terminated, our financial results could be harmed.

We expect that any Energy Server deployments through financed transactions (including our Bloom Electrons programs, our leasing programs and any Third-Party PPA Programs) will receive capital from financing parties ("Equity Investors") who derive a significant portion of their economic returns through tax benefits. 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, until the Equity Investors achieve their respective agreed rates of return. 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, lack of profitability and that we are only the 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 the continued availability of tax benefits applicable to our Energy Servers. In addition, conditions in the general economy and financial and credit markets may result in the contraction of available tax equity financing. If we are unable to enter into tax equity financing agreements with attractive pricing terms, or at all, we may not be able to obtain the capital needed to fund our financing programs or use the tax benefits provided by the ITC and MACRS depreciation, which could make it more difficult for customers to finance the purchase of our Energy Servers. Such circumstances could also require us to reduce the price at which we are able to sell our Energy Servers and therefore harm our business, our financial condition, and our results of operations.

Risks Related to Legal Matters and Regulations

We are subject to various environmental laws and regulations that could impose substantial costs upon us and cause delays in the delivery and installation of our Energy Servers.

We are subject to national, state, and local environmental laws and regulations as well as environmental laws in those foreign jurisdictions in which we operate. Environmental laws and regulations can be complex and may often change. 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, ensuring we are in compliance with applicable environmental laws requires significant time and management resources and could cause delays in our ability to build out, equip and operate our facilities as well as service our fleet, which would adversely impact our business, our prospects, our financial condition, and our operating results. In addition, environmental laws and regulations such as the Comprehensive Environmental Response, Compensation and Liability Act in the United States impose liability on several grounds including for the investigation and cleanup of contaminated soil and ground water, for building contamination, for impacts to human health and for damages to natural resources. If contamination is discovered in the future at properties formerly owned or operated by us or currently 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 Energy Servers have high sustainability standards, and any environmental noncompliance by us could harm our reputation and impact a current or potential customer’s buying decision. Additionally, in many cases we contractually commit to performing all necessary installation work on a fixed-price basis, and unanticipated costs associated with environmental remediation and/or compliance expenses may cause the cost of performing such work to exceed our revenue. The costs of complying with environmental laws, regulations, and customer requirements, and any claims concerning noncompliance or liability with respect to contamination in the future, could have a material adverse effect on our financial condition or our operating results.

The installation and operation of our Energy Servers are subject to environmental laws and regulations in various jurisdictions, and there is uncertainty with respect to the interpretation of certain environmental laws and regulations to our Energy Servers, especially as these regulations evolve over time.

Bloom is committed to compliance with applicable environmental laws and regulations including health and safety standards, and we continually review the operation of our Energy Servers 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 ensure that these are handled in accordance with applicable regulatory standards.

Maintaining compliance with laws and regulations can be challenging given the changing patchwork of environmental laws and regulations that prevail at the federal, state, regional, and local level. 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). Currently, there is generally little guidance from these agencies on how certain environmental laws and regulations may or may not be applied to our technology.

For example, natural gas, which is 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 of benzene found in the public natural gas supply (equivalent to what is present in one gallon of gasoline in an automobile fuel tank which are exempt from federal regulation) is collected by the gas cleaning units contained in our Energy Servers which are typically replaced once every 18 to 24 months by us from customers’ sites. 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 of such units without manifesting the contents as containing a hazardous waste. Although over the years and with the approval of two states, we believed that we operated 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. 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. However, the EPA has asked us to show cause why it should not collect approximately $1.0 million in fines from us for the prior period, which we are contesting. Additionally, we paid a nominal fine to an agency in a different state under that state’s environmental laws relating to the operation of our Energy Server under the exemption prior to the issuance of the revised EPA guidance.

Another example relates to the very small amounts of chromium in hexavalent form ("CR+6") which our Energy Servers emit at nanometer scale. This occurs any time a steel super alloy is exposed to high temperatures. CR+6 is found in small concentrations in the air generally. However, exposure to high or significant concentrations over prolonged periods of time can be carcinogenic. While the small amount of chromium emitted by our Energy Servers is initially in the hexavalent form, it converts to a non-toxic trivalent form, or CR+3, rapidly after it leaves the Energy Server. In tests we have conducted, air measurements taken 10 meters from an Energy Server show that the CR+6 is largely converted.

Our Energy Servers do not present any significant health hazard based on our modeling, testing methodology, and measurements. There are several supporting elements to this position including that the emissions from our Energy Servers are in very low concentrations, are emitted as nano-particles that convert to the non-hazardous form CR+3 rapidly, are quickly dispersed into the air, and are not emitted in close proximity to locations where people would be expected to have a prolonged exposure. Nevertheless, we have engineered a technology solution that we are deploying.

Several states in which we currently operate, including California, require permits for emissions of hazardous air pollutants based on the quantity of emissions, most of which require permits only for quantities of emissions that are higher than those observed from our Energy Servers. Other states in which we operate, including New York, New Jersey, and North Carolina, have specific exemptions for fuel cells. Some states in which we operate have CR+6 limits which are an order of magnitude over our operating range. Within California, the Bay Area Air Quality Management District ("BAAQMD") requires a permit for emissions that are more than 0.00051 lbs/year. Other California regulations require that levels of CR+6 be below 0.00005 $\mu g/m^3$, which is the level required by Proposition 65 and which requires notification of the presence of CR+6 unless it can be shown to be at levels that do not pose a significant health risk. We have determined that the standards applicable in California in this regard are more stringent than those in any other state or foreign location in which we have installed Energy Servers to date, therefore, deployment of our solution has been focused on California's standards.

There are generally no relevant environmental testing methodology guidelines for a technology such as ours. The standard test method for analyzing emissions cannot be readily applied to our Energy Servers because it would require inserting a probe into an emission stack. Our servers do not have emission stacks; therefore, we have to construct an artificial stack on top of our server in order to conduct a test. If we used the testing methodology similar to what the air districts have used in other large scale industrial products, it would show that we would need to reduce the emissions of CR+6 from our Energy Servers to meet the most stringent requirements. However, we employed a modified test method that is designed to capture the actual operating conditions of our Energy Servers and its distinctly different design from legacy power plants and industrial equipment. Based on our modeling, measured results and analysis, we believe we are in compliance with State of California air regulations. However, it is possible that the California Air Districts will require us to abate or shut down the operations of certain of our existing Energy Servers on a temporary basis or will seek the imposition of monetary penalties.

While we seek to comply with air quality and emission standards in every region in which we operate, it is possible that certain customers in other regions may request that we provide the new technology solution for their Energy Servers to comply with the stricter standards imposed by California even though they are not applicable and even though we are under no contractual obligation to do so. We plan to satisfy these requests from customers. Failure or delay in attaining regulatory approval could result in our not being able to operate in a particular local jurisdiction.

These examples illustrate that our technology is moving faster than the regulatory process in many instances. 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 Energy Servers, 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 their Energy Servers, any of which could adversely affect our business, our financial performance, and our reputation. In addition, new 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.

Furthermore, we have not yet determined whether our Energy Servers will satisfy regulatory requirements in the other states in the U.S. and in international locations in which we do not currently sell Energy Servers but may pursue in the future.

As a fossil fuel-based technology, 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.

Although the current generation of Energy Servers running on natural gas produce nearly 50% less carbon emissions compared to the average of U.S. combustion power generation, the operation of our Energy Servers does produce carbon dioxide ("CO2"), which has been shown to be a contributing factor to global climate change. As such, we may be negatively impacted by CO2-related changes in applicable laws, regulations, ordinances, rules, or the requirements of the incentive programs on which we and our customers currently rely. Changes (or a lack of change to comprehensively recognize the risks of climate change and recognize 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 illegal 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 customers, or we could be prohibited from completing new installations or continuing to operate existing projects. Certain municipalities in California have already banned the use of distributed generation products that utilize fossil fuel. Additionally, our customers' and potential customers' energy procurement policies may prohibit or limit their willingness to procure our 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.

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 or affect the financial performance of current sites.

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

In addition, 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 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 Bloom 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. A citizen-antagonist continues to oppose the Delaware Project and seeks support from Delaware officials and others. In 2018, he unsuccessfully petitioned the Delaware Public Service Commission. Most recently, he unsuccessfully appealed a favorable Order of the Secretary of Delaware's Department of Natural Resources and Environmental Control to Delaware's Environmental Appeals Board (EAB), an administrative entity with authority to review the Secretary's Orders. The Secretary's Order at issue approved permits that enable the upgrade of the Delaware Project. As we expected, the EAB upheld the Secretary's Order as the appeal was without merit and raised issues that were outside the scope of the permits and beyond the jurisdiction of the EAB. The Appeal and the opposition to the Delaware Project are examples of potentially material risks associated with electric power regulation.

At the federal level, 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 our PPA Entities 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.

Although we generally are not regulated as a utility, federal, state, and local government statutes and regulations concerning electricity heavily influence the market for our product and services. These statutes and regulations often relate to electricity pricing, net metering, incentives, taxation, and the rules surrounding the interconnection of customer-owned electricity generation for specific technologies. In the United States, governments frequently modify these statutes and regulations. Governments, often acting through state utility or public service commissions, change and adopt different requirements for utilities and rates for commercial customers on a regular basis. Changes, or in some cases a lack of change, in any of the laws, regulations, 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 Energy Servers on particular sites and, in turn, could negatively affect our ability to deliver cost savings to customers for the purchase of electricity.

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 use flammable fuels and may operate at 480 volts. Although our Energy Servers are certified to meet ANSI, IEEE, ASME, and NFPA design and safety standards, if an Energy Server is not properly handled in accordance with our servicing and handling standards and protocols, there could be a system failure and resulting liability. 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 our Company and our Energy Servers, which could harm our brand, our business prospects, and our operating results. While we maintain product liability insurance, our 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.

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 Item 3 in this Annual Report on Form 10-K captioned "Legal Proceedings" and footnote 14 to our consolidated financial statements entitled "Commitments and Contingencies." In addition, since our Energy Server is a new type of product in a nascent market, we have in the past needed and may in the future need to seek 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 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 Relating to Our Intellectual Property

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

Although we have taken many protective measures to protect our trade secrets including agreements, limited access, segregation of knowledge, password protections, and other measures, policing unauthorized use of proprietary technology can be difficult and expensive. For example, many of our engineers reside in California where it is not legally permissible to prevent them from working for a competitor if and when one should exist. Also, litigation may be necessary to enforce our intellectual property rights, 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 reputation.

We rely primarily on patent, trade secret, and trademark laws 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 laws and agreements afford us only limited protection and the actions we take to establish, maintain, and enforce our intellectual property rights may not be adequate. For example, our trade secrets and other confidential information could be disclosed in an unauthorized manner to third parties, our owned or licensed intellectual property rights could be challenged, invalidated, circumvented, infringed, or misappropriated or our intellectual property rights may not be sufficient to provide us with a competitive advantage, any of which could have a material adverse effect on our business, financial condition, or operating results. In addition, the laws of some countries do not protect proprietary rights as fully as do the laws of the United States. As a result, we may not be able to protect our proprietary rights adequately abroad.

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.

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. 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, 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 in the United States.

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. Although we are not currently subject to any claims related to intellectual property, 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 and by seeking licenses or injunctions. Several of the proprietary components used in our Energy Servers have been subjected to infringement challenges in the past. We also generally indemnify our customers against claims that the products we supply infringe, misappropriate, or otherwise violate 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 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.

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 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 to indemnification or our suppliers' resources may be unavailable or insufficient to cover our costs and losses.

Risks Relating 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.

Since our inception in 2001, we have incurred significant net losses and have used significant cash in our business. As of December 31, 2019, we had an accumulated deficit of $2.9 billion. We expect to continue to expand our operations, including by investing in manufacturing, sales and marketing, research and development, staffing systems, and infrastructure to support our growth. We anticipate that we will incur net losses for the foreseeable future. Our ability to achieve profitability in the future will depend on a number of factors, including:

- growing our sales volume;
- increasing sales to existing customers and attracting new customers;
- expanding into new geographical markets and industry market sectors;
- attracting and retaining financing partners who are willing to provide financing for sales on a timely basis and with attractive terms;
- continuing to improve the useful life of our fuel cell technology and reducing our warranty servicing costs;
- reducing the cost of producing our Energy Servers;
- improving the efficiency and predictability of our installation process;
- improving the effectiveness of our sales and marketing activities;
- attracting and retaining key talent in a competitive marketplace; and
- the amount of stock-based compensation recognized in the period.

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 Energy Servers 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 our financial condition and results of operations to fluctuate on a quarterly basis:

- the timing of installations, which may depend on many factors such as availability of inventory, product quality or performance issues, or local permitting requirements, utility requirements, environmental, health, and safety requirements, weather, and customer facility construction schedules;
- size of particular installations and number of sites involved in any particular quarter;
- the mix in the type 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;
- 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 at acceptance;
- delays or cancellations of Energy Server installations;
- fluctuations in our service costs, particularly due to unexpected costs of servicing and maintaining Energy Servers;
- weaker than anticipated demand for our Energy Servers due to changes in government incentives and policies or due to other conditions;
- 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;
- interruptions in our supply chain;
- the length of the sales and installation cycle for a particular customer;
- the timing and level of additional purchases by existing customers;
- 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 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 to 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. If we experience a significant growth in orders without improvements in automation and efficiency, we may need additional manufacturing capacity and we and some of our suppliers may need additional and 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 Energy Servers 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.

The accounting treatment related to our revenue-generating transactions is complex, and if we are unable to attract and retain highly qualified accounting personnel to evaluate the accounting implications of our complex or non-routine transactions, our ability to accurately report our financial results may be harmed.

Our revenue-generating transactions include traditional leases, Managed Services Agreements, sales to international channel partners and PPA transactions, all of which are accounted for differently in our financial statements. 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 thereto. Competition for senior finance and accounting personnel in the San Francisco Bay Area who have public company reporting experience is intense, 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.

We reached a determination to restate certain of our previously issued consolidated financial statements as a result of the identification of material misstatements in previously issued financial statements, which resulted in unanticipated costs and may affect investor confidence and raise reputational issues.

As discussed in the Explanatory Note, in Note 2, *Restatement and Revision of Previously Issued Financial Statements,* and in Note 18, *Unaudited Selected Quarterly Financial Data,* in this Annual Report on Form 10-K for the year ended December 31, 2019, we reached a determination to restate our consolidated financial statements and related disclosures for the periods disclosed in those notes after misstatements in our accounting treatment of some of our complex or non-routine transactions were identified. The restatement also included corrections for previously identified immaterial uncorrected misstatements in the impacted periods. As a result, we have incurred unanticipated costs for accounting and legal fees in connection with or related to the restatement, and have become subject to a number of additional risks and uncertainties, which may affect investor confidence in the accuracy of our financial disclosures and may raise reputational risks for our business, both of which could harm our business and financial results.

We recently identified a material weakness in our internal control over financial reporting related to the accounting for complex or non-routine transactions. If we do not effectively remediate the material weakness or if we otherwise fail to maintain effective internal control over financial reporting, our ability to report our financial results on a timely and an accurate basis may adversely affect the market price of our Class A common stock.

The Sarbanes-Oxley Act of 2002 ("Sarbanes-Oxley Act") requires, among other things, that public companies evaluate the effectiveness of their internal control over financial reporting and disclosure controls and procedures. As a recently public company and as an emerging growth company, we elected to delay adopting the requirements of the Sarbanes-Oxley Act as is our option under the Sarbanes-Oxley Act. While we have not yet adopted the requirements under Section 404B of the Sarbanes-Oxley Act, we did identify a material weakness in internal control over financial reporting at December 31, 2019, as we did not design and maintain an effective control environment with a sufficient complement of resources with an appropriate level of accounting knowledge, expertise and training to evaluate the accounting implications of complex or non-routine transactions commensurate with our financial reporting requirements. Please see Item 9A, *Controls and Procedures,* in this Annual Report on Form 10-K for additional information regarding the identified material weakness and our actions to date to remediate the material weakness. Subsequent testing by us or our independent registered public accounting firm, which has not yet performed an audit of our internal control over financial reporting, may reveal additional deficiencies in our internal control over financial reporting that are deemed to be material weaknesses.

To comply with Section 404B, we may incur substantial costs, expend significant management time on compliance-related issues, and hire additional accounting, financial, and internal audit staff with appropriate public company experience and technical accounting knowledge. Moreover, if we are not able to comply with the requirements of Section 404B in a timely manner or if we or our independent registered public accounting firm identify deficiencies in our internal control over financial reporting that are deemed to be material weaknesses, we could be subject to sanctions or investigations by the SEC or other regulatory authorities, which would require additional financial and management resources. 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. For further discussion on Section 404 compliance, see our Risk Factor: "*We are an 'emerging growth company' and we cannot be certain if the reduced disclosure requirements applicable to emerging growth companies will make our Class A common stock less attractive to investors and may make it more difficult to compare our performance with other public companies*."

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 net operating loss carryforwards that we can use in the future to offset taxable income for U.S. federal and state income tax purposes. Our net operating loss carryforwards ("NOLs") will expire, if unused, beginning in 2022 and 2028, respectively. 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 in our stock ownership as well as other 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 Relating to Our Liquidity

We must maintain customer confidence in our liquidity, including in our ability to timely service our debt obligations, and long-term business prospects in order to grow our business.

Currently, we are the only provider able to fully support and maintain our Energy Servers. 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 their Energy Servers 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;
- unfamiliarity with or uncertainty about our Energy Servers and the overall perception of the distributed generation market;
- prices for electricity or natural gas in particular markets;
- 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 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.

As of December 31, 2019, we and our subsidiaries had approximately $636.8 million of total consolidated indebtedness, of which an aggregate of $401.4 million represented indebtedness that is recourse to us, of which $325.4 million is classified as current and $76.0 million is classified as non-current. Of this $401.4 million debt, $273.4 million represented debt under our 6% Notes, $90.0 million represented debt under our 10% Notes, and $36.5 million represented debt under our 5% Notes. In addition, our PPA Entities' outstanding indebtedness of $235.4 million represented indebtedness that is non-recourse to us. 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 guaranties;
- 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;
- 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 debt agreements and 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 and 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 events such as a change in control of our Company, significant asset sales or mergers or similar transactions, the liquidation or dissolution of our Company or the cessation of our stock exchange listing, holders of our 6% Notes have the right to cause us to repurchase for cash any or all of such outstanding notes at a repurchase price in cash equal to 100% of the principal amount thereof, plus accrued and unpaid interest thereon. We cannot provide assurance that we would have sufficient liquidity to repurchase such notes. Furthermore, our financing and debt agreements, such as our 6% Notes and our 10% Notes, 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. If we were unable to repay those amounts, lenders could proceed against the collateral granted to them to secure repayment of those amounts. We cannot assure you that the collateral will be sufficient to repay in full those amounts. 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.

As of December 31, 2019, we and our subsidiaries have approximately $636.8 million of total consolidated indebtedness, including $337.6 million in short-term debt and $299.2 million in long-term debt. In addition, our 10% Notes contain restrictions on our ability to issue additional debt and both the 6% Notes and 10% Notes limit our ability to provide collateral for any additional debt. Given our current level of indebtedness, the restrictions on additional indebtedness contained in the 10% Notes and the fact that most of our assets serve as collateral to secure existing debt, it may be difficult for us to secure additional debt financing at an attractive cost, which may in turn impact our ability to expand our operations and our product development activities and to remain competitive in the market.

In addition, our substantial level of indebtedness could limit our ability to obtain required additional financing on acceptable terms or at all for working capital, capital expenditures, and general corporate purposes. Any of these risks could impact our ability to fund our operations or limit our ability to expand our business, which could have a material adverse effect on our business, our financial condition, our liquidity, and our results of operations. 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.

We may not be able to generate sufficient cash to meet our debt service obligations.

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

We finance a significant volume of Energy Servers and receive equity distributions from certain of the PPA Entities that purchase the Energy Servers and other project intangibles through a series of milestone payments. The milestone payments and equity distributions contribute to our cash flow. These PPA Entities are separate and distinct legal entities, do not guarantee our debt obligations, and have no obligation, contingent or otherwise, to pay amounts due under our debt obligations or to make any funds available to pay those amounts, whether by dividend, distribution, loan, or other payments. It is possible that the PPA Entities may not contribute significant cash to us.

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 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 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. 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.

Certain of our outstanding convertible debt securities may be required to be settled in cash, which could have a material effect on our financial position.

Certain listing standards of The New York Stock Exchange limit the number of shares we may deliver upon conversion of our outstanding convertible notes that we amended in March of 2020 unless we first obtain the approval of our stockholders to issue shares in excess of that amount. We may never obtain such stockholder approval. To comply with these listing standards, the number of shares that we may issue upon conversion of our outstanding convertible notes will be limited to an amount that does not exceed these limitations, until we have obtained stockholder approval to issue additional shares. Any shares that would otherwise have been deliverable upon conversion in the absence of this limitation will instead be settled in cash based on the applicable daily conversion values during the relevant period. We may not have the funds available to settle such conversions in cash. Our inability to settle such conversions in cash by the required conversion date would be a default under the agreements that govern our convertible notes.

Under some circumstances, we may be required to or elect to make additional payments to our PPA Entities or the Power Purchase Agreement Program Equity Investors.

Three of our PPA Entities are 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. All of our PPA Entities that operate Energy Servers for end customers have significant restrictions on their 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 PPAs or if Energy Servers are not deployed in accordance with the project's schedule. In three cases, if our PPA Entities experience 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 their PPAs, there could be insufficient cash generated from the project to meet the debt service obligations of the PPA Entity or to meet any targeted rates of return of Equity Investors. If a PPA Entity 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 Entity. To avoid this, we could choose to contribute additional capital to the applicable PPA Entity to enable such PPA Entity to make payments to avoid an event of default, which could adversely affect our business or our financial condition. Under PPA Company IV's note purchase agreement, PPA Company IV is obligated to offer to repay all outstanding debt in the event that at any time we fail to own (directly or indirectly) at least 50.1% of the equity interest of PPA Company IV not owned by the Equity Investor(s). Upon receipt of such offer, the lenders may waive that obligation or elect to require PPA Company IV to prepay all remaining amounts owed under PPA Company IV's project debt. The obligations under PPA Company IV have not been triggered as of December 31, 2019.

Risks Relating to Our Operations

We may have conflicts of interest with our PPA Entities.

In most of our PPA Entities, we act as the managing member and are responsible for the day-to-day administration of the project. However, we are also a major service provider for each PPA Entity in our capacity as the operator of the Energy Servers under an operations and maintenance agreement. Because we are both the administrator and the manager of our PPA Entities, as well as a major service provider, we face a potential conflict of interest in that we may be obligated to enforce contractual rights that a PPA Entity has against us in our capacity as a service provider. By way of example, the PPA Entity may have a right to payment from us under a warranty provided under the applicable operations and maintenance agreement, and we may be financially motivated to avoid or delay this liability by failing to promptly enforce this right on behalf of the PPA Entity. While we do not believe that we had any conflicts of interest with our PPA Entities as of December 31, 2019, conflicts of interest may arise in the future which cannot be foreseen at this time. In the event that prospective future Equity Investors and debt financing partners perceive there to exist any such conflicts, it could harm our ability to procure financing for our PPA Entities in the future, which could have a material adverse effect on our business.

If we are unable to attract and retain key employees and hire qualified management, technical, engineering, 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, 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 Chairman and President and Chief Executive Officer, and other key employees. None of our key employees is bound by an employment agreement for any specific term. In addition, Randy Furr, our Chief Financial Officer, has announced his intention to retire effective March 31, 2020 and we have identified his successor who is expected to join us on April 1, 2020. We cannot assure you that we will be able to successfully attract and retain senior leadership necessary to grow our business. Furthermore, there is increasing competition for talented individuals in our field, and competition for qualified personnel is especially intense 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, and sales personnel could adversely impact our business, our prospects, our financial condition, and our operating results. In addition, we do not have "key person" life insurance policies covering any of our officers or other key employees.

A breach or failure of our networks or computer or data management systems could damage our operations and our reputation.

Our business is dependent on the security and efficacy of our networks and computer and data management systems. For example, all of our Energy Servers are connected to and controlled and monitored by our centralized remote monitoring service, and we rely on our internal computer networks for many of the systems we use to operate our business generally. Although we take protective measures and endeavor to modify them as circumstances warrant, the security of our infrastructure, including the network that connects our Energy Servers to our remote monitoring service, may be vulnerable to breaches, unauthorized access, misuse, computer viruses, or other malicious code and cyber-attacks that could have a material adverse impact on our business and our Energy Servers in the field. A breach or failure of our networks or computer or data management systems due to intentional actions such as cyber-attacks, negligence, or other reasons could seriously disrupt our operations or could affect our ability to control or to assess the performance in the field of our Energy Servers and could result in disruption to our business and potentially legal liability. In addition, if certain of our IT systems failed, our production line might be affected, which could impact our business and operating results. These events, in addition to impacting our financial results, could result in significant costs or reputational consequences.

Our headquarters and other facilities are located in an active earthquake zone, and an earthquake or other types of natural disasters or resource shortages, including public safety power shut-offs that have occurred and will continue to occur in California, could disrupt and harm our results of operations.

We conduct a majority of our operations in the San Francisco Bay area in an active earthquake zone, and certain of our facilities are located within known flood plains. The occurrence of a natural disaster such as an earthquake, drought, 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 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. The insurance we maintain against fires, earthquakes and other natural disasters may not be adequate to cover our losses in any particular case.

Expanding operations internationally could expose us to additional risks.

Although we currently primarily operate in the United States, we will seek to expand our business internationally. We currently have operations in Japan, China, India, and the Republic of Korea (collectively, our "Asia Pacific region"). Managing any international expansion will require additional resources and controls including additional manufacturing and assembly facilities. Any expansion internationally could subject our business to risks associated with international operations, including:

- conformity with applicable business customs, including translation into foreign languages and associated expenses;
- lack of availability of government incentives and subsidies;
- challenges in arranging, and availability of, financing for our customers;
- potential changes to our established business model;
- cost of alternative power sources, which could be meaningfully lower outside the United States;
- availability and cost of natural gas;
- difficulties in staffing and managing foreign operations in an environment of diverse culture, laws, and customers, and the increased travel, infrastructure, and legal and compliance costs associated with international operations;
- installation challenges which we have not encountered before which may require the development of a unique model for each country;
- compliance with multiple, potentially conflicting and changing governmental laws, regulations, and permitting processes including environmental, banking, employment, tax, privacy, and data protection laws and regulations such as the EU Data Privacy Directive;
- compliance with U.S. and foreign anti-bribery laws including the Foreign Corrupt Practices Act and the U.K. Anti-Bribery Act;
- difficulties in collecting payments in foreign currencies and associated foreign currency exposure;
- restrictions on repatriation of earnings;
- compliance with potentially conflicting and changing laws of taxing jurisdictions where we conduct business and compliance with applicable U.S. tax laws as they relate to international operations, the complexity and adverse consequences of such tax laws, and potentially adverse tax consequences due to changes in such tax laws; and
- regional economic and political conditions.

As a result of these risks, any potential future international expansion efforts that we may undertake may not be successful.

We are an "emerging growth company" and we cannot be certain if the reduced disclosure requirements applicable to emerging growth companies will make our Class A common stock less attractive to investors and may make it more difficult to compare our performance with other public companies.

We are an emerging growth company ("EGC") as defined in the U.S. legislation Jumpstart Our Business Startups Act of 2012 (the "JOBS Act"), and we intend to take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not EGC, including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. We may take advantage of these exemptions for so long as we are an EGC, which could be until December 31, 2023, the last day of the fiscal year following the fifth anniversary of our IPO. We cannot predict if investors will find our Class A common stock less attractive because we rely on these exemptions. If some investors find our Class A common stock less attractive as a result, there may be a less active trading market for our Class A common stock, and our stock price may be more volatile.

An EGC may elect to provide financial statements in conformance with the U.S. GAAP requirement for transition periods to comply with new or revised accounting standards. With our not making this election, Section 102(b)(2) of the JOBS Act allows us to delay our adoption of new or revised accounting standards until those standards apply to private companies. As a result, our financial statements may not be comparable to companies that comply with public company revised accounting standards effective dates.

Risks Relating 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 factors, 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;
- failure of securities analysts to initiate or maintain coverage of us, changes in financial estimates by any securities analysts who follow our Company or our failure to meet these estimates or the expectations of investors;
- the issuance of reports from short sellers that may negatively impact the trading price of our Class A common stock;
- recruitment or departure of key personnel;
- the economy as a whole and market conditions in our industry;
- 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;
- announcements by us or our competitors of significant technical innovations, acquisitions, strategic partnerships, or capital commitments;
- lawsuits threatened or filed against us;
- other events or factors including those resulting from war, incidents of terrorism or responses to these events;
- the expiration of contractual lock-up or market standoff agreements; and
- sales or anticipated sales of shares of our Class A common stock by us or our stockholders.

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.

Sales of substantial amounts of our Class A common stock in the public markets, or the perception that they might occur, could cause the market price of our Class A common stock to decline.

The market price of our Class A common stock could decline as a result of sales of a large number of shares of our Class A common stock in the public market as and when our Class B common stock converts to Class A common stock. The perception that these sales might occur may also cause the market price of our common stock to decline. We had a total of 84,549,511 shares of our Class A common stock and 36,486,778 shares of our Class B common stock outstanding as of

December 31, 2019. The lock up for our Class B shares expired on January 21, 2019 and these shares are now freely tradeable once converted into Class A shares, except for any shares purchased by our "affiliates" as defined in Rule 144 under the Securities Act of 1933, as amended ("Securities Act").

Further, as of December 31, 2019, we had an aggregate of $289.3 million in convertible debt, our 6% Notes, under which the outstanding principal and interest may be converted, at the option of the holders, into an aggregate of 25,715,496 shares of Class B common stock. Upon conversion into Class A common stock, these shares are freely tradeable, except to the extent these shares are held by our "affiliates" as defined in Rule 144 under the Securities Act.

In addition, as of December 31, 2019, we had options and RSUs outstanding that, if fully exercised or settled, would result in the issuance of 9,454,578 shares of Class A common stock and 18,495,004 shares of Class B common stock. We have filed a registration statement on Form S-8 to register shares reserved for future issuance under our equity compensation plans. Subject to the satisfaction of applicable vesting requirements, the shares issued upon exercise of outstanding stock options or settlement of outstanding RSUs will be available for immediate resale in the United States in the open market.

Moreover, certain holders of our common stock have rights, subject to some conditions, to require us to file registration statements for the public resale of such shares or to include such shares in registration statements that we may file for us or other stockholders.

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 IPO including our directors, executive officers and significant stockholders, which limits or precludes your ability to influence corporate matters including the election of directors and the approval of any change of control transaction, 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, 2019, 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 a substantial majority 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 control a majority of the combined voting power of our common stock and therefore are able to control 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 conversion of the 6% Convertible Promissory Note could result in a significant stockholder with substantial voting control.

The holders of the 6% Convertible Promissory Notes have the option to convert the outstanding principal and interest under the 6% Convertible Promissory Note to Class B common stock at a conversion price of $11.25 per share at any time after the IPO and prior to maturity of the 6% Convertible Promissory Note in December 2020. As of December 31, 2019, an aggregate of 21,321,100 shares of Class B common stock is issuable to the Canada Pension Plan Investment Board ("CPPIB") upon the conversion of the outstanding principal and interest under the 6% Convertible Promissory Note. This, along with 312,575 shares of Class B common stock which CPPIB acquired from the exercise of a warrant at IPO, would result, as of December 31, 2019, in CPPIB having approximately 32.50% of the total voting power with respect to all shares of our Class A common stock (which has one vote per share) and Class B common stock (which has ten votes per share), voting as a single class, and would provide CPPIB significant influence over matters presented to the stockholders for approval and may result in voting decisions by CPPIB that are not in the best interests of our stockholders generally.

The dual class structure of our common stock may adversely affect the trading market for our Class A common stock.

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 may cause 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.

If securities or industry analysts do not publish research or publish inaccurate or unfavorable research about our business, the market price of our Class A common stock and trading volume could decline.

The market price for our Class A common stock depends in part on the research and reports that securities or industry analysts publish about us or our business. If industry analysts cease coverage of us, the trading price for our Class A common stock would be negatively affected. In addition, if one or more of the analysts who cover us downgrade our Class A common stock or publish inaccurate or unfavorable research about our business, our Class A common stock price would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, demand for our Class A common stock could decrease, which might cause our Class A common stock price and trading volume to decline. In addition, certain short sellers of our Class A common stock have published reports that we believe have negatively impacted the trading price 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 our Company 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, 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;
- 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 stockholder rights plan;
- only the chairman of our board of directors, our chief executive officer, or a majority of our board of directors are authorized 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;

- 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 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 of America 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.

ITEM 1B - UNRESOLVED STAFF COMMENTS

None.

ITEM 2 - PROPERTIES

The table below presents details for each of our principal properties[3]:

Facility	Location	Approximate Square Footage	Held	Lease Term
Corporate headquarters[1]	San Jose, CA	181,000	Leased	2028
Manufacturing	Sunnyvale, CA	192.975	Leased	2020
Manufacturing	Mountain View, CA	88,290	Leased	*
Manufacturing	Newark, DE	148,809	Leased	**
Manufacturing[2]	Newark, DE	75,609	Owned	n/a

* Month to month arrangement.

** Lease terms expire over the period December 2021 through December 2026.

[1] Our corporate headquarters is used for administration, research and development, and sales and marketing.

[2] 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.

[3] We lease additional office space as field offices in the United States and office and manufacturing space around the world including in India, the Republic of Korea, China and Taiwan.

We believe our office space and our manufacturing facilities are adequate to support our business for at least the next twelve months.

ITEM 3 - LEGAL PROCEEDINGS

For a discussion of legal proceedings, see "Legal Matters" under Note 14 - *Commitments and Contingencies*, in the notes to our consolidated financial statements.

We are, and from time to time we may become, involved in legal proceedings or be subject to claims arising in the ordinary course of our business. 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.

ITEM 5 - MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASE 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 March 16, 2020, there were 637 registered holders of record of our Class A common stock and 363 registered holders of record of our Class B common stock, and the closing price of our Class A common stock was $5.31 per share as reported on the NYSE.

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.

For information about our stock-based compensation plans, see Note 12 - *Stock-Based Compensation and Employee Benefit Plans* of the financial statements contained in this Annual Report on Form 10-K.

ITEM 6 - SELECTED CONSOLIDATED FINANCIAL DATA

We derived the selected consolidated statements of operations data for 2019, 2018 and 2017 and the selected consolidated balance sheet data as of December 31, 2019 and 2018 from our audited consolidated financial statements included in this Annual Report on Form 10-K. Our historical results are not necessarily indicative of the results that may be expected in the future. You should read this data together with Item 7 - *Management's Discussion and Analysis of Financial Condition and Results of Operations* and Item 8 - *Financial Statements* and Supplementary Data included in this Annual Report on Form 10-K. The selected consolidated financial data in this section are not intended to replace the consolidated financial statements and are qualified in their entirety by the consolidated financial statements and related notes included in this Annual Report on Form 10-K.

The Selected Consolidated Financial Statements Data as of and for the year ended December 31, 2018 have been restated, and as of and for the years ended December 31, 2017 and 2016 have been revised for the correction of misstatements described in Note 2, *Restatement and Revision of Previously Issued Consolidated Financial Statements* in Item 8, *Financial Statements and Supplementary Data*. This information should be read in conjunction with the "*Explanatory Note*" immediately preceding Item 1 of this Annual Report on Form 10-K, and with Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations.*

Selected data from our consolidated statements of operations[1] for the years ended December 31, 2019, 2018, 2017 and 2016 are as follows:

	Years Ended December 31,			
	2019 [1]	2018	2017	2016
		As Restated[2]	As Revised[2]	
	(in thousands, except per share amounts)			
Total revenue	$ 785,177	$ 632,648	$ 365,623	$ 206,391
Total cost of revenue	687,590	526,898	381,934	309,025
Gross profit (loss)	97,587	105,750	(16,311)	(102,634)
Operating expenses:				
Research and development	104,168	89,135	51,146	46,849
Sales and marketing	73,573	62,807	31,926	28,547
General and administrative	152,650	118,817	55,689	61,544
Total operating expenses	330,391	270,759	138,761	136,940
Loss from operations	$ (232,804)	$ (165,009)	$ (155,072)	$ (239,574)
Net loss attributable to Class A and Class B common stockholders	$ (304,414)	$ (273,540)	$ (276,362)	$ (285,843)
less: deemed dividend to noncontrolling interest	(2,454)	—	—	—
Net loss available to Class A and Class B common stockholders	$ (306,868)	$ (273,540)	$ (276,362)	$ (285,843)
Net loss per share available to Class A and Class B common stockholders, basic and diluted	$ (2.67)	$ (5.14)	$ (26.97)	$ (28.45)

[1] We adopted ASC 606 in the year ended December 31, 2019 using the modified retrospective method. As a policy election, Topic ASC 606 was applied only to contracts that were not substantially completed as of the date of adoption. We recognized the cumulative effect of initially applying ASC 606 as an adjustment to the January 1, 2019 opening balance of accumulated deficit. The prior period consolidated financial statements have not been retrospectively adjusted and continue to be reported under the accounting standards in effect for those periods. See Note 1, *Nature of Business, Liquidity, Basis of Presentation and Summary of Significant Accounting Policies,* in Item 8, *Financial Statements and Supplementary Data*, for additional information.

[2] We have restated previously disclosed consolidated financial data for the year ended December 31, 2018 and have revised previously disclosed consolidated financial data for the years ended December 31, 2017 and 2016 to correct misstatements principally related to managed services contracts with customers contracts and related arrangements, as well as other misstatements. See Note 2, *Restatement and Revision of Previously Issued Consolidated Financial Statements*, in Item 8, *Financial Statements and Supplementary Data*, for additional information.

Selected data from our consolidated balance sheets[1] as of December 31, 2019, 2018, 2017 and 2016 are as follows:

	December 31,			
	2019 [1]	2018	2017	2016
		As Restated[2]	As Revised[2]	
	(in thousands)			
Cash and cash equivalents	$ 202,823	$ 220,728	$ 103,828	$ 156,577
Working capital (deficit)	(101,256)	406,632	143,240	111,824
Total assets	1,322,591	1,521,794	1,248,813	1,214,336
Long-term portion of debt	299,229	711,433	921,205	773,346
Total liabilities	1,490,451	1,482,033	1,769,367	1,479,602
Convertible redeemable preferred stock [3]	—	—	1,465,841	1,465,841
Redeemable noncontrolling interest and noncontrolling interest	91,734	182,371	213,526	234,988
Stockholders' deficit	(259,594)	(142,610)	(2,199,921)	(1,966,095)

[1] We adopted ASC 606 in the year ended December 31, 2019 using the modified retrospective method. As a policy election, Topic ASC 606 was applied only to contracts that were not substantially completed as of the date of adoption. We recognized the cumulative effect of initially applying ASC 606 as an adjustment to the January 1, 2019 opening balance of accumulated deficit. The prior period consolidated financial statements have not been retrospectively adjusted and continue to be reported under the accounting standards in effect for those periods. See Note 1, *Nature of Business, Liquidity, Basis of Presentation and Summary of Significant Accounting Policies,* in Item 8, *Financial Statements and Supplementary Data*, for additional information.

[2] We have restated previously disclosed consolidated financial data as of December 31, 2018 and have revised previously disclosed consolidated financial data as of December 31, 2017 and 2016 to correct misstatements principally related to managed services contracts with customers contracts and related arrangements, as well as other misstatements. See Note 2, *Restatement and Revision of Previously Issued Consolidated Financial Statements*, in Item 8, *Financial Statements and Supplementary Data*, for additional information.

[3] All convertible redeemable preferred stock was converted into Class B common stock at the time of our IPO.

Selected Key Operating Metrics

Please see "Key Operating Metrics" included in Item 7 - *Management's Discussion and Analysis of Financial Condition and Results of Operations* for information regarding how we define our product accepted during the period, billings for product accepted in the period, billings for installation on product accepted in the period, billings for annual maintenance services agreements, product costs of product accepted, period costs of manufacturing related expenses not included in product costs and installation costs on product accepted in the period.

	Years Ended December 31,			
	2019	2018	2017	2016
	(in 100 kilowatt systems)			
Product accepted during the period	1,194	809	622	687

	Three Months Ended							
	Dec. 31, 2019	Sept. 30, 2019	Jun. 30, 2019	Mar. 31, 2019	Dec. 31, 2018	Sept. 30, 2018	Jun. 30, 2018	Mar. 31, 2018
	(in thousands)							
Product costs of product accepted in the period (per kilowatt)	$ 2,592	$ 2,850	$ 3,045	$ 3,206	$ 2,995	$ 3,351	$ 3,485	$ 3,855
Period costs of manufacturing related expenses not included in product costs	4,762	1,969	3,321	6,937	4,191	6,300	3,018	10,785
Installation costs on product accepted in the period (per kilowatt)	568	733	627	676	653	1,713	1,967	526

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

You should read the following discussion of our financial condition and results of operations in conjunction with the consolidated financial statements and the notes thereto included elsewhere in this Annual Report on Form 10-K. Some of the information contained in this discussion and analysis or set forth elsewhere in this Annual Report on Form 10-K, including information with respect to our plans and strategy for our business, includes forward-looking statements that involve risks and uncertainties as described under the heading Special Note Regarding Forward-Looking Statements following the Table of Contents of this Annual Report on Form 10-K. You should review the disclosure under Item 1A - Risk Factors in this Annual Report on Form 10-K for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

The following discussion should be read in conjunction with the other sections of this Annual Report on Form 10-K, including the consolidated financial statements and related notes contained in Item 8 *Financial Statements and Supplementary Data*.

Restatement and Revision of Previously Issued Consolidated Financial Statements

In this Annual Report on Form 10-K, we have restated our previously issued consolidated financial statements as of and for the year ended December 31, 2018 and revised our previously issued consolidated financial statements as of and for the year ended December 31, 2017. Refer to the "Explanatory Note" preceding Item 1, *Business* for background on the restatement and revision, the fiscal periods impacted, control considerations, and other information. As a result, we have also restated certain previously reported financial information as of and for the year ended December 31, 2018 and revised certain previously reported financial information as of and for the year ended December 31, 2017 in this Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations*, including but not limited to information within the Results of Operations and Liquidity and Capital Resources sections to conform the discussion with the appropriate restated and/or revised amounts. See Note 2, *Restatement and Revision of Previously Issued Consolidated Financial Statements*, in Item 8 *Financial Statements and Supplementary Data*, for additional information related to the restatement and revision, including descriptions of the misstatements and the impacts on our consolidated financial statements.

Description of Bloom Energy

Our solution, the Bloom Energy Server, is a stationary power generation platform built for the digital age and capable of delivering highly reliable, uninterrupted, 24x7 constant power that is also clean and sustainable. The Bloom Energy Server converts standard low-pressure natural gas, biogas or hydrogen into electricity through an electrochemical process without combustion, resulting in very high conversion efficiencies and lower harmful emissions than conventional fossil fuel generation. A typical configuration produces 250 kilowatts of power in a footprint roughly equivalent to that of half of a standard thirty-foot shipping container, or approximately 125 times more space-efficient than solar power generation. 250 kilowatts of power is roughly equivalent to the constant power requirement of a typical big box retail store. Any number of our Energy Server systems can be clustered together in various configurations to form solutions from hundreds of kilowatts to many tens of megawatts. We currently primarily target commercial and industrial customers.

We market and sell our Energy Servers primarily through our direct sales organization in the United States, and also have direct and indirect sales channels internationally. Recognizing that deploying our solutions requires a material 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, who 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 recently expanded our product and financing options to the below-investment-grade customers and have also expanded internationally to target customers with deployments on a wholesale grid. Given that our customers are typically large institutions with multi-level decision making processes, we generally experience a lengthy sales process.

Purchase and Lease Options

Initially, we only offered our Energy Servers on a direct purchase basis, in which the customer purchases the product directly from us. In order to expand our offerings to customers who lack the financial capability to purchase our Energy Servers directly (including customers who are unable to monetize the tax credits available to purchasers of our Energy Servers) and/or who prefer to lease the product or contract for our services on a pay-as-you-go model, we subsequently developed the traditional lease ("Traditional Lease"), Managed Services, and power purchase agreement programs ("PPA Programs").

Our capacity to offer our Energy Servers through any of these financed arrangements depends in large part on the ability of the financing party or parties involved to monetize the related investment tax credits, accelerated tax depreciation and other incentives. Interest rate fluctuations may also impact the attractiveness of any financing offerings for our customers, and currency exchange fluctuations may also impact the attractiveness of international offerings. The Traditional Lease, Managed Services and PPA Program options are limited by the creditworthiness of the customer. Additionally, the Managed Services and Traditional Lease options, as with all leases, are also limited by the customer's willingness to commit to making fixed payments regardless of the performance of the Energy Servers or our performance of our obligations under the customer agreement.

In each of our purchase 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.

Under each purchase option, we provide warranties and performance guaranties for the Energy Servers' efficiency and output. We refer to a "warranty" as a commitment where the failure of the Energy Servers to satisfy the stated performance level obligates us to repair or replace the Energy Servers as necessary to improve performance. If we fail to complete such repair or replacement, or if repair or replacement is impossible, we may be obligated to repurchase the Energy Servers from the customer or financier. We refer to a "guaranty" as a commitment where the failure of the Energy Servers to satisfy the stated performance level obligates us to make a payment to compensate the beneficiary of such guaranty for the resulting increased cost or diminution in benefits resulting from such failure. Our obligation to make payments under the guaranty is always contractually capped and represents a contingency linked to our services obligation with no economic incentive for us to default and force an exercise of the payment obligation.

Under direct purchase and Traditional Lease, the warranties and guaranties are typically included in the price of our Energy Server for the first year. The warranties and guaranties may be renewed annually at the customer's option, as an operations and maintenance services agreement, at predetermined prices for a period of up to 30 years. Historically, our customers and financiers have almost always exercised their option to renew the warranties and guaranties under these operations and maintenance services agreements.

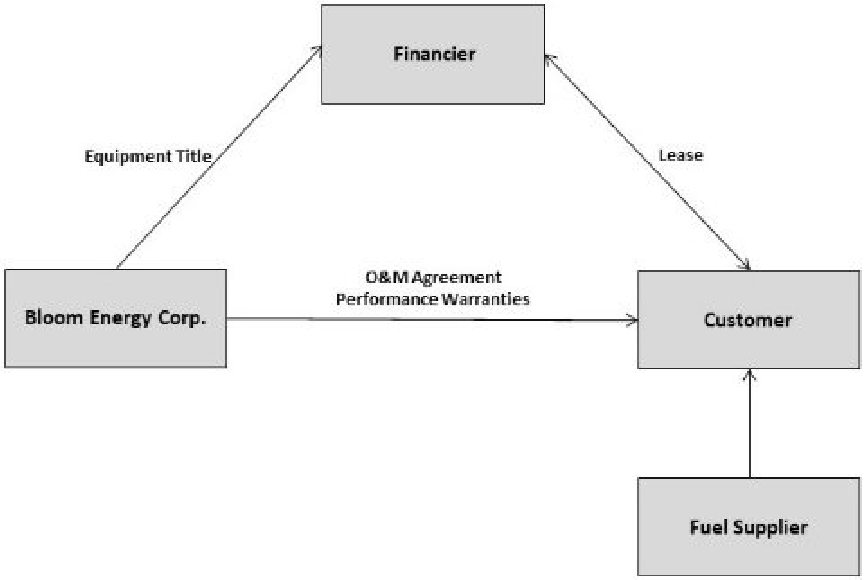
Under the Managed Services Program, the warranties and guaranties are included for the fixed period specified in the customer agreement. This period is typically 10 years, which may be extended at the option of the parties for additional years.

Under the PPA Programs, we typically provide warranties and guaranties regarding our Energy Servers' efficiency to the customer (i.e., the end user of the electricity generated by our Energy Servers, who is also responsible for the purchase of the fuel required for our Energy Servers' operations), and we provide warranties and guaranties regarding our Energy Servers' output to the financier(s) that purchases our Energy Servers. The warranties and guaranties are typically included in the price of our Energy Server for the first year and may be renewed annually at the financier's option, as an operations and maintenance services agreement, at predetermined prices for a period of up to 30 years. Historically, our financiers have almost always exercised their option to renew the warranties and guaranties under these operations and maintenance services agreements. We also provide a fixed schedule of prices for each year of the term of our agreements with our Customers and none of our Customers have failed to renew our operations and maintenance agreements.

The substantial majority of bookings made in recent periods are pursuant to the PPA and the Managed Services Programs.

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

Traditional Lease



Under the Traditional Lease arrangement, the customer enters into a lease directly with a financier, which pays us for our Energy Servers purchased pursuant to a sales agreement (see the description of the Financing Agreement below). We recognize product and installation revenue upon acceptance. After the standard one-year warranty period, our customers have almost always exercised the option to enter into operations and maintenance services agreements with us, under which we receive annual service payments from the customer. The price for the annual operations and maintenance services is set at the time we enter into the Financing Agreement. The term of a lease in a Traditional Lease ranges from 5 to 8 years.

Under a Financing Agreement, we are generally paid the full price of our Energy Servers as if sold as a purchase by the customer based on four milestones. The four payment milestones are typically as follows: (i) 15% upon execution of the financier's entry into the lease with a customer, (ii) 25% on the day that is 180 days prior to delivery of the Energy Servers, (iii) 40% upon shipment of the Energy Servers, and (iv) 20% upon acceptance of the Energy Servers. The financier receives title to the Energy Servers upon installation at the customer site and the financier has risk of loss while our Energy Server is in operation on the customer's site.

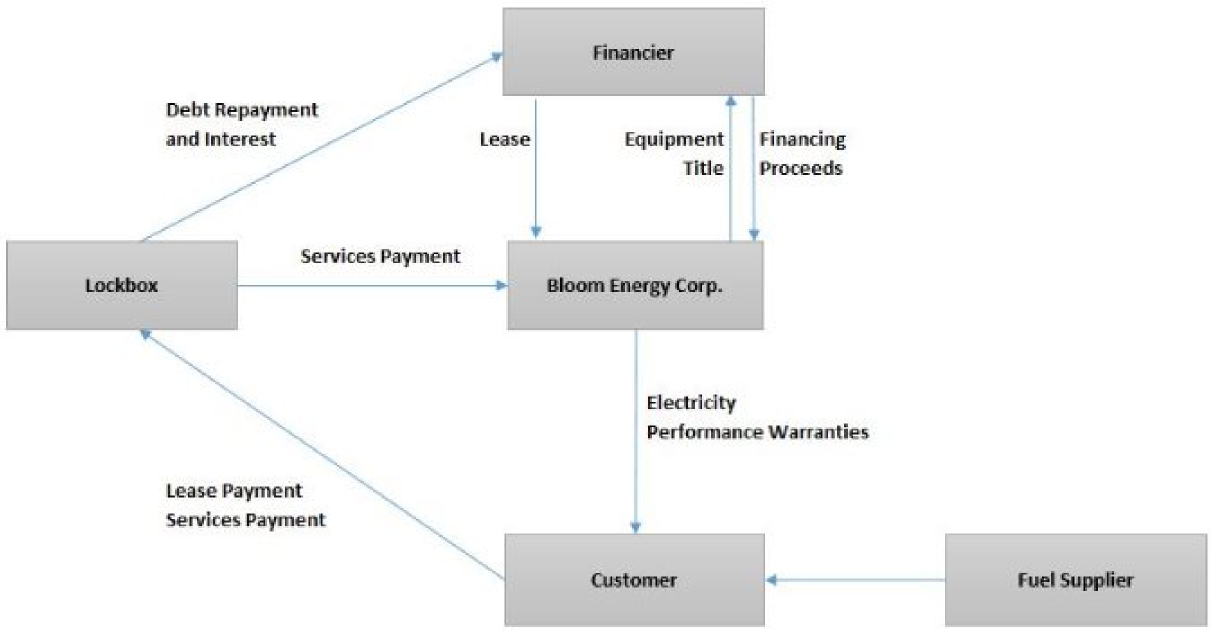
The Financing Agreement provides for the installation of our Energy Servers and includes a standard one-year warranty, to the financier, which includes the performance guaranties described below, with the warranty offered on an annually renewing basis at the discretion of, and to, the customer. The customer must provide fuel for the Bloom Energy Servers to operate.

Our direct lease deployments typically provide for warranties and guaranties of both the efficiency and output of our Energy Servers, all of which are written in favor of the customer and contained in the operations and maintenance services agreement. These warranties and guaranties may be measured on a monthly, annual, cumulative or other basis. As of December 31, 2019, we had incurred no liabilities due to failure to repair or replace our Energy Servers pursuant to these warranties. Our obligation to make payments for underperformance against the performance guaranties for Traditional Lease projects was capped contractually under the sales agreements between us and each customer at an aggregate total of approximately $6.0 million (including payments both for low output and for low efficiency), and, our aggregate remaining potential liability under this cap was approximately $4.8 million.

Remarketing at Termination of Lease

In the event the customer does not renew or purchase our Energy Servers to the end of any customer lease, we may remarket any such Energy Servers to a third party. Any proceeds of such sale would be allocated between us and the applicable financing partner as agreed between them at the time of such sale.

Managed Services Financing



In a Managed Services financing, we enter into a Managed Services Agreement with a customer, pursuant to which the customer is able to use the Energy Server for a certain term. Under the Managed Services Agreement, the customer makes a monthly payment for the use of the Energy Server. The customer payment typically has two components: (1) a fixed monthly capacity-based payment and (2) a performance-based payment based on the output of electricity that month from the Energy Server. The fixed capacity-based payments made by the customer under the Managed Services Agreement are applied toward our obligation to pay down our liability under the master lease with the financier. The performance payment is transferred to us as compensation for operations and maintenance services and recorded as services revenue within the consolidated statements of operations. In some cases, the customer's monthly payment consists solely of the first component, a fixed monthly capacity-based payment.

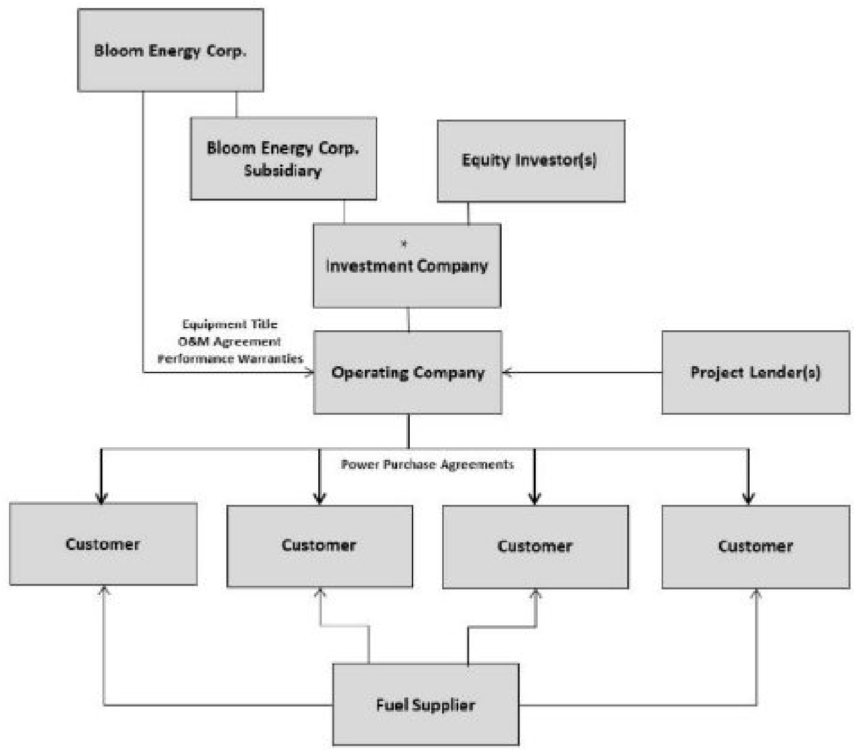
Once a financier is identified and the Energy Server's installation is complete, we sell the Energy Server contemplated by the Managed Services Agreement directly to a financier and the financier, as lessor, leases it back to us, as lessee, pursuant to a master lease in a sale-leaseback transaction. The proceeds from the sale are recorded as a financing obligation within the consolidated balance sheets. Any ongoing operations and maintenance service payments are scheduled in the Managed Services Agreement in the form of the performance-based payment described above. The financier typically pays the financing proceeds for the Energy Server contemplated by the Managed Services Agreement on or shortly after acceptance.

The fixed capacity payments made by the customer under the Managed Services Agreement are recognized as electricity revenue when billed and applied toward our obligation to pay the financing obligation under the master lease. Our Managed Services financings have historically shifted customer credit risk to the financier, as lessor, by providing in the master lease agreement that we have no liability for payment of rent except in certain enumerated circumstances, including in the event we are in breach of the Managed Services Agreement between us and the customer.

The duration of the master lease in a Managed Services financing is typically 10 years. The term of the master lease is typically the same as the term of the related Managed Services Agreement, but in some cases the term of the master lease is shorter than that of the Managed Services Agreement.

Our Managed Services deployments typically provide only for warranties of both the efficiency and output of the Energy Server(s), all of which are written in favor of the customer and contained in the operations and maintenance services agreement. These warranties may be measured on a monthly, annual, cumulative or other basis. Managed Services projects typically do not include guaranties above the warranty commitments, but in projects where the customer agreement includes a service payment for our operations and maintenance, that payment is typically proportionate to the output generated by the Energy Server(s) and our pricing assumes service revenues at the 95% output level. This means that our service revenues may be lower than expected if output is less than 95% and higher if output exceeds 95%. As of December 31, 2019, we had incurred no liabilities due to failure to repair or replace our Energy Servers pursuant to these warranties and the fleet of our Energy Servers deployed pursuant to the Managed Services Program was performing at a lifetime average output of approximately 88%.

Power Purchase Agreement Programs



*Under the Third Party PPA arrangements, there is no link with an investment company, as we do not have an equity investment in these arrangements.

In each Power Purchase Agreement, we sell our Energy Servers to an Operating Company which sells the electricity generated by the Energy Servers to the ultimate end customers pursuant to a Power Purchase Agreement, energy services agreement, or similar contract. Because the end customer's payment is stated on a dollar-per-kilowatt-hour ("$/kWh") basis, we refer to these agreements as Power Purchase Agreements ("PPAs"). Currently, our offerings for PPA Programs primarily include our Third-Party PPA Programs pursuant to which we recognize revenue on acceptance. Through 2017, as part of our PPA Programs, we had also offered the Bloom Electrons Program which included an equity investment by us in the Operating Company and in which we recognized revenue as the electricity was produced. For further discussion on our Bloom Electrons Programs, see Note 13 of our Notes to Consolidated Financial Statements.

In our Power Purchase Agreement Program, we enter into an Energy Server sales, operations and maintenance agreement ("EPC and O&M Agreement") with the Operating Company that will own the Energy Servers. The Operating Company then enters into the PPA with the end customer which purchases electricity generated by the Energy Servers. The Operating Company receives all cash flows generated under the PPA(s), in addition to all investment tax credits, all accelerated tax depreciation benefits, and any other cash flows generated by the operation of the Energy Servers not allocated to the end customer under the PPA.

The sales of our Energy Servers to the Operating Company in connection with the various Power Purchase Agreement Programs 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 or delivery of the Energy Server, and upon acceptance of the Energy Server. Acceptance typically occurs when the Energy Server is installed and running at full power as defined in the applicable EPC and O&M Agreement. A one-year service warranty is provided with the initial sale. After the expiration of the initial standard one-year warranty, the Operating Company has the option to extend our operations and maintenance services under the EPC and O&M Agreement on an annual basis at a price determined at the time of purchase of our Energy Server, which may be renewed annually for each Energy Server for up to 30 years. After the standard one-year warranty period, the Operating Company has almost always exercised the option to renew our operations and maintenance obligations under the EPC and O&M Agreement.

We typically provide output warranties and output guaranties to the Operating Company pursuant to the applicable EPC and O&M Agreement with the Operating Company. The end customer agreement between the Operating Company and the end customer also provides efficiency warranties and efficiency guaranties to the end user, and we provide a backstop of all of the Operating Company's obligations under those agreements, including both the repair or replacement obligations pursuant to the warranties and any payment liabilities under the guaranties.

As of December 31, 2019, we had incurred no liabilities due to failure to repair or replace Energy Servers pursuant to these warranties. Our obligation to make payments for underperformance against the performance guaranties for Power Purchase Agreement projects was capped at an aggregate total of approximately $75.0 million (including payments both for low output and for low efficiency) and our aggregate remaining potential liability under this cap was approximately $59.4 million.

Obligations to Operating Companies

In addition to our obligations to the end customers, our Power Purchase Agreement Programs involve many obligations to the Operating Company that purchases our Energy Servers. These obligations are set forth in the applicable EPC and O&M Agreement(s), and may include some or all of the following obligations:

- designing, manufacturing, and installing the Energy Servers, and selling such Energy Servers to the Operating Company,
- obtaining all necessary permits and other governmental approvals necessary for the installation and operation of the Bloom Energy Servers, and maintaining such permits and approvals throughout the term of the EPC and O&M Agreements,
- operating and maintaining the Bloom Energy Servers in compliance with all applicable laws, permits and regulations,
- satisfying the efficiency and output warranties set forth in such EPC and O&M Agreements and the PPAs ("performance warranties"), and
- complying with any specific requirements contained in the PPAs with individual end-customers.

The EPC and O&M Agreements obligate us to repurchase the Energy Servers in the event the Energy Servers fail to comply with the performance warranties and in the event we otherwise breach the terms of the applicable EPC and O&M Agreements and we fail to remedy such failure or breach after a cure period, or in the event that a PPA terminates as a result of any failure by us to comply with the applicable EPC and O&M Agreements. In some PPA Program projects, our obligation to repurchase Energy Servers extends to the entire fleet of Energy Servers sold pursuant to the applicable EPC and O&M Agreements in the event such failure affects more than a specified number of Energy Servers.

In some PPA Programs, we have also agreed to pay liquidated damages to the applicable Operating Company in the event of delays in the manufacture and installation of our Energy Servers, either in the form of a cash payment or a reduction in the purchase price for the applicable Energy Servers.

Both the upfront purchase price for the Energy Servers and the ongoing fees for our operations and maintenance are paid on a fixed dollar-per-kilowatt ($/kW) basis.

Indemnification of Performance Warranty Expenses Under PPAs - In addition to the performance warranties and guaranties in the EPC and O&M Agreements, we also have agreed to indemnify certain Operating Companies for any expenses they incur to any of the end customers resulting from failures of the applicable Energy Servers to satisfy any of the performance warranties and guaranties set forth in the applicable PPAs.

Administration of Operating Companies - In each of the Bloom Electrons programs, we perform certain administrative services on behalf of the applicable Operating Company, including invoicing the end customers for amounts owed under the PPAs, administering the cash receipts of the Operating 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 ($/kW) basis.

The Operating Company in each of the Bloom Electrons Programs (other than PPA I) has incurred debt in order to finance the acquisition of Energy Servers. The lenders for these projects are a combination of banks and/or institutional investors. In each case, the debt is secured by all of the assets of the applicable Operating Company, such assets being primarily comprised of the Energy Servers and a collateral assignment of each of the contracts to which the Operating Company is a party, including the O&M Agreement entered into with us and the offtake agreements entered into with the Operating Company's customers, and is senior to all other debt obligations of the Operating Company. As further collateral, the lenders receive a security interest in 100% of the membership interest of the Operating Company. However, as is typical in structured finance transactions of this nature, although the project debt is secured by all of the Operating Company's assets, the lenders have no recourse to us or to any of the other equity investors in the project. The applicable debt agreements include provisions that implement a customary "payment waterfall" that dictates the priority in which the Operating Company will use its available funds to satisfy its payment obligations to us, the lenders, the tax equity investors and other third parties.

We have determined that we are the primary beneficiary in the PPA Entities, subject to reassessments performed as a result of upgrade transactions (see Note 13, *Power Purchase Agreement Programs*). Accordingly, we consolidate 100% of the assets, liabilities and operating results of these entities, including the Energy Servers and lease income, in our consolidated financial statements. We recognize the tax equity investors' share of the net assets of the investment entities as noncontrolling interests in subsidiaries in our consolidated balance sheet. We recognize the amounts that are contractually payable to these investors in each period as distributions to noncontrolling interests in our consolidated statements of convertible redeemable preferred stock, redeemable noncontrolling interest, stockholders' deficit and noncontrolling interest. Our consolidated statements of cash flows reflect cash received from these investors as proceeds from investments by noncontrolling interests in subsidiaries. Our consolidated statements of cash flows also reflect cash paid to these investors as distributions paid to noncontrolling interests in subsidiaries. We reflect any unpaid distributions to these investors as distributions payable to noncontrolling interests in subsidiaries on our consolidated balance sheets. However, the PPA Entities are separate and distinct legal entities, and Bloom Energy Corporation may not receive cash or other distributions from the PPA Entities 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 rate of return to the tax equity investors, or otherwise.

For further information about our Power Purchase Agreement Programs, see Note 13, *Power Purchase Agreement Programs*, to our consolidated financial statements included in this Annual Report on Form 10-K.

Delivery and Installation

The timing of delivery and installations of our products have a significant impact on the timing of the recognition of product revenue. Many factors can cause a lag between the time that a customer signs a purchase order 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, 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 obtaining financing. 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. 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. As described in the Power Purchase Agreements section above, we offered the Bloom Electrons purchase program through the end of 2016 and no longer offer this financing structure to potential customers.

Our product sales backlog was $1.1 billion, equivalent to 1,983 systems, or 198 megawatts, as of December 31, 2019. Our product sales backlog was $0.8 billion, equivalent to 1,384 systems, or 138 megawatts, as of December 31, 2018.

We define product sales backlog as signed customer product sales orders received prior to the period end, but not yet accepted, excluding site cancellations. The timing of the deployment of our backlog depends on the factors described above. However, as a general matter, at any point in time, we expect at least 50% of our backlog to be deployed within the next 12 months. The portion of our backlog in the year ended December 31, 2019 attributable to each payment option was as follows: Direct Purchase (including Third Party PPAs) 93% and Managed Services 7%. The portion of our backlog in the year ended December 31, 2018 attributable to each payment option was as follows: Direct Purchase (including Third Party PPAs) 98% and Managed Services 2%.

International Channel Partners

Prior to 2018, we consummated a small number of sales outside the United States of America, including in India and Japan. In India, sales activities are currently conducted by Bloom Energy (India) Pvt. Ltd., our wholly-owned indirect subsidiary; however, we are currently evaluating 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 are conducted pursuant to a Japanese joint venture established between us and subsidiaries of SoftBank Corp, called Bloom Energy Japan Limited ("Bloom Energy Japan"). Under this arrangement, we sell Energy Servers to Bloom Energy Japan and we recognize revenue once the Energy Servers leave the port of the U.S. as Bloom Energy Japan enters into the contract with the end customer and performs all installation work as well as some of the operations and maintenance work.

South 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 with SK Engineering & Construction Co., Ltd. ("SK E&C") to enable us to sell directly into the Republic of Korea.

Under our agreement with SK E&C, SK E&C has a right of first refusal during the term of the agreement, with certain exceptions, to serve as distributor of Energy Servers for any fuel cell generation project in the Republic of Korea, and we have the right of first refusal to serve as SK E&C's supplier of generation equipment for any Bloom Energy fuel cell project in the Republic of Korea. Under the terms of each purchase order, title, risk of loss and acceptance of the Energy Servers pass from us to SK E&C upon delivery at the named port of lading for shipment in the United States for the Energy Servers shipped in 2018 and thereafter upon delivery at the named port of unlading in the Republic of Korea, prior to unloading subject to final purchase order terms. The Preferred Distributor Agreement has an initial term expiring on December 31, 2021, and thereafter will automatically be renewed for three-year renewal terms unless either party terminates the Preferred Distributor Agreement by written notice under certain circumstances.

Under the terms of the Preferred Distributor Agreement, 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, with terms specified below.

SK E&C Joint Venture Agreement. In September 2019, we entered into a joint venture agreement with SK E&C to establish a light-assembly facility in South Korea for sales of certain portions of the Bloom Server for the stationary utility and commercial and industrial market in South Korea. The joint venture is majority controlled and managed by us. We expect the facility to be operational by mid-2020 subject to the completion of certain conditions precedent to the establishment of the joint venture company. Other than a nominal initial capital contribution by Bloom, the joint venture will be funded by SK E&C. SK E&C, who currently acts as a distributor for Bloom Servers for the stationary utility and commercial and industrial market in Korea, will be the primary customer for the products assembled by the joint venture.

Community Distributed Generation Programs

In July 2015, the state of New York introduced its Community Distributed Generation program, which extends New York's net metering program in order to allow utility customers to receive net metering credits for electricity generated by distributed generation assets located on the utility's grid but not physically connected to the customer's facility. This program allows for the use of multiple generation technologies, including fuel cells.

In December 2019, we entered into fuel cell sales, installation, operations and maintenance agreements with two developers for the deployment of fuel cells pursuant to this Community Distributed Generation program. These agreements 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 or delivery of the Energy Server, and upon acceptance of the Energy Server. Acceptance typically occurs when the Energy Server is installed and running at full power as defined in each contract. A one-year service warranty is provided with the initial sale. After the expiration of the initial standard one-year warranty, the owner has the option to renew our operations and maintenance services for subsequent quarterly or annual periods for up to 30 years. We provide warranties and guaranties regarding both efficiency and output to the owners of the Energy Servers pursuant to the operations and maintenance services agreement with the Operating Company.

As of December 31, 2019, we had not yet completed the sale of any Energy Servers in connection with the New York Community Distributed Generation program.

Key Operating Metrics

In addition to the measures presented in the consolidated financial statements, we use the following key operating metrics 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.
- **Billings for product accepted in the period** - the total contracted dollar amount of the product component of all Energy Servers that are accepted in a period. We use this metric to gauge the dollar value of the product acceptances and to evaluate the change in dollar amount of acceptances between periods.

- **Billings for installation on product accepted in the period** - the total contracted dollar amount billable with respect to the installation component of all Energy Servers that are accepted. We use this metric to gauge the dollar value of the installations of our product acceptances and to evaluate the change in dollar value associated with the installation of our product acceptances between periods.
- **Billings for annual maintenance service agreements** - the dollar amount billable for one-year service contracts that have been initiated or renewed. We use this metric to measure the cumulative billings for all service contracts in any given period. As our installation base grows, we expect our billings for annual maintenance service agreements to grow, as well.
- **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 expenses not included in product costs** - the manufacturing and related operating costs that are incurred to procure parts and manufacture 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 of operations in the period that they are incurred.
- I**nstallation costs on product accepted (per kilowatt)** - the average unit installation cost for Energy Servers that are accepted in a given period. This metric is used to provide insight into the trajectory of install costs and, in particular, to evaluate whether our installation costs are in line with our installation billings.

Comparison of the Years Ended December 31, 2019, 2018 and 2017

A discussion regarding our key operating metrics for fiscal 2019 compared to fiscal 2018 and fiscal 2018 compared to fiscal 2017 is presented below.

Acceptances

We use acceptances as a key operating metric to measure the volume of our completed Energy Server installation activity from period to period. We typically define an acceptance as when an Energy Server is installed and running at full power as defined in the customer contract or the financing agreements. For orders where a third party performs the installation, acceptances are generally achieved when the Energy Servers are shipped.

The product acceptances in the periods were as follows:

	Years Ended December 31,		Change	
	2019	**2018**	**Amount**	**%**
Product accepted during the period (in 100 kilowatt systems)	1,194	809	385	47.6%

Product accepted increased by approximately 385 systems, or 47.6%, for 2019 compared to 2018. Acceptance volume increased as we installed more systems from backlog as demand increased for our Bloom Energy servers, in addition to enhancing our ability and capacity to install more energy servers with our installation team.

As discussed in the Purchase and Lease Programs above, our customers have several purchase options for our Energy Servers. The portion of acceptances attributable to each purchase option in the years ended December 31, 2019 and 2018 was as follows:

	Years Ended December 31,	
	2019	2018
Direct Purchase (including Third Party PPAs and International Channels)	93%	89%
Traditional Lease	—%	1%
Managed Services	7%	10%
	100%	100%

As discussed in the Purchase and Lease Programs above, our customers have several purchase options for our Energy Servers. The portion of total revenue attributable to each purchase option in the period was as follows:

	Years Ended December 31,	
	2019	2018
Direct Purchase (including Third Party PPAs and International Channels)	85%	79%
Traditional Lease	1%	2%
Managed Services	5%	5%
Bloom Electrons	9%	14%
	100%	100%

Billings Related to Our Products

	Years Ended December 31,		Change	
	2019	2018	Amount	%
		(dollars in thousands)		
Billings for product accepted in the period	$ 681,034	$ 458,290	$ 222,744	48.6 %
Billings for installation on product accepted in the period	61,270	78,927	(17,657)	(22.4)%
Billings for annual maintenance services agreements	76,852	82,881	(6,029)	(7.3)%

Billings for product accepted increased by approximately $222.7 million, or 48.6%, for 2019 compared to 2018. The increase was primarily driven by the increase in product accepted, including billings for product accepted under Managed Services agreements. Product accepted increased by approximately 385 systems, or 47.6%, for 2019 compared to 2018. Billings for installation on product accepted decreased $17.7 million for 2019, as compared to 2018. Although product acceptances in the period increased 48.6%, billings for installation on product accepted decreased due to the change in mix in installation billings driven by international sales, where our partners perform the installation, as well as site complexity, site size, customer financing option, and customer option to complete the installation of our Energy Servers themselves. In general, when we do not perform the installation function for a customer, such as SK E&C in the Republic of Korea, we will not have any installation billings for those orders. Billings for annual maintenance service agreements decreased $6.0 million for 2019 compared to 2018. This decrease was driven primarily by the relatively high number of PPA upgrades performed in 2019. When an upgrade occurs, new systems are installed and there are typically no billings for service during the first year after the upgrade as the first year period is covered under our standard warranty.

Costs Related to Our Products

	Years Ended December 31,		Change	
	2019	**2018**	**Amount**	**%**
Product costs of product accepted in the period	$2,881/kW	$3,372/kW	$(491)/kW	(14.6)%
Period costs of manufacturing related expenses not included in product costs (in thousands)	$16,989	$24,294	$(7,305)	(30.1)%
Installation costs on product accepted in the period	$644/kW	$1,189/kW	$(545)/kW	(45.8)%

Product costs of product accepted decreased by approximately $491 per kilowatt, or 14.6%, for 2019 compared to 2018. The product cost reduction was driven generally by our ongoing cost reduction efforts to reduce material costs in conjunction with our suppliers and our reduction in labor and overhead costs through improved processes and automation at our manufacturing facilities.

Period costs of manufacturing related expenses decreased by approximately $7.3 million, or 30.1%, for 2019 compared to 2018. Our period costs of manufacturing related expenses decreased primarily as a result of higher absorption of fixed manufacturing costs into product costs due to a larger volume of builds through our factory tied to our acceptance growth, which resulted in higher factory utilization.

Installation costs on product accepted decreased by approximately $545 per kilowatt, or 45.8%, for 2019 compared to 2018. Each customer site is different and installation costs can vary due to a number of factors, including site complexity, size, location of gas, etc. As such, installation on a per kW basis can vary significantly from period-to-period. When we achieve international acceptances, our partners are responsible for the installation, and therefore we do not incur installation costs. When we achieve acceptances for upgrading customer sites to our latest technology, installation costs are minimal as most of the installation work and costs were incurred when the site was initially installed. The mix of international acceptances, the PPA II upgrade and the PPA IIIb upgrade of Energy Servers contributed to the lower installation cost for 2019 compared to 2018.

Comparison of the Years Ended December 31, 2018 and 2017

Acceptances

	Years Ended December 31,		Change	
	2018	**2017**	**Amount**	**%**
Product accepted during the period (in 100 kilowatt systems)	809	622	187	30.1%

Product accepted increased by approximately 187 systems, or 30.1%, for 2018 compared to 2017. Acceptance volume increased as we installed more systems from backlog as demand increased for our Bloom Energy servers, in addition to enhancing our ability and capacity to install more energy servers with our installation team.

As discussed in the Purchase and Lease Programs above, our customers have several purchase options for our Energy Servers. The portion of acceptances attributable to each purchase option in the period was as follows:

	Years Ended December 31,	
	2018	**2017**
Direct Purchase (including Third Party PPAs and International Channels)	89%	72%
Traditional Lease	1%	6%
Managed Services	10%	22%
	100%	100%

The portion of total revenue attributable to each purchase option in the period was as follows:

	Years Ended December 31,	
	2018	2017
Direct Purchase (including Third Party PPAs and International Channels)	79%	63%
Traditional Lease	2%	7%
Managed Services	5%	6%
Bloom Electrons	14%	24%
	100%	100%

Billings Related to Our Products

	Years Ended December 31,		Change	
	2018	2017	Amount	%
	(dollars in thousands)			
Billings for product accepted in the period	$ 458,290	$ 248,102	$ 210,188	84.7 %
Billings for installation on product accepted in the period	78,927	96,452	(17,525)	(18.2)%
Billings for annual maintenance services agreements	82,881	79,881	3,000	3.8 %

Billings for product accepted increased by approximately $210.2 million, or 84.7%, for 2018 as compared to 2017. The increase was primarily due to three factors.

First, product accepted increased by approximately 187 systems, or 30.1%, for 2018 compared to 2017.

Second, ITC was reinstated on February 9, 2018. ITC was not available to the fuel cell industry in 2017, so our billings for product accepted for 2017 only included $1.3 million in benefit from ITC. Due to the reinstatement of ITC in 2018, billings for product accepted now includes the benefit of ITC. For 2018, billings for product accepted included $132.9 million in benefits from ITC, of which $45.1 million was retroactive ITC for 2017 acceptances.

Third, the adoption of customer personalized applications, such as batteries and grid-independent solutions, increased in 2018 compared to 2017. Products that incorporate these personalized applications have, on average, a higher billings rate than our standard platform products that do not incorporate these personalized applications.

Billings for installation on product accepted decreased $17.5 million for 2018, as compared to 2017. Although product acceptances in the period increased 30.1%, billings for installation on product accepted decreased due to the mix in installation billings driven by site complexity, size, customer purchase option and one large customer in particular in 2018 where the installation was performed by the customer and therefore, we did not have any installation billing for that customer. In general, when we do not perform the installation function for a customer, such as SK E&C in the Republic of Korea, we will not have any installation billings for those orders.

When we analyze changes between the years ended 2018 and 2017, we take into account the impact of ITC that was available in 2018 as a result of the reinstatement of the ITC through December 2021. The effect of the reinstatement of ITC was higher billings in the periods eligible for ITC. For 2018, the combined total for billings for product and installation accepted was $537.2 million, an increase of 55.9% from the billings for product and installation accepted combined of $344.6 million for 2017. The increase was significantly greater than the 30.1% increase in associated acceptances during the same periods due to the reinstatement of the ITC benefit, including the one-time fiscal 2017 retroactive ITC benefit recognized in 2018 that is included in the 2018 billings numbers.

Costs Related to Our Products

	Years Ended December 31,		Change	
	2018	2017	Amount	%
Product costs of product accepted in the period	$3,372/kW	$3,292/kW	$80/kW	2.4 %
Period costs of manufacturing related expenses not included in product costs (in thousands)	$24,294	$32,437	$(8,143)	(25.1)%
Installation costs on product accepted in the period	$1,189/kW	$1,271/kW	$(82)/kW	(6.5)%

Product costs of product accepted increased by approximately $80 per kilowatt, or 2.4%, for 2018 compared to 2017. This increase in cost is primarily related to the reinstatement of the ITC program in February 2018, in which we were required to repay certain suppliers for previously negotiated contractual discounts. This resulted in a one-time payment of $116 per kilowatt or $9.4 million, which was recorded to cost of product revenue.

Period costs of manufacturing related expenses decreased by approximately $8.1 million, or 25.1%, for 2018 as compared to 2017. Our period costs of manufacturing related expenses decreased primarily as a result of higher absorption of fixed manufacturing costs into product costs due to a larger volume of builds through our factory tied to our acceptance growth, which resulted in higher factory utilization.

Installation costs on product accepted decreased by approximately $82 per kilowatt, or 6.5%, for 2018 compared to 2017. Each customer site is different and installation costs can vary due to a number of factors, including site complexity, size, location of gas, etc. As such, installation on a per kW basis can vary significantly from period-to-period. In addition, some customers do their own installation, or, as is the case for SK E&C in the Republic of Korea orders, we have a partner who performs the installation. In those instances, we have little to no installation cost.

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. 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 below are based on our audited results of operations, which we have prepared in accordance with U.S. GAAP. In preparing these 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 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 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 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 power purchase agreements. We offer our customers several ways to finance their use of a Bloom Energy Server. Customers, including some of our international channel providers and Third Party PPAs, may choose to purchase our Energy Servers outright. Customers may also lease our Energy Servers through one of our financing partners via our Managed Services Program or as a traditional lease. Finally, customers may purchase electricity through our Power Purchase Agreement Programs.

Prior to Adoption of ASC 606 Revenue from Contracts with Customers

Prior to the adoption of ASC 606 *Revenue from Contracts with Customers*, we recognized revenue from contracts with customers for the sales of products, installation and services in accordance with ASC 605-25, Revenue Recognition for Multiple-Element Arrangements.

Revenue from the sale and installation of Energy Servers was recognized when all of the following criteria are met:

- Persuasive evidence of an arrangement exists. We rely upon non-cancelable sales agreements and purchase orders to determine the existence of an arrangement.
- Delivery and acceptance has occurred. We use shipping documents and confirmation from our installations team that the deployed systems are running at full power as defined in each contract to verify delivery and acceptance.
- The fee is fixed or determinable. We assess whether the fee is fixed or determinable based on the payment terms associated with the transaction.
- Collectability is reasonably assured. We assess collectability based on the customer's credit analysis and payment history.

When these criteria are met, we allocate revenue to each element of the customer arrangement (product, installation and services) based on an estimated selling price at the arrangement inception. The estimated selling price for each element is based upon the following hierarchy: vendor-specific objective evidence ("VSOE") of selling price, if available; third-party evidence ("TPE") of selling price, if VSOE of selling price is not available; or best estimate of selling price ("BESP") if neither VSOE of selling price nor TPE of selling price are available. We limit the amount of revenue recognized for delivered elements to an amount that is not contingent upon future delivery of additional products or services or upon meeting any specified performance conditions.

We have not been able to obtain reliable evidence of the selling price of the standalone Energy Server. Given that we typically sell an Energy Server with a maintenance service agreement and have not provided maintenance services to a customer who does not have use of an Energy Server, we have no evidence of selling prices for either and virtually no customers have elected to cancel their maintenance service agreements while continuing to operate the Energy Servers. Our objective is to determine the price at which we would transact business if the items were being sold separately. As a result, our estimate of our selling price is driven primarily by our expected margin on both the Energy Server and installation based on their respective costs or, in the case of maintenance service agreements, the estimated costs to be incurred during the expected service period.

Costs for 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 and to expected installation costs to determine the selling price to be used in our BESP model. Costs for maintenance service arrangements are estimated over the expected life of the maintenance contracts and include estimated future service costs and future material costs. Material costs over the expected 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. As our business offerings and eligibility for the Investment Tax Credit ("ITC") evolve over time, we may be required to modify our estimated selling prices in subsequent periods and our revenue could be adversely affected.

Subsequent to adoption of ASC 606 Revenue from Contracts with Customers

We adopted *ASC 606 Revenue from Contracts with Customers* as of January 1, 2019 using the modified retrospective method and present the impacts for the first time in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019.

In applying ASC 606, we frequently combine contracts governing the sale and installation of an Energy Server with the related maintenance service 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 is different to the maintenance service 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.

Most of our contracts contain performance obligations with a combination of our Energy Server product, installation and maintenance services. For these performance obligations, we allocate revenue to each performance obligation based on the total transaction price for each contract. Our maintenance service contracts are typically subject to renewal by customers on an annual basis. We assess these maintenance service renewal options at contract inception to determine whether they provide customers with material rights that give rise to a separate performance obligation.

The total transaction price is determined based on the total consideration specified in the contract, including variable consideration in the form of a production guarantee 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 also consider the customers' rights of return in determining the transaction price where applicable.

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. We allocate the transaction price to each performance obligation in an amount that depicts the amount of consideration to which we expect to be entitled in exchange for transferring and installing the Energy Server and providing associated maintenance services.

Given that we typically sell an Energy Server with a maintenance service agreement and have not provided maintenance services to a customer who does not have use of an Energy Server, standalone selling prices are estimated using a cost-plus approach. Costs relating to 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 deployment. As our business offerings and eligibility for the Investment Tax Credit ("ITC") evolve over time, we may be required to modify the expected margin in subsequent periods and our revenue could be adversely 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 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 and the maintenance service agreements based on their respective costs or, in the case of maintenance service agreements, the estimated costs to be incurred. We recognize product and installation revenue at the point in time that the Customer obtains control of the Energy Server. We recognize service revenue, including revenue associated with any related customer material rights, over time as we perform service maintenance activities.

Amounts billed to customers for shipping and handling activities are considered contract fulfillment activities and not a separate performance obligation of the contract. Shipping and handling fees are recorded as revenue and the related cost is a cost to fulfill the contract that is recognized within costs of goods sold.

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, including financing partners on Third-Party PPAs, international channel providers and traditional lease customers. 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 is when the system has been installed and is running at full power or, in the case of sales to our international channel providers, based upon shipment terms.

Under our traditional leases financing option, 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 service contract are not combined.

Payments received from customers are recorded within deferred revenue and customer deposits in the consolidated balance sheets until the acceptance criteria as defined within the customer contract are met. The related cost of such product and installation is also deferred as a component of deferred cost in the consolidated balance sheets until acceptance.

Installation Revenue - Nearly all of our installation revenue relates to the installation of Energy Servers sold to direct purchase, including financing partners on Third-Party PPAs and traditional lease customers. Generally, we recognize installation revenue when the system has been installed and is running at full power.

Service Revenue - Service revenue is generated from maintenance services agreements. We typically provide to our customers a standard one-year warranty against manufacturing or performance defects in our Energy Servers. We also sell to these customers extended annual maintenance services that effectively extend the standard one-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. 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.

Revenue is recognized over the term of the renewed one-year service period. Given our customers' renewal history, we anticipate that almost all of our customers will continue to renew their maintenance services agreements each year through their expected use of the Energy Server. As a result, we estimate the standalone selling price for customer renewal options that give rise to material rights using the practical alternative by reference to optional operations and maintenance services renewal periods expected to be provided and the corresponding expected consideration for these services. This reflects that our additional performance obligations in any contractual renewal period are consistent with the services provided under the initial maintenance service contract.

Payments from customers for the extended maintenance contracts are 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 period as the services are performed using a cost-to-cost basis that reflects the cost of providing these services.

Electricity Revenue - We sell electricity produced by our Energy Servers owned directly by us or by our consolidated PPA entities. Our PPA Entities purchase Energy Servers from us and sell electricity produced by these systems to customers through long-term power purchase agreements ("PPAs"). Customers are 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 addition, in certain product sales, we are a party to master lease agreements that provide for the sale of our Energy Servers to third-parties and the simultaneous leaseback of the systems, which we then sublease to our customers. In sale-leaseback sublease arrangements ("Managed Services"), we first determine whether the Energy Servers under the sale-leaseback arrangement are “integral equipment”. As the Energy Servers are determined not to be integral equipment, we determine if the leaseback is classified as a capital lease or an operating lease.

Our managed services arrangements with the financing party are classified as capital leases and are recorded as financing transactions, while the sub-lease arrangements with the end customer are classified as operating leases. Payments received from the financier are recorded as financing leases. We then recognize revenue for the electricity generated by allocating the total proceeds based on the relative standalone selling prices to electricity revenue and to service revenue. Electricity revenue relating to power purchase agreements is typically accounted for in accordance with ASC 840 *Leases* and service revenue in accordance with ASC 606.

We recognize revenue from the PPAs and Managed Services contracts as the electricity is provided over the term of the agreement.

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. Lastly, 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. During fiscal 2019, we did not recognize any material revenue for contracts modified during the period that had performance obligations satisfied in prior periods.

We recognize a contract liability (deferred revenue) 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 goods sold 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.

Property, Plant and Equipment - Property, plant and equipment, including leasehold improvements are stated at cost less accumulated depreciation. Energy Servers are depreciated to their residual values over their useful economic lives which reflect consideration of the terms of their related power purchase 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. 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.

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, including inventory from purchase commitments, 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 to is sold or otherwise disposed.

Derivative Financial Instruments

We enter into derivative natural gas fixed price forward contracts to manage our exposure to the fluctuating price of natural gas under certain of our power purchase agreements entered in connection with the Bloom Electrons program. In addition, we enter into fixed forward interest rate swap arrangements to convert variable interest rates on debt to a fixed rate and on occasion have committed to certain utility grid price protection guarantees in sales agreements. We do not enter into derivative transactions for trading or speculative purposes.

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) on the consolidated balance sheets and for those that do not qualify for hedge accounting or are not designated hedges are recorded through earnings in the consolidated statements of operations.

While we hedge certain of our natural gas purchase requirements under our power purchase agreements, we do not classify these natural gas fixed price forward contracts as designated hedges for accounting purposes. Therefore, we record the change in the fair value of our natural gas fixed price forward contracts in cost of revenue on the consolidated statements of operations. The fair value of the natural gas fixed price forward contracts is recorded on the consolidated balance sheets as a component of accrued expenses and other current liabilities and as derivative liabilities. As these forward contracts are considered economic hedges, the changes in the fair value of these forward contracts are classified as operating activities within the statement of cash flows, which is consistent with the classification of the cash flows of the hedged item.

Our interest rate swap arrangements qualify as cash flow hedges for accounting purposes as they effectively convert variable rate obligations into fixed rate obligations. We evaluate and calculate the effectiveness of the hedge at each reporting date. The effective change is recorded in accumulated other comprehensive income (loss) and will be recognized as interest expense on settlement. As of January 1, 2019, we adopted Accounting Standards Update ("ASU") 2017-12 Derivatives and Hedging (Topic 815), Targeted Improvements to Accounting for Hedging Activities ("ASU 2017-12"). Per ASU 2017-12, ineffectiveness is no longer required to be measured or disclosed. If a cash flow hedge is discontinued due to changes in the forecasted hedged transactions, hedge accounting is discontinued prospectively and any unrealized gain or loss on the related derivative is recorded in accumulated other comprehensive income (loss) and is reclassified into earnings in the same period during which the hedged forecasted transaction affects earnings. The fair value of the swap arrangement is recorded on the consolidated balance sheets as a component of accrued expenses and other current liabilities and as derivative liabilities. The changes in fair value of swap agreement are classified as operating activities within the statement of cash flows, which is consistent with the classification of the cash flows of the hedged item.

Stock-based Compensation

We measure stock options and other stock-based awards such as restricted stock units, granted to employees and directors based on the fair value on the date of the grant and recognize compensation expense of those awards, net of estimated forfeitures, over the requisite service period, which is generally the vesting period of the respective award. Generally, we issue stock options with only service-based vesting conditions and record the expense for these awards using the straight-line method. The liability related to these awards is recognized over the period during which services are rendered until completed. The fair value of the stock-based compensation liability is estimated using the Black-Scholes option pricing model and are recorded in our consolidated statements of operations. The Black-Scholes option-pricing 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 our stock options and our expected dividend yield.

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 each of our variable interest entities ("VIE"), which we refer to as our power purchase agreement entities ("PPA Entities"). This approach focuses on determining whether we haves the power to direct those activities of the PPA Entities that most significantly affect 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 Entities.

Noncontrolling Interests and Redeemable Noncontrolling Interests

We generally allocate 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 PPE Entities.

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, 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.

Emerging Growth Company Status

The Jumpstart Our Business Startups Act of 2012 ("JOBS Act") provides that an "emerging growth company" can take advantage of the extended transition period afforded by the JOBS Act for the implementation of new or revised accounting standards. However, we have elected not to "opt out" of such extended transition period, which means that when a standard is issued or revised and it has different application dates for public or private companies, we will adopt the new or revised standard at the time private companies adopt the new or revised standard, provided that we continue to be an emerging growth company.

Results of Operations

Revenue

We primarily recognize revenue from the sale and installation of Energy Servers, by providing services under maintenance contracts, and from electricity sales by our PPA Entities and from our Managed Services agreements.

Product Revenue

All of our product revenue is generated from the sale of our Energy Servers to direct purchase, Third-Party PPAs and traditional lease customers. We generally recognize product revenue from contracts with customers for the sales of our Energy Servers once we achieve acceptance; that is, generally when the system has been installed and is running at full power as defined in each contract or, for sales to some of our International Channel Partners, based upon shipment terms.

The amount of product revenue we recognize in a given period is materially dependent on the volume and size of installations of our Energy Servers and on the type of financing used by the customer.

Installation Revenue

The majority of our installation revenue is generated from the installation of our Energy Servers to direct purchase Third-Party PPAs and traditional lease customers. The amount of installation revenue we recognize in a given period is materially dependent on the volume and size of installations of our Energy Servers in a given period, whether the customer chooses to do the installation themselves, and on the type of financing used by the customer.

Service Revenue

Service revenue is generated from operations and maintenance services agreements to support and maintain the Energy Servers in the field. Customers of our direct purchase, Third Party PPA and lease programs can renew their operating and maintenance services agreements on an annual basis for the life of the contract at prices predetermined at the time of purchase of the Energy Server. We anticipate that almost all of our customers will continue to renew their operations and maintenance services agreements each year throughout their expected use of the Energy Server.

Electricity Revenue

Our PPA Entities and financiers in our Managed Services contracts purchase Energy Servers from us and sell the electricity produced by these systems to end customers. Customers are required to purchase all of the electricity produced by the Energy Servers at agreed-upon rates over the course of the contract term. We generally recognize revenue from such PPA Entities and managed services customers as the electricity is provided over the term of the agreement.

Cost of Revenue

Our total cost of revenue consists of cost of product revenue, cost of installation revenue, cost of service revenue and cost of electricity revenue. It includes personnel costs associated with our operations and global customer support organizations consisting of salaries, benefits, bonuses, stock-based compensation and allocated facilities costs.

Cost of Product Revenue

Cost of product revenue consists of costs of Energy Servers that we sell to direct, Third Party PPA and traditional lease customers, including costs of materials, personnel costs, allocated costs, shipping costs, provisions for excess and obsolete inventory and the depreciation costs of our equipment. We expect our cost of product revenue to increase in absolute dollars as we deliver and install more Energy Servers and our product revenue increases.

Cost of Installation Revenue

Cost of installation revenue consists of the costs to install the Energy Servers that we sell to direct, Third Party PPA and traditional lease customers, including costs of materials and service providers, personnel costs, and allocated costs. In our Asia Pacific region, the cost of the installations and resulting revenue is attributable to our channel partners. Notwithstanding the use of channel partners, for the next twelve months, we expect our cost of installation revenue to increase in absolute dollars as we deliver and install more Energy Servers, though it will be subject to variability as a result of the timing of installation and other factors.

Cost of Service Revenue

Cost of service revenue consists of costs incurred under maintenance service contracts for all customers including direct sales, Third Party PPA, traditional lease, managed services and PPA customers. Such costs include personnel costs for our customer support organization, allocated costs and extended maintenance-related product repair and replacement costs. We expect our cost of service revenue to increase in absolute dollars as our base of megawatts deployed grows, and we expect our cost of service revenue to fluctuate period by period depending on the timing of maintenance of Energy Servers.

Cost of Electricity Revenue

Cost of electricity revenue primarily consists of the depreciation of the cost of the Energy Servers owned by our PPA Entities and by us through our managed services agreements and the cost of gas purchased in connection with our first PPA Entity. The cost of depreciation of the Energy Servers is reduced by the amortization of any U.S. Treasury grant payment in lieu of the energy investment tax credit associated with these systems. We expect our cost of electricity revenue to be correlated in absolute dollars to our base of megawatts deployed by our PPA entities and by us through our managed services agreements.

Gross Profit (Loss)

Gross profit (loss) has been and will continue to be affected by a variety of factors, including the sales price of our products, manufacturing costs, the costs to install the products, the costs to maintain the systems in the field, the mix of financing options used and the mix of revenue between product, service and electricity. We expect our gross profit to fluctuate over time depending on the factors described above.

Operating Expenses

Research and Development

Research and development costs are expensed as incurred and consist primarily of personnel costs. Research and development expense also includes prototype related expenses and allocated facilities costs. We expect research and development expense to increase in absolute dollars as we continue to invest in our future products and services, and we expect our research and development expense to fluctuate as a percentage of total revenue.

Sales and Marketing

Sales and marketing expense consists primarily of personnel costs, including commissions. We expense commission costs as each performance obligation occurs over the duration of the contract. Sales and marketing expense also includes costs for market development programs, promotional and other marketing costs, travel costs, office equipment and software, depreciation, professional services and allocated facilities costs. We expect sales and marketing expense to continue to increase in absolute dollars as we increase the size of our sales and marketing organizations and as we expand our international presence, and we expect our sales and marketing expense to fluctuate as a percentage of total revenue.

General and Administrative

General and administrative expense consists of personnel costs, fees for professional services and allocated facilities costs. General and administrative personnel include our executive, finance, human resources, information technology, facilities, business development and legal organizations. We expect general and administrative expense to increase in absolute dollars due to additional legal fees and costs associated with accounting, insurance, investor relations, SEC and stock exchange compliance and other costs associated with being a public company, and we expect our general and administrative expense to fluctuate as a percentage of total revenue.

Stock-Based Compensation

We measure and recognize compensation costs for all stock-based awards, including stock options and purchase rights issued to employees based on the estimated fair value of the awards on the grant date. We use the Black-Scholes-Merton ("Black-Scholes") option pricing model to estimate the fair value of stock options and employee stock purchase plan ("ESPP") rights. The fair value of stock options is recognized as expense on a straight-line basis over the requisite service period, which is generally four years. The fair value of restricted stock units ("RSUs"), is measured using the fair value of our common stock on the date of the grant. The fair value of RSUs is recognized as expense on a straight-line basis over the requisite service period, which generally ranges from two to four years. For stock-based awards granted to employees with a performance condition, we recognize stock-based compensation costs using the accelerated attribution method over the requisite service period when management determines it is probable that the performance condition will be satisfied. For stock-based awards granted to employees with market conditions, we recognize stock-based compensation costs over the requisite service period and use the Monte Carlo simulation option pricing model to estimate the fair value of the awards at the time of grant. The fair value of the 2018 ESPP purchase rights is recognized as expense on the vesting period of each offering period. 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.

Stock-based compensation expense is recorded in the consolidated statements of operations based on the employees' respective function. Additionally, stock-based compensation costs relating to manufacturing employees are capitalized as a component of Energy Server manufacturing costs to inventory, deferred cost of revenues, construction-in-progress and property, plant and equipment as per ASC 330 and SEC Staff Accounting Bulletin Topic 14. These costs are expensed on consumption of the related inventory and over the economic useful life of the property, plant and equipment, as applicable.

Interest Expense

Interest expense primarily consists of interest charges associated with our secured line of credit, long-term debt facilities, financing obligations and capital lease obligations.

Other Income (Expense), Net

Other income (expense), net primarily consists of gains or losses associated with foreign currency fluctuations, net and of income earned on our cash and cash equivalents holdings in interest-bearing accounts. We have historically invested our cash in money-market funds.

Gain (Loss) on Revaluation of Warrant Liabilities and Embedded Derivatives

Warrants issued to investors and lenders that allow them to acquire our convertible preferred stock have been classified as liability instruments on our balance sheet. Since the warrants issued were mandatorily convertible into common stock at the completion of our IPO, the liability related to these mandatorily converted warrants was reclassified to additional paid-in capital on the IPO date and total gains and losses for revaluation of warrant liabilities was recorded in the consolidated statement of operations. We estimate the fair value of embedded derivatives in certain sales contracts using a Monte Carlo simulation model which considers various potential natural gas forward curves over the sales contract term. We record any changes in the fair value of these instruments between reporting dates in our consolidated statements of operations.

Provision for Income Taxes

Provision for income taxes consists primarily of federal and state income taxes in the United States and income taxes in foreign jurisdictions in which we conduct business. We have provided a full valuation allowance on our U.S. deferred tax assets because we believe it is more likely than not that the deferred tax assets will not be realized. At December 31, 2019, we had federal and state net operating loss carryforwards of $1.8 billion and $1.6 billion, respectively, which will expire, if unused, beginning in 2022 and 2028, respectively.

Net Income (Loss) Attributable to Noncontrolling Interests

We allocate profits and losses to the 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 our PPA entities. Net income (loss) attributable to noncontrolling interests is deducted from our net income (loss) in determining our net income (loss) attributable to common stockholders.

Deemed Dividend to Noncontrolling Interests

We recognized a deemed dividend of $2.4 million on November 26, 2019 related to our buyout of the tax equity partner's equity interest in PPA IIIb. The deemed dividend was recorded as a result of the buyout amount exceeding the hypothetical liquidation book value of the tax equity investor's equity interest in PPA IIIb on the date the buyout occurred. This charge impacted net income attributable to common stockholders and earnings per share in the year ended December 31, 2019.

A discussion regarding our financial condition and results of operations for fiscal 2019 as compared to fiscal 2018 and for fiscal 2018 compared to fiscal 2017 is presented below.

We adopted new revenue guidance, Accounting Standards Codification ("ASC") 606, *Revenue From Contracts With Customers ("*ASC 606"), which was effective from January 1, 2019 under the modified retrospective method which has limited the comparability of prior year results. The comparative information for periods prior to 2019 has not been recast for the impact of ASC 606. Additional comparative information is provided in Note 3 of the *Notes to Consolidated Financial Statements* for the adoption of ASC 606 and our proforma financial results under ASC 605, *Revenue Recognition* ("ASC 605")*,* for fiscal 2019.

Comparison of the Years Ended December 31, 2019 and 2018

Revenue

	Years Ended December 31,		Change	
	2019	2018	Amount	%
		As Restated		
		(dollars in thousands)		
Product	$ 557,336	$ 400,638	$ 156,698	39.1 %
Installation	60,826	68,195	(7,369)	(10.8)%
Service	95,786	83,267	12,519	15.0 %
Electricity	71,229	80,548	(9,319)	(11.6)%
Total revenue	$ 785,177	$ 632,648	$ 152,529	24.1 %

Total Revenue

Total revenue increased by approximately $152.5 million, or 24.1%, for 2019 as compared to 2018. Revenue in 2019 included a revenue recognition timing adjustment decrease of $34.6 million associated with the adoption of ASC 606. Excluding this adjustment in 2019, revenue would have increased in 2019 by approximately $187.1 million, or 29.6%.

Revenue in 2018 included a one-time benefit of $45.5 million associated with the 2017 retroactive ITC benefit recognized in the same period in 2018. In early 2018, the ITC law was retroactively reinstated, extending and phasing-out the ITC through 2021. Future application of ITC to new installations is subject to a phase-out schedule, see Note 14, *Commitments and Contingencies - Investment Tax Credits* for additional information.

Excluding this one-time retroactive ITC benefit in 2018 and the adjustment in connection with the adoption of ASC 606, revenue would have increased in 2019 by approximately $232.6 million, or 39.6%, as compared to 2018. This increase was driven primarily by the increase in product acceptances of approximately 385 systems, or 47.6%, for 2019, as compared to 2018.

Product Revenue

Product revenue increased by approximately $156.7 million, or 39.1%, for 2019, as compared to 2018. This increase was driven by the increase in acceptances of 385 systems. Product revenue in 2018 included a one-time benefit of $45.5 million associated with the 2017 retroactive ITC benefit recognized in the same period in 2018 and product revenue in 2019 included an adjustment in connection with the adoption of ASC 606 of $44.5 million. Excluding these adjustments in 2018 and 2019, revenue increased during 2019 by approximately $246.7 million, or 69.5%, as compared to 2018, driven primarily by the increase in product acceptances of approximately 385 systems, or 47.6%, for 2019.

Installation Revenue

Installation revenue decreased by approximately $7.4 million, or 10.8%, for 2019, as compared to 2018. Installation revenue in 2019 included an adjustment in connection with the adoption of ASC 606 of $6.1 million. Excluding the adjustment in connection with the adoption of ASC 606, installation revenue would have decreased by approximately $13.5 million, or 19.8%. This decrease was generally driven by the higher mix of international acceptances, where we typically do not perform the installation service.

Service Revenue

Service revenue increased by approximately $12.5 million, or 15.0% for 2019, as compared to 2018. Service revenue in 2019 included an adjustment in connection with the adoption of ASC 606 of $3.8 million. Excluding the adjustment in connection with the adoption of ASC 606, service revenue would have increased by approximately $8.7 million, or 10.4%. This was primarily due to the increase in the number of annual maintenance contract renewals driven by our growing fleet of installed Energy Servers.

Electricity Revenue

Electricity revenue decreased by approximately $9.3 million, or 11.6%, for 2019, as compared to 2018, due to a reduction in electricity revenues resulting from the decommissioning and deconsolidation of the existing Energy Servers during the PPA II and PPA IIIb upgrades of Energy Servers. Electricity revenue is driven from our former Bloom Electrons program, which included PPA II and PPA IIIb. When these PPAs were decommissioned, we no longer recognized electricity revenue for them.

Cost of Revenue

	Years Ended December 31,		Change	
	2019	**2018**	**Amount**	**%**
		As Restated		
		(dollars in thousands)		
Cost of revenue:				
Product	$ 435,479	$ 281,275	$ 154,204	54.8 %
Installation	76,487	95,306	(18,819)	(19.7)%
Service	100,238	100,689	(451)	(0.4)%
Electricity	75,386	49,628	25,758	51.9 %
Total cost of revenue	$ 687,590	$ 526,898	$ 160,692	30.5 %

Total Cost of Revenue

Total cost of revenue increased by approximately $160.7 million, or 30.5%, for 2019, as compared to 2018. Total cost of revenue in 2019 included an adjustment in connection with the adoption of ASC 606 of $7.1 million. Excluding the adjustment in connection with the adoption of ASC 606, total cost of revenue increased by approximately $167.8 million, or 31.9%. Further, included as a component of total cost of revenue, stock-based compensation increased approximately $15.7 million for 2019, as compared to 2018. Total cost of revenue, excluding stock-based compensation, increased approximately $144.9 million, or 29.2%, for 2019, as compared to 2018. Cost of revenue for 2019 included $94.8 million in expenses associated with the PPA II and PPA IIIb upgrades of Energy Servers transactions. See *Note 13, Power Purchase Agreement Programs - PPA II Upgrade of Energy Servers* for further details. Cost of revenue for 2018 included a payment of $9.4 million driven by the reinstatement of the ITC program in February 2018 where we were required to repay certain suppliers for previously negotiated contractual discounts.

Total cost of revenue, excluding stock-based compensation, the adjustment in connection with the adoption of ASC 606, the expenses associated with the PPA upgrades and the ITC reinstatement, increased approximately 66.7 million, or 13.7%, to $554.5 million for 2019, as compared to $487.8 million for 2018, primarily driven by higher volume of product acceptances.

Cost of Product Revenue

Cost of product revenue increased by approximately $154.2 million, or 54.8%, for 2019, as compared to 2018. Included as a component of cost of product revenue, stock-based compensation increased approximately $14.6 million for 2019, as compared to 2018. Cost of product revenue, excluding stock-based compensation, increased approximately $139.6 million, or 53.4%, for 2019, as compared to 2018. This increase was driven primarily by the increase in product acceptances of approximately 385 systems, or 47.6%, for 2019, as compared to 2018. There was also a $70.5 million write-off associated with the PPA upgrade projects in 2019, partially offset by a payment of $9.4 million recorded to cost of product revenue in 2018. This $9.4 million cost was driven by the reinstatement of the ITC program in February 2018 where we were required to repay certain suppliers for previously negotiated contractual discounts.

Cost of Installation Revenue

Cost of installation revenue decreased by approximately $18.8 million, or 19.7%, for 2019, as compared to 2018. This decrease was generally driven by the higher mix of international acceptances in 2019 where we do not perform the installation service and due to lower install cost associated with the PPA II and the PPA IIIb upgrades of Energy Servers.

Cost of Service Revenue

Cost of service revenue decreased by approximately $0.5 million, or 0.4%, for 2019, as compared to 2018. Cost of service revenue in 2019 included an adjustment in connection with the adoption of ASC 606 of $6.5 million. This adjustment is associated with performance guarantees to our customers and with the adoption of ASC 606, these costs are recorded as a reduction to service revenue. Excluding the adjustment in connection with the adoption of ASC 606, cost of service revenue increased by approximately $6.1 million, or 6.1%. This increase in service cost was primarily due to more power module replacements required in the fleet as our fleet of installed Energy Servers grows with acceptances and additional extended service contracts are executed and renewed.

Cost of Electricity Revenue

Cost of electricity revenue increased by approximately $25.8 million, or 51.9%, for 2019, as compared to 2018, mainly due to a $24.4 million charge related to the decommissioning and deconsolidation of Energy Servers associated with the PPA II and PPA IIIb upgrades of Energy Servers.

Gross Profit (Loss)

	Years Ended December 31,		
	2019	2018	Change
		As Restated	
	(dollars in thousands)		
Gross Profit:			
Product	$ 121,857	$ 119,363	$ 2,494
Installation	(15,661)	(27,111)	11,450
Service	(4,452)	(17,422)	12,970
Electricity	(4,157)	30,920	(35,077)
Total Gross Profit	$ 97,587	$ 105,750	$ (8,163)
Gross Margin:			
Product	22 %	30 %	
Installation	(26)%	(40)%	
Service	(5)%	(21)%	
Electricity	(6)%	38 %	
Total Gross Margin	12 %	17 %	

Total Gross Profit

Gross profit decreased $8.2 million in 2019, as compared to 2018. During 2018, gross profit included a one-time benefit of $36.1 million associated with the 2017 retroactive ITC benefit and 2019 included an adjustment in connection with the adoption of ASC 606 of $27.4 million. Excluding the one-time retroactive ITC benefit in 2018 and the adjustment in connection with the adoption of ASC 606 in 2019, gross profit increased approximately $55.4 million, or 79.5% in 2019, as compared to 2018. This increase was generally due to the increase in product acceptances and lower product cost driven by ongoing cost reduction activities.

Product Gross Profit

Product gross profit increased $2.5 million in 2019, as compared to 2018. Excluding the one-time retroactive ITC benefit of $36.1 million in 2018 and the adjustment in connection with the adoption of ASC 606 in 2019 of $43.9 million, gross profit increased approximately $82.5 million, or 99.1% in 2019, as compared to 2018. This increase was generally due to the increase in product acceptances and lower product cost driven by ongoing cost reduction activities.

Installation Gross Loss

Installation gross loss decreased $11.5 million in 2019, as compared to 2018. Excluding the adjustment in connection with the adoption of ASC 606 in 2019 of $6.1 million, installation gross loss decreased by $5.4 million, or 19.7%. This improvement was due to lower installation costs due to a higher mix of international customer sites accepted in 2019, as compared to 2018. Our installation costs are driven by the complexity of each site at which we are installing an Energy Server, including personalized applications, the size of each installation, which can cause variability in installation costs, and whether we or our international partners perform the installation.

Service Gross Loss

Service gross loss decreased $13.0 million in 2019, as compared to 2018. Excluding the adjustment in connection with the adoption of ASC 606 in 2019 of $10.4 million, service gross loss decreased by $2.6 million, or 14.8%. This improvement was primarily due to an increase in service revenue outpacing the increase in service cost required for maintaining the fleet of installed Energy Servers.

Electricity Gross Profit

Electricity gross profit decreased $35.1 million, or 113.4% in 2019, as compared to 2018, mainly due to charges related to the decommissioning and deconsolidation of Energy Servers associated with the PPA II and PPA IIIb upgrades of Energy Servers.

Operating Expenses

	Years Ended December 31,		Change	
	2019	2018	Amount	%
		As Restated		
		(dollars in thousands)		
Research and development	$ 104,168	$ 89,135	$ 15,033	16.9%
Sales and marketing	73,573	62,807	10,766	17.1%
General and administrative	152,650	118,817	33,833	28.5%
Total operating expenses	$ 330,391	$ 270,759	$ 59,632	22.0%

Total Operating Expenses

Total operating expenses increased $59.6 million, or 22.0%, in 2019, as compared to 2018. Included as a component of total operating expenses, stock-based compensation expenses increased approximately $12.1 million for 2019, as compared to 2018. The increase in stock-based compensation expense is primarily attributable to a one-time employee grant of restricted stock units ("RSUs") awarded prior to IPO with a performance condition of an IPO of the Company's securities. These RSUs have a two-year vesting period starting on the day of IPO and were issued as an employee retention vehicle to bring our stock-based compensation in line with our peer group. In addition to the one-time grant, the stock-based compensation includes some previously granted RSUs with vesting beginning upon the completion of our IPO. Total operating expenses, excluding stock-based compensation, increased approximately $47.6 million, or 36.1%, in 2019, as compared to 2018. This increase was primarily due to compensation related expenses associated with hiring new employees, investments for next generation servers and customer personalized application technology development, expenses related to our demand generation functions, expenses related to our public company readiness and a $5.9 million debt payoff make-whole penalty associated with the PPA II upgrade of Energy Servers.

Research and Development

Research and development expenses increased by approximately $15.0 million, or 16.9%, in 2019, as compared to 2018. Included as a component of research and development expenses, stock-based compensation expenses increased by approximately $1.9 million for 2019, as compared to 2018. Total research and development expenses, excluding stock-based compensation, increased by approximately $13.1 million, or 26.2%, for 2019, as compared to 2018. This increase was primarily due to compensation-related expenses for hiring new employees and investments made for our next generation technology development, sustaining engineering projects for the current Energy Server platform, and investments made for customer personalized applications, such as microgrid and storage solutions, and new fuel solutions utilizing biogas.

Sales and Marketing

Sales and marketing expenses increased by approximately $10.8 million, or 17.1%, in 2019, as compared to 2018. Included as a component of sales and marketing expenses, stock-based compensation expenses increased by approximately $0.2 million for 2019, as compared to 2018. Total sales and marketing expenses, excluding stock-based compensation, increased by approximately $10.6 million, or 34.6%, for 2019, as compared to 2018. This increase was primarily due to compensation expenses related to hiring new employees and expenses related to efforts to increase demand and raise market awareness of our Energy Server solutions, expanding outbound communications, as well as efforts to attract new customer financing partners.

General and Administrative

General and administrative expenses increased by approximately $33.8 million, or 28.5%, in 2019, as compared to 2018. Included as a component of general and administrative expenses, stock-based compensation expenses increased by approximately $9.9 million for 2019, as compared to 2018. The majority of this increase was due to stock-based compensation expenses related to the RSU grants made at the time of our IPO. Total general and administrative expenses, excluding stock-based compensation, increased by approximately $23.9 million, or 46.5% for 2019, as compared to 2018. The increase in general and administrative expenses was due to an increase in compensation related expenses associated with hiring new employees to support public company readiness across accounting and legal functions, expenses related to becoming a public company and information technology related expenses for infrastructure and security support, as well as $5.9 million for a debt payoff make-whole penalty associated with the PPA II upgrade of Energy Servers and a production insurance write-off of $1.8 million associated with the PPA IIIb upgrade of Energy Servers.

Stock-Based Compensation

	Years Ended December 31,		Change	
	2019	2018	Amount	%
		As Restated		
	(dollars in thousands)			
Cost of revenue	$ 45,429	$ 29,680	$ 15,749	53.1%
Research and development	40,949	39,029	1,920	4.9%
Sales and marketing	32,478	32,284	194	0.6%
General and administrative	77,435	67,489	9,946	14.7%
Total stock-based compensation	$ 196,291	$ 168,482	$ 27,809	16.5%

Total stock-based compensation increased $27.8 million, or 16.5%, in 2019, as compared to 2018. Of the $196.3 million in stock-based compensation for 2019, approximately $91.3 million was related to one-time employee grants of RSUs that were issued at the time of our IPO and that have a two-year vesting period. These RSUs provided us an employee retention vehicle to bring our stock-based compensation in line with our peer group. In addition, the stock-based compensation included some previously granted RSUs that vested upon the completion of our IPO.

Other Income and Expense

	Years Ended December 31,		
	2019	2018	Change
		As Restated	
	(in thousands)		
Interest income	$ 5,661	$ 4,322	$ 1,339
Interest expense	(87,480)	(97,021)	9,541
Interest expense, related parties	(6,756)	(8,893)	2,137
Other income (expense), net	706	(999)	1,705
Loss on revaluation of warrant liabilities and embedded derivatives	(2,160)	(22,139)	19,979
Total	$ (90,029)	$ (124,730)	$ 34,701

Total Other Expense

Total other expense decreased $34.7 million in 2019, as compared to 2018. This decrease was primarily due to the change in accounting for warrant liabilities and embedded derivatives that occurred at the time of the IPO removing the re-measurement requirement for these instruments, as well as due to a decrease in interest expense following the conversion of a portion of our debt into equity at the time of the IPO and the reduction of debt due to the PPA II and PPA IIIb upgrades.

Interest Income

Interest income increased $1.3 million in 2019, as compared to 2018. This increase was primarily due to the increase in interest on the cash and short-term investment balances which increased from proceeds from the IPO.

Interest Expense

Interest expense decreased $9.5 million in 2019, as compared to 2018. This decrease was primarily due to lower amortization expense of our debt derivatives and a decrease in interest expense with the debt buy-out due to the PPA II and PPA IIIb upgrades.

Interest Expense, Related Parties

Interest expense, related parties decreased $2.1 million due to the conversion of $40.1 million of our 8% Notes from related parties into equity at the time of the IPO.

Other Income (Expense), net

Other income (expense), net increased $1.7 million in 2019, as compared to 2018, due to changes in foreign currency translation expense.

Loss on Revaluation of Warrant Liabilities and Embedded Derivatives

Upon the IPO in 2018, the final valuation of the embedded derivatives related to the 6% Notes was reclassified from a derivative liability to additional paid-in capital and as a result, we did not record any valuation adjustments in 2019. In 2018, we recognized net loss of $22.1 million primarily due to an increase in the value of our derivatives of $31.2 million, which was partially offset by gains recognized from the revaluation of the preferred warrant liability of $9.1 million.

Provision for Income Taxes

	Years Ended December 31,		Change	
	2019	2018	Amount	%
		(dollars in thousands)		
Income tax provision	$ 633	$ 1,537	$ (904)	(58.8)%

Income tax provision decreased in 2019, as compared to 2018, and 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 December 31,		Change	
	2019	2018	Amount	%
		(dollars in thousands)		
Less: net loss attributable to noncontrolling interests and redeemable noncontrolling interests	$ (19,052)	$ (17,736)	$ (1,316)	(7.4)%

Total loss attributable to noncontrolling interests increased $1.3 million, or 7.4%, in 2019, as compared to 2018. The net loss increased due to increased losses in our PPA Entities which are allocated to our noncontrolling interests.

Comparison of the Years Ended December 31, 2018 and 2017

Revenue

	Years Ended December 31,		Change	
	2018	2017	Amount	%
	As Restated	As Revised		
	(dollars in thousands)			
Product	$ 400,638	$ 157,192	$ 243,446	154.9%
Installation	68,195	57,937	10,258	17.7%
Service	83,267	74,892	8,375	11.2%
Electricity	80,548	75,602	4,946	6.5%
Total revenue	$ 632,648	$ 365,623	$ 267,025	73.0%

Total Revenue

Total revenue increased by approximately $267.0 million, or 73.0%, for 2018, as compared to 2017. There were four principal drivers of this revenue increase.

First, product acceptances increased by approximately 187 systems, or 30.1%, for 2018, as compared to 2017.

Second, we achieved a higher mix of orders from customers where revenue is recognized on acceptance compared to orders where revenue is recognized ratably over the term of the agreement. In 2018, we recognized 89.6% of our orders at acceptance, whereas only 77.4% of total acceptances in 2017 were recognized at acceptance.

Third, the Federal Investment Tax Credit ("ITC") was reinstated on February 9, 2018. ITC was not available to the fuel cell industry in 2017, however, our revenue in 2018 includes the benefit of the reinstatement.

Lastly, the adoption of customer personalized applications, such as batteries and grid-independent solutions, increased in 2018, as compared to 2017. Customer orders that include these personalized applications generated, on average, higher revenue than our standard orders that do not include these personalized applications.

Product Revenue

Product revenue increased by approximately $243.4 million, or 154.9%, for 2018, as compared to 2017. This increase was driven by the increase in acceptances, higher mix of orders where revenue is recognized on acceptance, the ITC reinstatement, and an increase in the sales of customer personalized applications.

Installation Revenue

Installation revenue increased by approximately $10.3 million, or 17.7%, for 2018, as compared to 2017. This increase was driven by the increase in acceptances, higher mix of orders where revenue is recognized on acceptance, and an increase in the sales of customer personalized applications, partially offset by the lower installation revenue associated with one large customer in 2018 where the installation was performed by the customer and as a result, we did not have any installation revenue for that customer. In general, when a customer or, in the case of SK E&C in the Republic of Korea, a partner performs the installation service, we do not generate significant revenue for the installation.

Service Revenue

Service revenue increased by approximately $8.4 million, or 11.2% for 2018, as compared to 2017. This was primarily due to the increase in the number of annual maintenance contract renewals driven by our growing fleet of installed Energy Servers.

Electricity Revenue

Electricity revenue increased by approximately $4.9 million, or 6.5%, for 2018, as compared to 2017, due primarily to a growing fleet of installed Energy Servers related to our managed service customers where revenue is recognized over the term of the agreement, as well as Bloom Electrons customers whose contracts were initiated in 2017 and therefore only recognized revenue for a partial year versus a full year in 2018.

Cost of Revenue

	Years Ended December 31,		Change	
	2018	2017	Amount	%
	As Restated	As Revised		
	(dollars in thousands)			
Cost of revenue:				
Product	$ 281,275	$ 192,361	$ 88,914	46.2%
Installation	95,306	54,970	40,336	73.4%
Service	100,689	85,128	15,561	18.3%
Electricity	49,628	49,475	153	0.3%
Total cost of revenue	$ 526,898	$ 381,934	$ 144,964	38.0%

Total Cost of Revenue

Total cost of revenue increased by approximately $145.0 million, or 38.0%, for 2018, as compared to 2017. Included as a component of total cost of revenue, stock-based compensation increased approximately $23.3 million for 2018, as compared to 2017. Total cost of revenue, excluding stock-based compensation, increased approximately $121.6 million, or 32.4%, to $497.2 million for 2018, as compared to $375.6 million for 2017. This increase in total cost of revenue was primarily attributable to higher product and install cost of revenue which was driven by an increase in the volume of product acceptances and a higher mix of orders with customers in which cost of revenue is recognized on acceptance, instead of ratably over the life of the agreement. Additionally there was an increase in the sales of customer personalized applications for 2018. These applications generally have a cost associated with them and therefore cause an increase in the cost of revenue.

Cost of Product Revenue

Cost of product revenue increased by approximately $88.9 million, or 46.2%, for 2018, as compared to 2017. This increase was driven by the increase in acceptances, higher mix of orders where cost of revenue is recognized on acceptance, increased costs from the sales of customer personalized applications, and an increase in stock-based compensation. Additionally, as a result of the reinstatement of the ITC program in February 2018, we were required to repay certain suppliers for previously negotiated contractual discounts. This payment of $9.4 million was recorded to cost of product revenue.

Cost of Installation Revenue

Cost of installation revenue increased by approximately $40.3 million, or 73.4%, for 2018, as compared to 2017. This increase was driven by the increase in acceptances, higher mix of orders where cost of revenue is recognized on acceptance, and increased costs from the sales of customer personalized applications where the installation is more complex, partially offset by the lower cost of installation associated with one large customer in 2018 where the installation was performed by the customer and as a result, we did not have any installation cost for that customer. In general, when we do not perform the installation function for a customer, such as in SK E&C in the Republic of Korea, we do not incur any significant installation costs on those orders.

Cost of Service Revenue

Cost of service revenue increased by approximately $15.6 million, or 18.3%, for 2018, as compared to 2017. This increase in service cost was primarily due to more power module replacements required in the fleet as a result of a larger fleet of installed Energy Servers, as well as replacing older generation power modules during the normal service process.

Cost of Electricity Revenue

Cost of electricity revenue increased by approximately $0.2 million, or 0.3%, for 2018, as compared to 2017, due to a growing fleet of installed Energy Servers related to our managed service customers where cost is recognized over the term of the agreement, as well as Bloom Electrons customers whose contracts were initiated in 2017 and therefore, we only recognized cost for a partial year versus a full year in 2018. These increases were offset by a gain recorded as a result of the fair value adjustment on our natural gas fixed price forward contract.

Gross Profit (Loss)

	Years Ended December 31, 2018	Years Ended December 31, 2017	Change
	As Restated	As Revised	
	(dollars in thousands)		
Gross Profit (Loss):			
Product	$ 119,363	$ (35,169)	$ 154,532
Installation	(27,111)	2,967	(30,078)
Service	(17,422)	(10,236)	(7,186)
Electricity	30,920	26,127	4,793
Total Gross Profit (Loss)	$ 105,750	$ (16,311)	$ 122,061
Gross Margin			
Product	30 %	(22)%	
Installation	(40)%	5 %	
Service	(21)%	(14)%	
Electricity	38 %	35 %	
Total Gross Margin	17 %	(4)%	

Total Gross Profit

Gross profit improved $122.1 million in 2018, as compared to 2017. This improvement was generally as a result of higher product margins due to the increase in product acceptances which drove higher volume, a higher mix of orders recognized at acceptance versus ratably over the life of the agreement, and the reinstatement of the ITC.

Product Gross Profit

Product gross profit improved $154.5 million in 2018, as compared to 2017. This increase was due to the increase in product acceptances which drove higher volume, a higher mix of orders recognized at acceptance versus ratably over the life of the Bloom Electrons' or managed service contracts and the reinstatement of the ITC.

Installation Gross Loss

Installation gross amount worsened $30.1 million in 2018, as compared to 2017. This decrease from profit to a loss was due to higher installation costs associated with the initial installations for the new customer personalized applications. Our installation costs are driven by the complexity of each site at which we are installing an Energy Server, including personalized applications, as well as the size of each installation, which can cause variability in installation costs from year-to-year.

Service Gross Loss

Service gross loss worsened $7.2 million in 2018, as compared to 2017. This increased loss was primarily due to more power module replacements required in the fleet as a result of a larger fleet of installed Energy Servers, as well as replacing older power modules during the normal service process.

Electricity Gross Profit

Electricity gross profit increased $4.8 million, or 18.3%, in 2018, as compared to 2017 due to a gain recorded as a result of the fair value adjustment on a natural gas fixed price forward contract and a growing fleet of installed Energy Servers related to our managed service customers.

Operating Expenses

	Years Ended December 31,		Change	
	2018	**2017**	**Amount**	**%**
	As Restated	**As Revised**		
	(dollars in thousands)			
Research and development	$ 89,135	$ 51,146	$ 37,989	74.3%
Sales and marketing	62,807	31,926	30,881	96.7%
General and administrative	118,817	55,689	63,128	113.4%
Total operating expenses	$ 270,759	$ 138,761	$ 131,998	95.1%

Total Operating Expenses

Total operating expenses increased $132.0 million, or 95.1%, in 2018, as compared to 2017. Included as a component of total operating expenses, stock-based compensation expenses increased approximately $116.1 million for 2018, as compared to 2017, accounting for much of the year-over-year increase. The increase in stock-based compensation is primarily attributable to a one-time employee grant of restricted stock units ("RSUs") at the time of our IPO and that have a two-year vesting period. These RSUs provided us with a market equity employee retention vehicle to help us compete for talent across our peer group. Additionally, the stock-based compensation included some previously granted RSUs that vested upon the completion of our IPO. Total operating expenses, excluding stock-based compensation, increased approximately $15.9 million, or 13.7%, in 2018, as compared to 2017. This increase was primarily due to compensation related expenses associated with hiring new employees, investments for next generation servers and customer personalized application technology development, and expenses related to our efforts to increase demand and raise market awareness of our Energy Server solutions, as well as to drive new customer financing partners.

Research and Development

Research and development expenses increased by approximately $38.0 million, or 74.3%, in 2018, as compared to 2017. Included as a component of research and development expenses, stock-based compensation expenses increased by approximately $33.5 million for 2018, as compared to 2017. The majority of this increase was due to stock-based compensation expenses related to the RSU grants made at the time of our IPO. Total research and development expenses, excluding stock-based compensation, increased by approximately $4.5 million, or 9.9%, for 2018, as compared to 2017. This increase was primarily due to compensation-related expenses related to hiring new employees and investments made for customer personalized applications, such as a battery solution, sustaining engineering projects for the current Energy Server platform and investments made for our next generation technology development.

Sales and Marketing

Sales and marketing expenses increased by approximately $30.9 million, or 96.7%, in 2018, as compared to 2017. Included as a component of sales and marketing expenses, stock-based compensation expenses increased by approximately $27.6 million for 2018, as compared to 2017. The majority of this increase was due to stock-based compensation expenses related to the RSU grants made at the time of our IPO. Total sales and marketing expenses, excluding stock-based compensation, increased by approximately $3.3 million, or 12.0%, for 2018, as compared to 2017. This increase was primarily due to compensation expenses related to hiring new employees and expenses related to efforts to increase demand and raise market awareness of our Energy Server solutions, expanding outbound communications, as well as efforts to attract new customer financing partners.

General and Administrative

General and administrative expenses increased by approximately $63.1 million, or 113.4%, in 2018, as compared to 2017. Included as a component of general and administrative expenses, stock-based compensation expenses increased by approximately $55.0 million for 2018, as compared to 2017. The majority of this increase was due to stock-based compensation expenses related to the RSU grants made at the time of our IPO. Total general and administrative expenses, excluding stock-based compensation, increased by approximately $8.1 million, or 18.8%, for 2018, as compared to 2017. The increase in general and administrative expenses was due to an increase in compensation related expenses associated with hiring new employees to support public company readiness across accounting and legal functions, expenses related to becoming a public company and information technology related expenses for infrastructure and security support.

Stock-Based Compensation

	Years Ended December 31,		Change	
	2018	2017	Amount	%
	As Restated	As Revised		
	(dollars in thousands)			
Cost of revenue	$ 29,680	$ 6,355	$ 23,325	367%
Research and development	39,029	5,560	33,469	602%
Sales and marketing	32,284	4,685	27,599	589%
General and administrative	67,489	12,501	54,988	440%
Total stock-based compensation	$ 168,482	$ 29,101	$ 139,381	479%

Total stock-based compensation increased $139.4 million, or 479%, in 2018, as compared to 2017. Of the $168.5 million in stock-based compensation for 2018, approximately $139.1 million was related to one-time employee grant of RSUs that were issued at the time of our IPO and that have a two-year vesting period. These RSUs provided us with a market equity employee retention vehicle necessary to compete for talent across our peer group. In addition, the stock-based compensation included some previously granted RSUs that vested upon completion of our IPO.

Other Income and Expense

	Years Ended December 31,		
	2018	2017	Change
	As Restated	As Revised	
	(in thousands)		
Interest income	$ 4,322	$ 759	$ 3,563
Interest expense	(97,021)	(112,039)	15,018
Interest expense, related parties	(8,893)	(12,265)	3,372
Other expense, net	(999)	(491)	(508)
Loss on revaluation of warrant liabilities and embedded derivatives	(22,139)	(15,284)	(6,855)
Total	$ (124,730)	$ (139,320)	$ 14,590

Total Other Expense

Total other expense decreased $14.6 million in 2018, as compared to 2017. This decrease was primarily due to the decrease in interest expense following the conversion of a portion of our debt into equity at the time of the IPO.

Interest Income

Interest income increased $3.6 million in 2018, as compared to 2017. This increase was primarily due to the increase in interest on the short-term investment balances which increased from proceeds from the IPO.

Interest Expense

Interest expense decreased $15.0 million in 2018, as compared to 2017. This decrease was primarily due to lower amortization expense of our debt derivatives and due to the conversion of a portion of our debt into equity at the time of the IPO.

Interest Expense, Related Parties

Interest expense, related parties decreased $3.4 million due to the conversion of $40.1 million of our 8% Notes from related parties into equity at the time of the IPO.

Other Income (Expense), net

Other expense decreased $0.5 million in 2018, as compared to 2017. This change was primarily due to an increase in interest income, partially offset by foreign currency translation.

Revaluation of Warrant Liabilities and Embedded Derivatives

For 2018, we recognized net loss of $22.1 million primarily due to an increase in the value of our derivatives of $31.2 million, which was partially offset by gains recognized from the revaluation of the preferred warrant liability of $9.1 million. The loss on revaluation of warrant liabilities and embedded derivatives increased $6.9 million when compared to 2017.

Provision for Income Taxes

	Years Ended December 31,		Change	
	2018	2017	Amount	%
		(dollars in thousands)		
Income tax provision	$ 1,537	$ 636	$ 901	141.7%

Income tax provision increased in 2018, as compared to 2017 and 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 December 31,		Change	
	2018	2017	Amount	%
		(dollars in thousands)		
Net loss attributable to noncontrolling interests and redeemable noncontrolling interests	$ (17,736)	$ (18,666)	$ 930	5.0%

Total loss attributable to noncontrolling interests decreased $0.9 million, or 5.0%, in 2018, as compared to 2017. The net loss decreased due to the allocation of our lower net loss using HLBV allocation methodology.

Liquidity and Capital Resources

As of December 31, 2019, we had an accumulated deficit of approximately $2.9 billion. We have financed our operations, including the costs of acquisition and installation of Energy Servers, mainly through a variety of financing arrangements and PPA Entities, credit facilities from banks, sales of our common stock, debt financings and cash generated from our operations. As of December 31, 2019, we had $401.4 million of total outstanding recourse debt, $235.4 million of non-recourse debt and $28.0 million other long term liabilities. See Note 7, *Outstanding Loans and Security Agreements* for a complete description of our outstanding debt. As of December 31, 2019 and 2018, we had cash and cash equivalents and short-term investments of $202.8 million and $325.1 million, respectively.

In July 2018, we successfully completed an initial public offering ("IPO") of our securities with the sale of 20,700,000 shares of our Class A common stock at a price of 15.00 per share, resulting in cash proceeds of $282.3 million, net of underwriting discounts, commissions and estimated offering costs.

We believe that our existing cash and cash equivalents will be sufficient to meet our operating and capital cash flow requirements and other cash flow needs for at least the next 12 months from the date of this Annual Report on Form 10-K. As of December 31, 2019, the current portion of our total debt is $337.6 million, which would require cash payments of $353.5 million in the next 12 months. On March 31, 2020, we extended the maturity for all but $70.0 million of current debt as follows:

We entered into an Amendment Support Agreement (the “Amendment Support Agreement”) with the beneficial owners (the “Noteholders”) of our outstanding 6.0% Convertible Notes due 2020 (the “Convertible Notes”) pursuant to which such Noteholders have agreed, subject to certain conditions set forth therein, to consent to, among other things, certain amendments to the indenture (the “Proposed Amendments”) dated as of December 15, 2015, as supplemental by the First Supplemental Indenture dated as of September 20, 2016, the Second Supplemental Indenture dated as of June 29, 2017 and the Third Supplemental Indenture dated as of January 18, 2018, each among us, the guarantor party thereto and U.S. Bank National Association, as trustee and collateral agent (as so supplemented, the “Original Indenture”), pursuant to which the Convertible Notes were issued to extend the maturity date of the Convertible Notes to December 1, 2021.

In connection with the execution and delivery of the Amendment Documents, on March 31, 2020, we entered into an Amended and Restated Subordinated Secured Convertible Note Modification Agreement (the “Constellation Note Modification Agreement”) with Constellation NewEnergy, Inc. (“Constellation”) pursuant to which certain terms of our outstanding Amended and Restated Subordinated Secured Convertible Note issued to Constellation were modified to extend the maturity date to December 31, 2021.

Furthermore, on March 31, 2020, we entered into a note purchase agreement and convertible note purchase agreement, as follows:

We entered into a note purchase agreement (the “Note Purchase Agreement”) with certain investors pursuant to which such investors have agreed to purchase, and we have agreed to issue, $70.0 million of 10.25% Senior Secured Notes due 2027 (the “Senior Secured Notes”) in a private placement (the “Senior Secured Notes Private Placement”). The funding of the Note Purchase Agreement is subject to certain conditions including obtaining a rating from a rating agency.

We entered into a convertible note purchase agreement (the “Convertible Note Purchase Agreement”) with Foris Ventures, LLC and New Enterprise Associates 10, Limited Partnership (together, the “Purchasers”), pursuant to which such Purchasers were issued $30.0 million aggregate principal amount of additional Convertible Notes (the “Additional Convertible Notes”) under the Amended and Restated Indenture.

The combination of our existing cash and cash equivalents, the extension of the Convertible Notes and Constellation Note Modification to December 2021, the proceeds from the convertible note agreement and operating cash flows are expected to be sufficient to meet our operational and capital cash flow requirements and other cash flows for the next 12 months from the date of this Annual Report on Form 10-K, including the current portion of our total debt.

Our future cash flow requirements may vary materially from those currently planned and 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, the expansion of sales and marketing activities, market acceptance of our products, the timing of receipt by us of distributions from our PPA Entities and overall economic conditions including the impact of COVID-19 on our future operations. We do not expect to receive significant cash distributions from our PPA Entities. During June 2019, we completed a transaction for the PPA II upgrade of Energy Servers and we repaid all the PPA II outstanding debt of $76.8 million. During November 2019, we completed a transaction for the PPA IIIb upgrade of Energy Servers and we repaid all the PPA IIIb outstanding debt of $23.9 million. For additional information refer to *Note 13, Power Purchase Agreement Programs.*

Cash Flows

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

	Years Ended December 31,		
	2019	2018	2017
		As Restated	As Revised
Net cash provided by (used in):			
Operating activities	$ 163,770	$ (91,948)	$ (91,966)
Investing activities	53,447	(125,375)	(88,247)
Financing activities	(120,314)	317,196	142,910

Net cash provided by (used in) our variable interest entities (the PPA Entities) which are incorporated into the consolidated statements of cash flows for December 31, 2019, 2018 and 2017, is as follows (in thousands):

	Years Ended December 31,		
	2019	2018	2017
PPA Entities [1]			
Net cash provided by PPA operating activities	$ 279,402	$ 30,612	$ 24,797
Net cash used in PPA financing activities	(167,259)	(38,813)	(30,525)

[1] The PPA Entities' operating and financing cash flows are a subset of our consolidated cash flows and represents 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 noncontrollling 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 consolidated cash flows of the PPA Entities in which we have only a minority interest.

Operating Activities

Net cash provided by operating activities for the twelve months ended December 31, 2019 was $163.8 million and was primarily the result of net cash earnings of $67.3 million plus the net decrease in working capital of $96.5 million. Net cash earnings is primarily comprised of a net loss of $323.5 million, adjusted for non-cash benefit items including: (i) depreciation and amortization of $78.6 million; (ii) PPA II and PPA IIIb decommissioning costs of $70.5 million; (iii) write-off of property, plant and equipment net of $3.1 million; (iv) impairment of assets of $11.3 million; (v) a loss on revaluation of derivative contracts of $2.8 million; (vi) stock-based compensation of $196.3 million; (vii) amortization of debt issuance cost of $22.1 million, plus (viii) an expense reclass to financing activities related to a debt make-whole expense of $5.9 million. Net cash provided from changes in working capital consisted primarily of decreases in: (i) accounts receivable of $52.0 million; (ii) inventories of $18.4 million; (iii) customer financing receivable of $5.5 million; (iv) prepaid expenses and other current assets of $8.6 million; and (v) other long-term assets of $3.6 million; plus increases in: (vi) accrued expenses and other current liabilities of $6.7 million; and (vii) other long-term liabilities of $4.4 million, and (viii) deferred revenue and contract liabilities of $37.1 million. These sources of cash from working capital were partially offset by increases in: (i) deferred cost of revenue of $22.0 million; and (ii) decreases in: accounts payable of $11.3 million and (iii) accrued warranty of $6.6 million.

Net cash used in operating activities for the twelve months ended December 31, 2018 was $91.9 million and was the result of net cash loss of $22.4 million and the net increase in working capital of $69.5 million. Net cash loss is primarily comprised of a net loss of $291.3 million, adjusted for non-cash benefit items including: (i) depreciation and amortization of approximately $53.9 million; (ii) write-off of property, plant and equipment net of $0.9 million; (iii) a loss on revaluation of derivative contracts of $29.0 million; (iv) stock-based compensation of $168.5 million; and (v) amortization of debt issuance cost of $25.4 million; partially offset by (vi) a gain on revaluation of stock warrants of $9.1 million. Net cash used by changes in working capital consisted primarily of increases in: (i) accounts receivable of $55.0 million; (ii) inventory of $37.0 million; and (iii) prepaid expenses and other current assets of $8.0 million; plus a decrease in: (iv) accrued expenses and other current liabilities of $6.0 million; and (v) deferred revenue and contract liabilities of $21.8 million. These uses of cash for working capital were partially offset by decreases in: (i) deferred cost of revenue of $14.2 million; and (ii) customer financing receivable and other of $4.9 million; plus increases in: (iv) accounts payable of $18.3 million; (v) accrued warranty of $1.5 million; and (vi) other long term liabilities of $19.6 million.

Net cash used in operating activities for the twelve months ended December 31, 2017 was $92.0 million and was the result of net cash loss of $152.2 million partially offset by the net increase in working capital of $60.2 million. Net cash loss is primarily comprised of a net loss of $295.0 million, adjusted for non-cash benefit items including: (i) depreciation and amortization of approximately $54.4 million; (ii) a loss on revaluation of derivative contracts of $15.0 million; (iii) stock-based compensation of $29.1 million; and (iv) amortization of debt issuance cost of $47.3 million; partially offset by (v) a gain on revaluation of stock warrants of $3.0 million. Net cash provided by changes in working capital consisted primarily of decreases in: (i) accounts receivable of $3.2 million; (ii) customer financing receivable and other of $5.5 million, and (iii) other long-term assets of $0.8 million; plus an increase in: (iv) accrued expenses and other current liabilities of $8.0 million; (v) deferred revenue and contract liabilities of $48.3 million; and (vi) other long term liabilities of $37.6 million. These sources of cash from working capital were partially offset by increases in: (i) inventory of $10.6 million; (ii) deferred cost of revenue of $31.3 million; and (iii) prepaid expenses and other current assets of $1.0 million; plus decrease in: (iv) accrued warranty of $7.4 million.

Investing Activities

Net cash provided by investing activities in the twelve months ended December 31, 2019 was $53.4 million which included proceeds from maturity of marketable securities of $104.5 million, partially offset by $51.1 million used for the purchase of long-lived assets. Our use of cash in the twelve months ended December 31, 2019 for the purchase of property, plant and equipment increased, as compared to the same period in 2018, due to completing a move to our new corporate headquarters which is used for administration, research and development, and sales and marketing.

Net cash used in investing activities in the twelve months ended December 31, 2018 was $125.4 million which was primarily the result of net purchase of marketable securities of $76.9 million, plus $48.5 million used for the purchase of long-lived assets.

Net cash used in investing activities in the twelve months ended December 31, 2017 was $88.2 million which was primarily the result of net purchase of marketable securities of $26.8 million, plus $61.5 million used for the purchase of long-lived assets.

Financing Activities

Net cash used in financing activities in the twelve months ended December 31, 2018 was $120.3 million which included payments to noncontrolling and redeemable noncontrolling interest of $56.5 million, distributions paid to our PPA Equity Investors of $12.5 million, repayments of debt of $121.5 million, and a debt make-whole payment of $5.9 million related to our PPA II upgrade of Energy Servers, partially offset by proceeds from issuance of common stock of $12.7 million.

Net cash provided by financing activities in the twelve months ended December 31, 2018 was $317.2 million resulted primarily from our initial public offering netting $292.5 million plus proceeds from the issuance of common stock of $1.5 million, partially offset by distributions paid to our PPA Equity Investors of $15.3 million, repayments of long-term debt of $20.2 million, and payments of initial public offering issuance costs of $5.5 million.

Net cash provided by financing activities in the twelve months ended December 31, 2017 was $142.9 million resulted from net proceeds from the issuance of debt of $93.9 million and net proceeds from noncontrolling and redeemable noncontrolling interests of $13.7 million, partially offset by distributions paid to our PPA Equity Investors of $23.7 million, repayments of long-term debt of $21.4 million, and costs related to our initial public offering of $1.1 million.

Outstanding Loans and Security Agreements

The following is a summary of our debt as of December 31, 2019 (in thousands):

	Unpaid Principal Balance	Net Carrying Value			Unused Borrowing Capacity
		Current	Long-Term	Total	
LIBOR + 4% term loan due November 2020	$ 1,571	$ 1,536	$ —	$ 1,536	$ —
5% convertible promissory note due December 2020	33,104	36,482	—	36,482	—
6% convertible promissory notes due December 2020	289,299	273,410	—	273,410	—
10% notes due July 2024	93,000	14,000	75,962	89,962	—
Total recourse debt	416,974	325,428	75,962	401,390	—
7.5% term loan due September 2028	38,338	3,882	31,088	34,970	—
6.07% senior secured notes due March 2030	80,988	3,151	76,865	80,016	—
LIBOR + 2.5% term loan due December 2021	121,784	5,122	115,315	120,437	—
Available letters of credit, expires December 2021	—	—	—	—	1,220
Total non-recourse debt	241,110	12,155	223,268	235,423	1,220
Total debt	$ 658,084	$ 337,583	$ 299,230	$ 636,813	$ 1,220

Recourse debt refers to debt that Bloom Energy Corporation has an obligation to pay. Non-recourse debt refers to debt that is recourse to only specified assets or our subsidiaries. The differences between the unpaid principal balances and the net carrying values are due to debt discounts and deferred financing costs. We were in compliance with all of our financial covenants as of December 31, 2019 and 2018.

Recourse Debt Facilities

LIBOR + 4% Term Loan due November 2020 - In May 2013, we entered into a $5.0 million credit agreement and a $12.0 million financing agreement to help fund the building of a new facility in Newark, Delaware. The $5.0 million credit agreement expired in December 2016. The $12.0 million financing agreement has a term of 90 months, payable monthly at a variable rate equal to one month LIBOR plus the applicable margin. The year-to-date weighted average interest rate as of December 31, 2019 and 2018 was 6.3% and 5.9%, respectively. The loan requires monthly payments and is secured by the manufacturing facility. In addition, the credit agreement includes a cross-default provision which provides that the remaining balance of borrowing under the agreement will be due and payable immediately if a lien is placed on the Newark facility in the event we default on any indebtedness in excess of $100,000 individually or $300,000 in the aggregate. Under the terms of the financing agreement, we are required to comply with various restrictive covenants. As of December 31, 2019 and 2018, the debt outstanding was $1.6 million and $3.3 million, respectively.

5% Convertible Promissory Notes due 2020 (Originally 8% Convertible Promissory Notes due December 2018) - Between December 2014 and June 2016, we issued $193.2 million of three-year convertible promissory notes ("8% Notes") to certain investors. The 8% Notes had a fixed interest rate of 8% compounded monthly, due at maturity or at the election of the investor with accrued interest due in December of each year.

On January 18, 2018, amendments were finalized to extend the maturity dates for all the 8% Notes to December 2019. At the same time, the portion of the notes that was held by Constellation NewEnergy, Inc. ("Constellation") was extended to December 2020 and the interest rate decreased from 8% to 5% ("5% Notes").

Investors held the right to convert the unpaid principal and accrued interest of both the 8% Notes and 5% Notes to Series G convertible preferred stock at any time at the price of $38.64 per share. In July 2018, upon our IPO, the $221.6 million of principal and accrued interest of outstanding 8% Notes automatically converted into additional paid-in capital, the conversion of which included all the related-party noteholders. The 8% Notes converted to shares of Series G convertible preferred stock and, concurrently, each such share of Series G convertible preferred stock converted automatically into one share of Class B common stock. Upon our IPO, 5,734,440.0 shares of Class B common stock were issued from conversions and the 8% Notes were retired. Constellation, the holder of the 5% Notes, has not elected to convert as of December 31, 2019. The outstanding unpaid principal and accrued interest debt balance of the 5% Notes of $36.5 million was classified as current as of December 31, 2019, and the outstanding unpaid principal and accrued interest debt balance of the 5% Notes of $36.5 million was classified as non-current as of December 31, 2018.

6% Convertible Promissory Notes due December 2020 - Between December 2015 and September 2016, we issued $260.0 million convertible promissory notes due December 2020, ("6% Notes") to investors. The 6% Notes bore a 5% fixed interest rate, payable monthly either in cash or in kind, at our election. We amended the terms of the 6% Notes in June 2017 to reduce the collateral securing the notes and to increase the interest rate from 5% to 6%.

As of December 31, 2019 and 2018, the amount outstanding on the 6% Notes, which includes interest paid in kind through the IPO date, was $289.3 million and $296.2 million, respectively. Upon the IPO, the debt was convertible at the option of the holders at the conversion price of $11.25 per share into common stock at any time through the maturity date. In January 2018, we amended the terms of the 6% Notes to extend the convertible put option, which investors could elect only if the IPO did not occur prior to December 2019. After the IPO, we paid the interest in cash when due and no additional interest accrued on the consolidated balance sheet on the 6% Notes. In November 2019, one note holder exchanged a portion of their 6% Notes at the conversion price of $11.25 per share into 616,302 shares of common stock.

On or after July 27, 2020, we may redeem, at our option, all or part of the 6% Notes if the last reported sale price of our common stock has been at least $22.50 for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending within the three trading days immediately preceding the date on which we provide written notice of redemption In certain circumstances, the 6% Notes are also redeemable at our option in connection with a change of control.

Under the terms of the indenture governing the 6% Notes, we are required to comply with various restrictive covenants, including meeting reporting requirements, such as the preparation and delivery of audited consolidated financial statements, and restrictions on investments. In addition, we are required to maintain collateral which secures the 6% Notes in an amount equal to 200% of the principal amount of and accrued and unpaid interest on the outstanding notes. This minimum collateral test is not a negative covenant and does not result in a default if not met. However, the minimum collateral test does restrict us with respect to investing in non-PPA subsidiaries. If we do not meet the minimum collateral test, we cannot invest cash into any non-PPA subsidiary that is not a guarantor of the notes. The 6% Notes also include a cross-acceleration provision which provides that the holders of at least 25% of the outstanding principal amount of the 6% Notes may cause such notes to become immediately due and payable if we or any of our subsidiaries default on any indebtedness in excess of $15.0 million such that the repayment of such indebtedness is accelerated.

In connection with the issuance of the 6% Notes, we agreed to issue to J.P. Morgan and CPPIB, upon the occurrence of certain conditions, warrants to purchase our common stock up to a maximum of 146,666 shares and 166,222 shares, respectively. On August 31, 2017, J.P. Morgan transferred its rights to CPPIB. Upon completion of the IPO, the 312,888 warrants were net exercised for 312,575 shares of Class B Common stock.

10% Notes due July 2024 - In June 2017, we issued $100.0 million of senior secured notes ("10% Notes"). The 10% Notes mature in 2024 and bear a 10.0% fixed rate of interest and with principal amortization started July 2019, payable semi-annually. The 10% Notes have a continuing security interest in the cash flows payable to us as servicing, operations and maintenance fees and administrative fees from certain active power purchase agreements. Under the terms of the indenture governing the notes, we are required to comply with various restrictive covenants including, among other things, to maintain certain financial ratios such as debt service coverage ratios, to incur additional debt, issue guarantees, incur liens, make loans or investments, make asset dispositions, issue or sell share capital of our subsidiaries and pay dividends, meet reporting requirements, including the preparation and delivery of audited consolidated financial statements, or maintain certain restrictions on investments and requirements in incurring new debt. As of December 31, 2019, we were in compliance with all of such covenants. In addition, we are required to maintain collateral which secures the 10% Notes based on debt ratio analyses. This minimum collateral test is not a negative covenant and does not result in a default if not met. However, the minimum debt service coverage ratio test does restrict our access to the excess cash escrowed in a collection account which would otherwise be released to us on a bi-annual basis after principal amortization and interest payment. The outstanding unpaid principal and accrued interest debt balance of the 10% Notes of $14.0 million and $7.0 million were classified as current as of December 31, 2019 and 2018, respectively and the outstanding unpaid principal and accrued interest debt balances of the 10% Notes of $76.0 million and $88.6 million were classified as non-current as of December 31, 2019 and 2018, respectively.

Non-recourse Debt Facilities

5.22% Senior Secured Term Notes - In March 2013, PPA Company II refinanced its existing debt by issuing 5.22% Senior Secured Notes due March 30, 2025 (the "5.22% Notes"). During the year ended December 31, 2019, there was a decommissioning in PPA II, including the retirement of the 5.22% Notes outstanding unpaid debt and interest of $77.6 million, which included the accumulated unpaid interest on the debt. See *Note 13, Power Purchase Agreement Programs - PPA II Upgrade of Energy Servers* for additional information.

7.5% Term Loan due September 2028 - In December 2012 and later amended in August 2013, PPA IIIa entered into a $46.8 million credit agreement to help fund the purchase and installation of Energy Servers. The loan bears a fixed interest rate of 7.5% payable quarterly. The loan requires quarterly principal payments which began in March 2014. The credit agreement requires us to maintain a debt service reserve for all funded systems, the balance of which was $3.8 million and $3.7 million as of December 31, 2019 and 2018, respectively, and which was included as part of long-term restricted cash in the consolidated balance sheets. The loan is secured by all assets of PPA IIIa.

LIBOR + 5.25% Term Loan due October 2020 - In September 2013, PPA IIIb entered into a credit agreement to help fund the purchase and installation of Energy Servers. The aggregate amount of the debt facility was $32.5 million. During the year ended December 31, 2019, there was a decommissioning in PPA IIIb, including the retirement of this outstanding unpaid debt of $24.2 million, which included the accumulated unpaid interest on the debt. See *Note 13, Power Purchase Agreement Programs - PPA IIIb Upgrade of Energy Servers* for additional information.

6.07% Senior Secured Notes - In July 2014, PPA IV issued senior secured notes amounting to $99.0 million to third parties to help fund the purchase and installation of Energy Servers. The notes bear a fixed interest rate of 6.07% payable quarterly which began in December 2015 and ends in March 2030. The notes are secured by all the assets of the PPA IV. The Note Purchase Agreement requires us to maintain a debt service reserve, the balance of which was $8.0 million as of December 31, 2019 and $6.5 million as of December 31, 2018, and which was included as part of long-term restricted cash in the consolidated balance sheets.

LIBOR + 2.5% Term Loan due December 2021 - In June 2015, PPA V entered into a $131.2 million credit agreement to fund the purchase and installation of Energy Servers. The lenders are a group of five financial institutions and the terms included commitments to a letter of credit (LC) facility (see below). The loan was initially advanced as a construction loan during the development of the PPA V Project and converted into a term loan on February 28, 2017 (the “Term Conversion Date”). As part of the term loan’s conversion, the LC facility commitments were adjusted.

In accordance with the credit agreement, PPA V was issued a floating rate debt based on LIBOR plus a margin, paid quarterly. The applicable margins used for calculating interest expense are 2.25% for years 1-3 following the Term Conversion Date and 2.5% thereafter. The loan is secured by all the assets of the PPA V and requires quarterly principal payments which began in March 2017. In connection with the floating-rate credit agreement, in July 2015 the PPA V entered into pay-fixed, receive-float interest rate swap agreements to convert its floating-rate loan into a fixed-rate loan.

Letters of credit due December 2021 - In June 2015, PPA V entered into a $131.2 million term loan due December 2021. The agreement also included commitments to a letter of credit ("LC") facility, with the characteristics of a line of credit, with the aggregate principal amount of $6.4 million, later adjusted down to $6.2 million. The amount reserved under the letter of credit as of December 31, 2019 and 2018 was $5.0 million. The unused capacity as of December 31, 2019 and 2018 was $1.2 million.

Contractual Obligations and Other Commitments

The following table summarizes our contractual obligations and the debt of our consolidated PPA entities that is non-recourse to Bloom as of December 31, 2019:

	Payments Due By Period				
	Total	Less than 1 Year	1-3 Years	3-5 Years	More than 5 Years
	(in thousands)				
Contractual Obligations and Other Commitments:					
Recourse debt[1]	$ 416,974	$ 337,974	$ 34,000	$ 45,000	$ —
Non-recourse debt[2]	241,110	12,155	131,416	20,391	77,148
Operating leases	43,411	7,250	9,662	8,586	17,913
Service arrangements	3,255	1,397	1,858	—	—
Financing obligations	312,862	37,840	78,406	79,024	117,592
Natural gas fixed price forward contracts	6,968	4,052	2,916	—	—
Grant for Delaware facility	10,469	—	10,469	—	—
Interest rate swap	9,130	782	2,384	2,486	3,478
Supplier purchase commitments	2,324	1,225	1,099	—	—
Renewable energy credit obligations	1,109	761	348	—	—
Asset retirement obligations	500	500	—	—	—
Total	$ 1,048,112	$ 403,936	$ 272,558	$ 155,487	$ 216,131

[1] Our 6% Notes and our credit agreements related to the building of our facility in Newark, Delaware each contain cross-default or cross-acceleration provisions. See "Recourse Debt Facilities" above for more details.

[2] Each of the debt facilities entered into by PPA IIIa, PPA IV and PPA V contain cross-default provisions. See "Non-recourse Debt Facilities" above for more details.

Off-Balance Sheet Arrangements

We include in our consolidated financial statements all assets and liabilities and results of operations of our PPA Entities that we have entered into and over which we have substantial control. For additional information, see Note 13, *Power Purchase Agreement Programs*.

We have not entered into any other transactions that have generated relationships with unconsolidated entities or financial partnerships or special purpose entities. Accordingly, as of December 31, 2019 and 2018, we had no off-balance sheet arrangements.

ITEM 7A - QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

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

Interest Rate Risk

Our cash is maintained in interest-bearing accounts, our cash equivalents are invested in money market funds and our short-term investments are invested in U.S. Treasury Bills. Lower interest rates would have an adverse impact on our interest income. Due to the short-term investment nature of our cash, cash equivalents and short-term investments, 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 liquidate substantially all of this 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, cash equivalents and short-term investments, we performed a sensitivity analysis to determine the impact a change in interest rates would have on income statement and in investment fair values assuming a 1% decline in yield. Based on investment positions in both December 31, 2019 and 2018, a hypothetical 1% decrease in interest rates across all maturities would result in a $3.8 million decline in interest income on an annualized basis. 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 are exposed to interest rate risk related to our indebtedness that bears interest based on a floating LIBOR rate. We generally hedge such interest rate risks with the use of hedging instruments, and for these loans, changes in interest rates are generally offset by interest rate derivative swap contracts. For our fixed-rate debt, interest rate changes do not affect our earnings or cash flows.

To provide a meaningful assessment of the interest rate risk for that portion of our outstanding loans associated with floating LIBOR and not covered by interest rate derivative swaps, we performed a sensitivity analysis to determine the impact a change in interest rates would have on our consolidated statements of operations assuming a 1% interest rate increase. Based on monthly floating-rate loan positions for the years ended December 31, 2019 and 2018, a hypothetical 1% increase in LIBOR would have resulted in a $0.3 million and a $0.2 million increase to our interest expense, respectively. These losses would be directly attributable to our PPA Entities.

Commodity Price Risk

We are subject to commodity price risk arising from price movements for natural gas that we supply to 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 the definition of a derivative under U.S. GAAP and accordingly, any changes in its fair value is recorded within cost of revenue in the 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.

To provide a meaningful assessment of the commodity price risk arising from price movements in the commodity futures contracts for natural gas, we performed a sensitivity analysis to determine the impact a change in natural gas commodity pricing would have on our consolidated statements of operations assuming a 10% change in the commodity contracts held. Based on monthly commodity positions for the years ended December 31, 2019 and 2018, a hypothetical 10% increase in the price of natural gas futures would have resulted in a $0.6 million and a $1.0 million adjustment to their balance sheet fair values, respectively.

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 U.S. However, we conduct some internationally domiciled 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% decline in the value of the U.S. dollar. Based on our foreign currency holdings as of December 31, 2019 and 2018, a hypothetical 20% 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, 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.

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, 2019 and 2018 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.

ITEM 8 - FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Bloom Energy Corporation

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Bloom Energy Corporation and its subsidiaries (the "Company") as of December 31, 2019 and 2018, and the related consolidated statements of operations, of comprehensive loss, of convertible redeemable preferred stock, redeemable noncontrolling interest, stockholders' deficit and noncontrolling interest and of cash flows for each of the three years in the period ended December 31, 2019, including the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019 in conformity with accounting principles generally accepted in the United States of America.

Restatement of Previously Issued Financial Statements

As discussed in Note 2 to the consolidated financial statements, the Company has restated its consolidated financial statements as of and for the year ended December 31, 2018 to correct misstatements.

Change in Accounting Principle

As discussed in Note 1 to the consolidated financial statements, the Company changed the manner in which it accounts for revenue from contracts with customers in 2019.

Basis for Opinion

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

We conducted our audits of these consolidated financial statements in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

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

/s/ PricewaterhouseCoopers LLP
San Jose, California
March 31, 2020

We have served as the Company's auditor since 2009.

Bloom Energy Corporation
Consolidated Balance Sheets
(in thousands, except share and per share data)

	December 31,	
	2019	2018 As Restated
Assets		
Current assets:		
Cash and cash equivalents[1]	$ 202,823	$ 220,728
Restricted cash[1]	30,804	28,657
Short-term investments	—	104,350
Accounts receivable[1]	37,828	88,784
Inventories	109,606	135,265
Deferred cost of revenue	58,470	43,809
Customer financing receivable[1]	5,108	5,594
Prepaid expenses and other current assets[1]	28,068	36,747
Total current assets	472,707	663,934
Property, plant and equipment, net[1]	607,059	716,751
Customer financing receivable, non-current[1]	50,747	67,082
Restricted cash, non-current[1]	143,761	31,100
Deferred cost of revenue, non-current	6,665	45
Other long-term assets[1]	41,652	42,882
Total assets	$ 1,322,591	$ 1,521,794
Liabilities, Redeemable Noncontrolling Interest, Stockholders' Deficit and Noncontrolling Interest		
Current liabilities:		
Accounts payable[1]	$ 55,579	$ 66,889
Accrued warranty	10,333	17,968
Accrued expenses and other current liabilities[1]	70,284	66,838
Deferred revenue and customer deposits[1]	89,192	67,632
Financing obligations	10,993	8,128
Current portion of recourse debt	304,627	8,686
Current portion of non-recourse debt[1]	8,273	18,962
Current portion of recourse debt from related parties	20,801	—
Current portion of non-recourse debt from related parties[1]	3,882	2,200
Total current liabilities	573,964	257,303
Derivative liabilities[1]	17,551	14,143
Deferred revenue and customer deposits, net of current portion[1]	125,529	87,308
Financing obligations, non-current	446,165	385,650
Long-term portion of recourse debt	75,962	360,339
Long-term portion of non-recourse debt[1]	192,180	289,241
Long-term portion of recourse debt from related parties	—	27,734
Long-term portion of non-recourse debt from related parties[1]	31,087	34,119
Other long-term liabilities[1]	28,013	26,196
Total liabilities	1,490,451	1,482,033
Commitments and contingencies (Note 14)		
Redeemable noncontrolling interest	443	57,261
Stockholders' deficit:		
Common stock: $0.0001 par value; Class A shares, 600,000,000 shares authorized at both December 31, 2019 and 2018, and 84,549,511 shares and 20,868,286 shares issued and outstanding at December 31, 2019 and 2018, respectively; Class B shares, 600,000,000 shares authorized at both December 31, 2019 and 2018, and 36,486,778 shares and 88,552,897 shares issued and outstanding at December 31, 2019 and 2018, respectively.	12	11
Additional paid-in capital	2,686,759	2,481,352
Accumulated other comprehensive income	19	131

Accumulated deficit		(2,946,384)		(2,624,104)
Total stockholders’ deficit		(259,594)		(142,610)
Noncontrolling interest		91,291		125,110
Total liabilities, redeemable noncontrolling interest, stockholders' deficit and noncontrolling interest	$	1,322,591	$	1,521,794

[1]We have variable interest entities which represent a portion of the consolidated balances are recorded within these financial statement line items in the Consolidated Balance Sheets (see *Note 13, Power Purchase Agreement Programs*).

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,		
	2019	2018	2017
		As Restated	As Revised
Revenue:			
Product	$ 557,336	$ 400,638	$ 157,192
Installation	60,826	68,195	57,937
Service	95,786	83,267	74,892
Electricity	71,229	80,548	75,602
Total revenue	785,177	632,648	365,623
Cost of revenue:			
Product	435,479	281,275	192,361
Installation	76,487	95,306	54,970
Service	100,238	100,689	85,128
Electricity	75,386	49,628	49,475
Total cost of revenue	687,590	526,898	381,934
Gross profit (loss)	97,587	105,750	(16,311)
Operating expenses:			
Research and development	104,168	89,135	51,146
Sales and marketing	73,573	62,807	31,926
General and administrative	152,650	118,817	55,689
Total operating expenses	330,391	270,759	138,761
Loss from operations	(232,804)	(165,009)	(155,072)
Interest income	5,661	4,322	759
Interest expense	(87,480)	(97,021)	(112,039)
Interest expense to related parties	(6,756)	(8,893)	(12,265)
Other income (expense), net	706	(999)	(491)
Gain (loss) on revaluation of warrant liabilities and embedded derivatives	(2,160)	(22,139)	(15,284)
Loss before income taxes	(322,833)	(289,739)	(294,392)
Income tax provision	633	1,537	636
Net loss	(323,466)	(291,276)	(295,028)
Less: net loss attributable to noncontrolling interests and redeemable noncontrolling interests	(19,052)	(17,736)	(18,666)
Net loss attributable to Class A and Class B common stockholders	(304,414)	(273,540)	(276,362)
Less: deemed dividend to noncontrolling interest	(2,454)	—	—
Net loss available to Class A and Class B common stockholders	$ (306,868)	$ (273,540)	$ (276,362)
Net loss per share available to Class A and Class B common stockholders, basic and diluted	$ (2.67)	$ (5.14)	$ (26.97)
Weighted average shares used to compute net loss per share attributable to Class A and Class B common stockholders, basic and diluted	115,118	53,268	10,248

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,		
	2019	2018	2017
		As Restated	As Revised
Net loss	$ (323,466)	$ (291,276)	$ (295,028)
Other comprehensive income (loss), net of taxes:			
Unrealized gain (loss) on available-for-sale securities	14	26	(13)
Change in effective portion of interest rate swap	(295)	267	393
Other comprehensive income	(281)	293	380
Comprehensive loss	$ (323,747)	$ (290,983)	$ (294,648)

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

Bloom Energy Corporation
Consolidated Statements of Convertible Redeemable Preferred Stock, Redeemable Noncontrolling Interest, Stockholders' Deficit and Noncontrolling Interest
(in thousands, except shares)

	Convertible Redeemable Preferred Stock		Redeemable Noncontrolling Interest	Class A and Class B Common Stock[1]		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Deficit	Noncontrolling Interest
	Shares	Amount		Shares	Amount					
Balances at December 31, 2016 (as Reported)	71,740,162	$ 1,465,841	$ 59,320	10,132,220	$ 1	$ 108,647	$ (542)	$ (2,068,048)	$ (1,959,942)	$ 175,668
Adjustments to accumulated deficit and total stockholders' deficit	—	—	—	—	—	—	—	(6,154)	(6,154)	—
Balances at December 31, 2016 (as Revised)	71,740,162	1,465,841	59,320	10,132,220	1	108,647	(542)	(2,074,202)	(1,966,096)	175,668
Contributions from noncontrolling interests	—	—	—	—	—	—	—	—	—	13,652
Issuance of common stock warrant	—	—	—	—	—	9,410	—	—	9,410	—
Issuance of common stock	—	—	—	64,000	—	1,981	—	—	1,981	—
Exercise of stock options	—	—	—	123,153	—	432	—	—	432	—
Issuance of restricted stock awards	—	—	—	33,896	—	1,254	—	—	1,254	—
Stock-based compensation	—	—	—	—	—	29,080	—	—	29,080	—
Unrealized gain on available-for-sale securities	—	—	—	—	—	—	(13)	—	(13)	—
Change in effective portion of interest rate swap agreement	—	—	1	—	—	—	393	—	393	500
Distributions to noncontrolling interests	—	—	(5,104)	—	—	—	—	—	—	(11,845)
Net income (loss) (as revised)	—	—	3,937	—	—	—	—	(276,362)	(276,362)	(22,603)
Balances at December 31, 2017 (as Revised)	71,740,162	1,465,841	58,154	10,353,269	1	150,804	(162)	(2,350,564)	(2,199,921)	155,372
Issuance of Class A common stock upon public offering, net	—	—	—	20,700,000	2	282,274	—	—	282,276	—
Issuance of Class B common stock on convertible notes	—	—	—	5,734,440	1	221,579	—	—	221,580	—
Issuance of Class A and B common stock upon exercise of warrants	—	—	—	312,575	—	—	—	—	—	—
Conversion of redeemable convertible preferred stock Series A-G	(71,740,162)	(1,465,841)	—	71,740,162	7	1,465,834	—	—	1,465,841	—
Reclassification of redeemable convertible preferred stock warrant liability to additional paid-in capital	—	—	—	—	—	882	—	—	882	—
Reclassification of derivative liability into additional paid-in capital (as restated)	—	—	—	—	—	177,963	—	—	177,963	—
Issuance of common stock	—	—	—	166,667	—	2,500	—	—	2,500	—
Issuance of restricted stock awards	—	—	—	17,793	—	349	—	—	349	—
Exercise of stock options	—	—	—	396,277	—	1,521	—	—	1,521	—
Stock-based compensation	—	—	—	—	—	177,646	—	—	177,646	—
Unrealized loss on available-for-sale securities	—	—	—	—	—	—	26	—	26	—
Change in effective portion of interest rate swap agreement	—	—	2	—	—	—	267	—	267	1,829

	Convertible Redeemable Preferred Stock		Redeemable Noncontrolling Interest	Class A and Class B Common Stock[1]		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Deficit	Noncontrolling Interest
	Shares	Amount		Shares	Amount					
Distributions to noncontrolling interests	—	—	(6,788)	—	—	—	—	—	—	(8,462)
Net loss (as restated)	—	—	5,893	—	—	—	—	(273,540)	(273,540)	(23,629)
Balances at December 31, 2018 (as Restated)	—	—	57,261	109,421,183	11	2,481,352	131	(2,624,104)	(142,610)	125,110
Cumulative effect upon adoption of new accounting standard (Note 3)	—	—	—	—	—	—	—	(17,996)	(17,996)	—
Buyout of equity investors in PPA IIIb (Note 13)	—	—	—	—	—	(2,454)	169	—	(2,285)	—
Conversion of Notes	—	—	—	616,302	—	6,933	—	—	6,933	—
Issuance of restricted stock awards	—	—	—	8,921,807	1	—	—	—	1	—
ESPP purchase	—	—	—	1,718,433	—	11,183	—	—	11,183	—
Exercise of stock options	—	—	—	358,564	—	1,529	—	—	1,529	—
Stock-based compensation	—	—	—	—	—	188,114	—	—	188,114	—
Unrealized loss on available-for-sale securities	—	—	—	—	—	—	14	—	14	—
Change in effective portion of interest rate swap agreement	—	—	—	—	—	—	(295)	—	(295)	(5,790)
Distributions to noncontrolling interests	—	—	(4,011)	—	—	102		—	102	(5,970)
Mandatory redemption of noncontrolling interests	—	—	(55,684)	—	—	—	—	—	—	—
Cumulative effect of hedge accounting	—	—	—	—	—	—		130	130	(130)
Net income (loss)	—	—	2,877	—	—	—	—	(304,414)	(304,414)	(21,929)
Balances at December 31, 2019	—	—	**$ 443**	**121,036,289**	**$ 12**	**$ 2,686,759**	**$ 19**	**$ (2,946,384)**	**$ (259,594)**	**$ 91,291**

[1] Common Stock issued and converted to Class A Common and Class B Common effective July 2018.
[2] Amounts are less than $0.5 thousand and round down to zero.

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

Bloom Energy Corporation
Consolidated Statements of Cash Flows
(in thousands)

	Years Ended December 31,		
	2019	2018	2017
		As Restated	As Revised
Cash flows from operating activities:			
Net loss	$ (323,466)	$ (291,276)	$ (295,028)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	78,584	53,887	54,376
Write-off of property, plant and equipment, net	3,117	939	48
Write-off of customer financing receivable	11,302	—	—
Write-off of PPA II and PPA IIIb decommissioned assets	70,543	—	—
Debt make-whole expense	5,934	—	—
Revaluation of derivative contracts	2,779	29,021	15,042
Stock-based compensation	196,291	168,482	29,101
Loss (gain) on long-term REC purchase contract	53	200	(70)
Revaluation of stock warrants	—	(9,108)	(2,975)
Amortization of debt issuance cost	22,130	25,437	47,312
Changes in operating assets and liabilities:			
Accounts receivable	51,952	(55,023)	3,242
Inventories	18,425	(36,974)	(10,636)
Deferred cost of revenue	(21,992)	14,223	(31,278)
Customer financing receivable and other	5,520	4,878	5,459
Prepaid expenses and other current assets	8,643	(8,032)	(982)
Other long-term assets	3,618	(202)	756
Accounts payable	(11,310)	18,307	7,076
Accrued warranty	(6,603)	1,498	(7,365)
Accrued expenses and other current liabilities	6,728	(5,984)	7,997
Deferred revenue and customer deposits	37,146	(21,774)	48,322
Other long-term liabilities	4,376	19,553	37,637
Net cash provided by (used in) operating activities	163,770	(91,948)	(91,966)
Cash flows from investing activities:			
Purchase of property, plant and equipment	(51,053)	(45,205)	(61,454)
Payments for acquisition of intangible assets	—	(3,256)	—
Purchase of marketable securities	—	(103,914)	(29,043)
Proceeds from maturity of marketable securities	104,500	27,000	2,250
Net cash provided by (used in) investing activities	53,447	(125,375)	(88,247)
Cash flows from financing activities:			
Borrowings from issuance of debt	—	—	100,000
Repayment of debt	(119,277)	(18,770)	(20,507)
Repayment of debt to related parties	(2,200)	(1,390)	(912)
Debt make-whole payment	(5,934)	—	—
Debt issuance costs	—	—	(6,108)
Proceeds from financing obligations	72,334	70,265	84,314
Repayment of financing obligations	(8,954)	(6,188)	(3,210)
Proceeds from noncontrolling and redeemable noncontrolling interests	—	—	13,652
Payments to noncontrolling and redeemable noncontrolling interests	(56,459)	—	—
Distributions to noncontrolling and redeemable noncontrolling interests	(12,537)	(15,250)	(23,659)
Proceeds from issuance of common stock	12,713	1,521	432
Proceeds from public offerings, net of underwriting discounts and commissions	—	292,529	—
Payments of initial public offering issuance costs	—	(5,521)	(1,092)
Net cash provided by (used in) financing activities	(120,314)	317,196	142,910

Net increase (decrease) in cash, cash equivalents, and restricted cash		96,903		99,873		(37,303)
Cash, cash equivalents, and restricted cash:						
Beginning of period		280,485		180,612		217,915
End of period	$	377,388	$	280,485	$	180,612
Supplemental disclosure of cash flow information:						
Cash paid during the period for interest	$	69,851	$	59,549	$	37,628
Cash paid during the period for taxes		860		1,748		616
Non-cash investing and financing activities:						
Liabilities recorded for property, plant and equipment		1,745		12,236		975
Liabilities recorded for intangible assets		—		3,180		2,138
Issuance of common stock warrant		—		—		9,410
Reclassification of redeemable convertible preferred stock warrant liability to additional paid-in capital		—		882		—
Conversion of redeemable convertible preferred stock into additional paid-in capital		—		1,465,841		—
Conversion of 8% convertible promissory notes into additional paid-in capital		—		181,469		—
Conversion of 6% and 8% convertible promissory notes into additional paid-in capital to related parties		6,933		40,110		—
Reclassification of derivative liability into additional paid-in capital		—		177,208		—
Reclassification of prior year prepaid initial public offering costs to additional paid-in capital		—		4,732		—
Issuance of common stock		—		—		1,981
Issuance of restricted stock		—		—		1,254
Accrued distributions to Equity Investors		373		576		576
Accrued interest for notes		1,812		19,041		29,705
Accrued interest for notes to related parties		—		2,733		4,368

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

1. Nature of Business, Liquidity, Basis of Presentation and Summary of Significant Accounting Policies

Nature of Business

We design, manufacture, sell and, in certain cases, install solid-oxide fuel cell systems ("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. We were originally incorporated in Delaware under the name of Ion America Corporation on January 18, 2001 and on September 16, 2006, we changed our name to Bloom Energy Corporation.

Liquidity

We have incurred operating losses and negative cash flows from operations since our inception. Additionally, as disclosed in Note 17, *Subsequent Events*, the impact of COVID-19 on our ability to execute our business strategy and on our financial position and results of operations is uncertain. Additionally, as of December 31, 2019, the current portion of our total debt was $337.6 million, which would require cash payments of $353.5 million in the next 12 months. Cash and cash equivalents and other liquidity was insufficient to satisfy the above current debt obligations as well as operating cash flow requirements as of December 31, 2019. As a result, on March 31, 2020, we extended the maturity for our current debt as follows:

- We entered into an Amendment Support Agreement (the “Amendment Support Agreement”) with the beneficial owners (the “Noteholders”) of its outstanding 6.0% Convertible Notes due 2020 (the “Convertible Notes”) pursuant to which such Noteholders have agreed, to extend the maturity date of the Convertible Notes to December 1, 2021. In connection with the extension, the interest rate was increased to 10% and the strike price on the conversion feature was reduced to $8/share. The Amendment Support Agreement requires that we repay at least $70.0 million of the Convertible Notes on or before September 1, 2020.
- On March 31, 2020, we entered into an Amended and Restated Subordinated Secured Convertible Note Modification Agreement (the “Constellation Note Modification Agreement”) with Constellation NewEnergy, Inc. (“Constellation”) pursuant to which certain terms of our outstanding Amended and Restated Subordinated Secured Convertible Note issued to Constellation were modified to extend the maturity date to December 31, 2021.
- On March 31, 2020, we entered into a note purchase agreement pursuant to which certain investors have agreed to purchase, and we have agreed to issue, $70.0 million of 10.25% Senior Secured Notes due 2027 (the “Senior Secured Notes”) in a private placement (the “Senior Secured Notes Private Placement”). The funding of the Note Purchase Agreement, which is expected to occur no later than May 29, 2020, is subject to certain conditions, including obtaining a rating from a rating agency which is dependent upon providing audited financial statements as of and for the year ended December 31, 2019. Upon funding by the purchasers, 100% of any funds received is required to be utilized to pay one holder of the Convertible Notes discussed above. This payment will be used to extinguish the $70.0 million due as of September 1, 2020.
- Also on March 31, 2020, we entered into a convertible note purchase agreement (the “Convertible Note Purchase Agreement”) with Foris Ventures, LLC and New Enterprise Associates 10, Limited Partnership (together, the “Purchasers”), pursuant to which such Purchasers were issued $30.0 million aggregate principal amount of additional Convertible Notes.

Our future cash flow requirements may vary materially from those currently planned and 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, the expansion of sales and marketing activities, market acceptance of our products, the timing of receipt by us of distributions from our PPA Entities and overall economic conditions including the impact of COVID-19 on our future operations. However, in the opinion of management, the combination of our existing cash and cash equivalents, the extension of the Convertible Notes and Constellation Note Modification to December 2021, the proceeds from the convertible note agreement, 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 this Annual Report on Form 10-K.

For additional information on the terms of the amended Notes and the terms and provision of the new notes obtained, see Note 17, *Subsequent Events*.

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").

The consolidated balance sheets as of December 31, 2019 and 2018, the consolidated statements of operations, the consolidated statements of comprehensive loss, the consolidated statements of convertible redeemable preferred stock, redeemable noncontrolling interest, stockholders' deficit and noncontrolling interest, and the consolidated statements of cash flows for the years ended December 31, 2019, 2018 and 2017, as well as other information disclosed in the accompanying notes have been prepared in accordance with generally accepted accounting principles as applied in the United States ("U.S. GAAP").

Restatement and Revision of Previously Issued Consolidated Financial Statements

In this Annual Report on Form 10-K, we have restated our consolidated financial statements for the year ended December 31, 2018, as well as the unaudited financial statements for the three month period ended March 31, 2019, the three and six month periods ended June 30, 2019 and 2018 and the three and nine month periods ended September 30, 2019 and 2018, to correct misstatements in those prior periods primarily related to (i) misstatements identified in improperly applying accounting guidance on certain managed services and similar transactions and recognizing them as sales, rather than financing transactions, under the guidance of Accounting Standards Codification ("ASC") Topic 840 - *Leases*, (ii) misstatements relating to not capitalizing stock-based compensation expenses directly associated with the product manufacturing operations process and expensed when the capitalized asset is used in the normal course of the sales or services process under the provisions of SEC Staff Accounting Bulletin Topic 14, (iii) misstatements related to not recording derivative liabilities for embedded derivatives in certain revenue agreements for an escalator price protection (“EPP”) feature given to our customers, and (iv) certain other identified misstatements which were not material individually or in the aggregate.

In addition, management determined that the impact of these misstatements to periods prior to the three months ended June 30, 2018 was not material to warrant restatement of reported figures; however, our consolidated financial statements as of and for the year ended December 31, 2017 and the unaudited interim condensed consolidated financial information for the three month period ended March 31, 2018 are revised to correct these misstatements.

See Note 2, *Restatement and Revision of Previously Issued Consolidated Financial Statements* for additional information regarding the errors identified in this Annual Report on Form 10-K and the restatement and revision adjustments made to the Consolidated Financial Statements.

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 each of our variable interest entities ("VIE"), which we refer to as our power purchase agreement entities ("PPA Entities"). This approach focuses on determining whether we haves the power to direct those activities of the PPA Entities that most significantly affect 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 Entities. For all periods presented, we have determined that we are the primary beneficiary in all of our operational PPA Entities other than with respect to the PPA II Entity, as discussed below.

We evaluate our relationships with the PPA Entities on an ongoing basis to ensure that we continue to be the primary beneficiary. All intercompany transactions and balances have been eliminated in consolidation. On June 14, 2019, we entered into a transaction with SP Diamond State Class B Holdings, LLC (“SPDS”), a wholly owned subsidiary of Southern Power Company, in which SPDS will purchase a majority interest in PPA II, which operates in Delaware providing alternative energy generation for state tariff rate payers (the "PPA II upgrade of Energy Servers"). PPA II will use the funds received to purchase current generation Bloom Energy Servers in connection with the upgrade of its energy generation assets fleet. In connection with the closing of this transaction, SPDS was admitted as a member of Diamond State Generation Partners, LLC ("DSGP"). DSGP, an operating company, is now owned by Diamond State Generation Holdings, LLC ("DSGH") and SPDS. As a result of the PPA II upgrade of Energy Servers, we determined that we no longer retain a controlling interest in PPA II and therefore DSGP was no longer consolidated as a VIE into our consolidated financial statements as of June 30, 2019. On November 27, 2019, we entered into a PPA IIIb upgrade of Energy Servers transaction such that the Project Company became indirectly wholly-owned by us and therefore, it was no longer a VIE.

For additional information, see *Note 13, Power Purchase Agreement Programs - PPA II Upgrade of Energy Servers*.

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 best estimate of selling price under ASC 605, and stand-alone selling price under ASC 606, including material rights estimates, 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 guaranties, assumptions to compute the fair value of lease and non-lease components and related financing obligations such as incremental borrowing rates, estimated output, efficiency and residual value of the Energy Servers, warranty, product performance guaranties and extended maintenance, derivative valuations, estimates for recapture of U.S. Treasury grants and similar grants, estimates relating to contractual indemnities provisions, estimates for income taxes and deferred tax asset valuation allowances, and stock-based compensation costs . Actual results could differ materially from these estimates under different assumptions and conditions.

Concentration of Risk

Geographic Risk - The majority of our revenue and long-lived assets are attributable to operations in the United States for all periods presented. Additionally, we sell our Energy Servers in Japan, China, India, and the Republic of Korea (collectively, our "Asia Pacific region"). In the year ended December 31, 2019 and 2018, total revenue in the Asia Pacific region was 23% and 14%, respectively, of our total revenue.

Credit Risk - At December 31, 2019, two customers, Costco Wholesale Corporation and The Kraft Group LLC accounted for approximately 19% and 17%, respectively, of accounts receivable. At December 31, 2018, SK (Korea) accounted for approximately 64% of accounts receivable. At December 31, 2019 and 2018, we did not maintain any allowances for doubtful accounts as we deemed all of our receivables fully collectible. To date, we have neither provided an allowance for uncollectible accounts nor experienced any credit loss.

Customer Risk - In the year ended December 31, 2019, revenue from two customers, The Southern Company and SK (Korea) accounted for approximately 34% and 23%, respectively, of our total revenue. In the year ended December 31, 2018, revenue from customer The Southern Company accounted for approximately 51% of our total revenue. The Southern Company wholly owns a Third-Party PPA which purchases Energy Servers from us, however such purchases and resulting revenue are made on behalf of various customers of this Third-Party PPA.

Cybersecurity Risk

All of our installed Energy Servers are connected to and controlled and monitored by our centralized remote monitoring service. Additionally, we rely on internal computer networks for many of the systems used to operate the business generally. We may be vulnerable to breaches, unauthorized access, misuse, computer viruses or other malicious code and cyber-attacks. We take protective measures and endeavors to modify these internal systems as circumstances warrant to prevent unauthorized intrusions or disruptions.

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 power purchase agreements. We offer our customers several ways to finance their use of a Bloom Energy Server. Customers, including some of our international channel providers and Third Party PPAs, may choose to purchase our Energy Servers outright. Customers may also lease our Energy Servers through one of our financing partners via our Managed Services Program or as a traditional lease. Finally, customers may purchase electricity through our Power Purchase Agreement Programs.

Prior to Adoption of ASC 606 Revenue from Contracts with Customers

Prior to the adoption of ASC 606 *Revenue from Contracts with Customers*, we recognized revenue from contracts with customers for the sales of products, installation and services in accordance with ASC 605-25, *Revenue Recognition for Multiple-Element Arrangements.*

Revenue from the sale and installation of Energy Servers was recognized when all of the following criteria are met:

- Persuasive evidence of an arrangement exists. We rely upon non-cancelable sales agreements and purchase orders to determine the existence of an arrangement.
- Delivery and acceptance have occurred. We use shipping documents and confirmation from our installations team that the deployed systems are running at full power as defined in each contract to verify delivery and acceptance.
- The fee is fixed or determinable. We assess whether the fee is fixed or determinable based on the payment terms associated with the transaction.
- Collectability is reasonably assured. We assess collectability based on the customer's credit analysis and payment history.

When these criteria are met, we allocate revenue to each element of the customer arrangement (product, installation and services) based on an estimated selling price at the arrangement inception. The estimated selling price for each element is based upon the following hierarchy: vendor-specific objective evidence ("VSOE") of selling price, if available; third-party evidence ("TPE") of selling price, if VSOE of selling price is not available; or best estimate of selling price ("BESP") if neither VSOE of selling price nor TPE of selling price are available. We limit the amount of revenue recognized for delivered elements to an amount that is not contingent upon future delivery of additional products or services or upon meeting any specified performance conditions.

We have not been able to obtain reliable evidence of the selling price of the standalone Energy Server. Given that we typically sell an Energy Server with a maintenance service agreement and have not provided maintenance services to a customer who does not have use of an Energy Server, we have no evidence of selling prices for either and virtually no customers have elected to cancel their maintenance service agreements while continuing to operate the Energy Servers. Our objective is to determine the price at which we would transact business if the items were being sold separately. As a result, our estimate of our selling price is driven primarily by our expected margin on both the Energy Server and installation based on their respective costs and, in the case of maintenance service agreements, the estimated costs to be incurred during the expected service period.

Costs for 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 and to expected installation costs to determine the selling price to be used in our BESP model. Costs for maintenance service arrangements are estimated over the expected life of the maintenance contracts and include estimated future service costs and future material costs. Material costs over the expected 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. As our business offerings and eligibility for the Investment Tax Credit ("ITC") evolve over time, we may be required to modify our estimated selling prices in subsequent periods and our revenue could be adversely affected.

Subsequent to adoption of ASC 606 Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board "FASB" issued Accounting Standards Update "ASU" No. 2014-09, *"Revenue from Contracts with Customers* ("ASU 2014-09")." This standard superseded most of the previous revenue recognition guidance under U.S. GAAP and is intended to improve and converge with international standards' related financial reporting requirements for revenue recognition. The core principle of the new guidance is that an entity should recognize revenue to depict the transfer of control of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. New disclosures about the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers are also required. Subsequently, the FASB issued several standards that clarified certain aspects of ASU 2014-09, but did not significantly change the original standard. We adopted ASU 2014-09 and its related amendments (collectively "ASC 606") as of January 1, 2019 using the modified retrospective method. Under the modified retrospective method, results for reporting periods beginning after December 31, 2018 are presented under ASC 606 while prior period financial information is not adjusted and continues to be reported under prior guidance ("ASC 605"). See "*Accounting Guidance Implemented in Fiscal Year 2019*" below for additional information on the impact of adopting ASC 606.

In applying ASC 606, Revenue related to contracts with customers is recognized by following a five-step process:

- *Identify the contract(s) with a customer.* Evidence of a contract generally consists of a purchase order issued pursuant to the terms and conditions of a distributor, reseller, purchase, use and maintenance agreement, maintenance service agreements or energy supply agreement.
- *Identify the performance obligations in the contract.* Performance obligations are identified in our contracts and include transferring control of an Energy Server, installation of Energy Servers, providing maintenance services and maintenance service renewal options which provide customers with material rights.

- *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 penalties that may be payable to our customers.
- *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.
- *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 frequently combine contracts governing the sale and installation of an Energy Server with the related maintenance service 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 is different to the maintenance service 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.

Most of our contracts contain performance obligations with a combination of our Energy Server product, installation and maintenance services. For these performance obligations, we allocate revenue to each performance obligation based on the total transaction price for each contract. Our maintenance service contracts are typically subject to renewal by customers on an annual basis. We assess these maintenance service renewal options at contract inception to determine whether they provide customers with material rights that give rise to a separate performance obligation.

The total transaction price is determined based on the total consideration specified in the contract, including variable consideration in the form of a production guarantee 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 also consider the customers' rights of return in determining the transaction price where applicable.

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. We allocate the transaction price to each performance obligation in an amount that depicts the amount of consideration to which we expect to be entitled in exchange for transferring and installing the Energy Server and providing associated maintenance services.

Given that we typically sell an Energy Server with a maintenance service agreement and have not provided maintenance services to a customer who does not have use of an Energy Server, standalone selling prices are estimated using a cost-plus approach. Costs relating to 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 deployment. As our business offerings and eligibility for the Investment Tax Credit ("ITC") evolve over time, we may be required to modify the expected margin in subsequent periods and our revenue could be adversely 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 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 and the maintenance service agreements based on their respective costs or, in the case of maintenance service agreements, the estimated costs to be incurred. We recognize product and installation revenue at the point in time that the Customer obtains control of the Energy Server. We recognize maintenance service revenue, including revenue associated with any related customer material rights, over time as we perform service maintenance activities.

Amounts billed to customers for shipping and handling activities are considered contract fulfillment activities and not a separate performance obligation of the contract. Shipping and handling fees are recorded as revenue and the related cost is a cost to fulfill the contract that is recognized within costs of goods sold.

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, including financing partners on Third-Party PPAs, international channel providers and traditional lease customers. 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 is when the system has been installed and is running at full power or, in the case of sales to our international channel providers, based upon shipment terms.

Under our traditional leases financing option, 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 service contract are not combined.

Payments received from customers are recorded within deferred revenue and customer deposits in the consolidated balance sheets until the acceptance criteria as defined within the customer contract are met. The related cost of such product and installation is also deferred as a component of deferred cost in the consolidated balance sheets until acceptance.

Installation Revenue - Nearly all of our installation revenue relates to the installation of Energy Servers sold to direct purchase, including financing partners on Third-Party PPAs and traditional lease customers. Generally, we recognize installation revenue when the system has been installed and is running at full power.

Service Revenue - Service revenue is generated from maintenance services agreements. We typically provide to our customers a standard one-year warranty, against manufacturing or performance defects in our Energy Servers. We also sell to these customers extended annual maintenance services that effectively extend the standard one-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. 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.

Revenue is recognized over the term of the renewed one-year service period. Given our customers' renewal history, we anticipate that almost all of our customers will continue to renew their maintenance services agreements each year through their expected use of the Energy Server. As a result, we estimate the standalone selling price for customer renewal options that give rise to material rights using the practical alternative by reference to optional operations and maintenance services renewal periods expected to be provided and the corresponding expected consideration for these services. This reflects that our additional performance obligations in any contractual renewal period are consistent with the services provided under the initial maintenance service contract.

Payments from customers for the extended maintenance contracts are 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 using a cost-to-cost basis that reflects the cost of providing these services.

Electricity Revenue - We sell electricity produced by our Energy Servers owned directly by us or by our consolidated PPA entities. Our PPA Entities purchase Energy Servers from us and sell electricity produced by these systems to customers through long-term power purchase agreements ("PPAs"). Customers are 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 addition, in certain product sales, we are a party to master lease agreements that provide for the sale of our Energy Servers to third-parties and the simultaneous leaseback of the systems, which we then sublease to our customers. In sale-leaseback sublease arrangements ("Managed Services"), we first determine whether the Energy Servers under the sale-leaseback arrangement are “integral equipment”. As the Energy Servers are determined not to be integral equipment, we determine if the leaseback is classified as a capital lease or an operating lease.

Our managed services arrangements with the financing party are classified as capital leases and are recorded as financing transactions, while the sub-lease arrangements with the end customer are classified as operating leases. Payments received from the financier are recorded as financing leases. We then recognize revenue for the electricity generated by allocating the total proceeds based on the relative standalone selling prices to electricity revenue and to service revenue. Electricity revenue relating to power purchase agreements is typically accounted for in accordance with ASC 840 *Leases* and service revenue in accordance with ASC 606.

We recognize revenue from the PPAs and Managed Services contracts as the electricity is provided over the term of the agreement.

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. Lastly, 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. During fiscal 2019, we did not recognize any material revenue for contracts modified during the period that had performance obligations satisfied in prior periods.

We recognize a contract liability (deferred revenue) 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 goods sold 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.

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 customers, including financing partners on Third-Party PPA, 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. Estimated standard one-year warranty costs are also included in cost of product revenue for those contracts that do not contain material rights, see *Warranty Costs* below.

Cost of Installation Revenue - Cost of installation revenue primarily consists of the costs to install our Energy Servers that we sell to direct, including financing partners on Third-Party PPAs and lease customers. It includes costs paid to our 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 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 and the cost of gas purchased in connection with our first PPA Entity. The cost of electricity revenue is generally recognized over the term of the Managed Services agreement or customer’s PPA contract. The cost of depreciation of the Energy Servers is reduced by the amortization of any U.S. Treasury Department grant payment in lieu of the energy investment tax credit associated with these systems.

Revenue Recognized from Power Purchase Agreement Programs *(See Note 13 - Power Purchase Agreement Programs)*

In 2010, we began offering our Energy Servers through our Bloom Electrons financing program. This program is financed via a special purpose Investment Company and Operating Company, collectively referred to as a PPA Entity, and are owned partly by us and partly by third-party investors. The investors contribute cash to the PPA Entity in exchange for an equity interest, which then allows the PPA Entity to purchase our Energy Server from us. The cash contributions held are classified as short-term or long-term restricted cash according to the terms of each power purchase agreement. As we identify end customers, the PPA Entity enters into a PPA with the end customer pursuant to which the customer agrees to purchase the power generated by the Bloom Energy Server at a specified rate per kilowatt hour ("kWh") for a specified term, which can range from 10 to 21 years. The PPA Entity typically enters into a maintenance services agreement with us following the first year of service to extend the standard one-year warranty service and performance guaranties. This intercompany arrangement is eliminated in consolidation. Those power purchase agreements 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. For both operating leases and tariff agreements, income is recognized as contractual amounts are due when the electricity is generated and presented within electricity revenue on the consolidated statements of operations.

Sales-Type Leases - Certain arrangements entered into by certain PPA entities, including Bloom Energy 2009 PPA Project Company, LLC ("PPA I"), 2012 ESA Project Company, LLC ("PPA IIIa") and 2013B ESA Project Company, LLC ("PPA IIIb"), qualify as sales-type leases in accordance with FASB ASC Topic 840, *Leases* ("ASC 840"). We are responsible for the installation, operation and maintenance of the Energy Servers at the customers' sites, including running the Energy Servers during the term of the PPA which ranges from 10 to 15 years. Based on the terms of the customer contracts, we may also be obligated to supply fuel for the Energy Servers. The amount billed for the delivery of the electricity to PPA I's customers primarily consists of returns on the amounts financed including interest revenue, service revenue and fuel revenue for certain arrangements.

We are obligated to supply fuel to the Energy Servers that deliver electricity under the PPA I agreements. Based on the customer offtake agreements, the customers pay an all-inclusive rate per kWh of electricity produced by the Energy Servers. The consideration received under the PPA I agreements primarily consists of returns on the amounts financed including interest revenue, service revenue and fuel revenue on the consolidated statements of operations.

As the Power Purchase Agreement Programs contain a lease, the consideration received is 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 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 service, fuel and interest related to the leased systems.

Service revenue and fuel revenue are recognized over the term of the PPA as electricity is generated. The interest component related to the leased system is recognized as interest revenue over the life of the lease term. The customer has the option to purchase the Energy Servers at the then fair market value at the end of the PPA contract term.

Service revenue related to sales-type leases of $2.9 million, $3.4 million and $4.0 million for the years ended December 31, 2019, 2018 and 2017, respectively, is included in electricity revenue in the consolidated statements of operations.

Product revenue associated with the sale of the Energy Servers under the PPAs that qualify as sales-type leases is recognized at the present value of the minimum lease payments, which approximates fair value, assuming all other conditions for revenue recognition noted above have also been met. A sale is typically recognized as revenue when an Energy Server begins generating electricity and has been accepted, which is consistent across all purchase options in that acceptance generally occurs after the Energy Server has been installed and is running at full power as defined in each contract. There was no product revenue recognized under sales-type leases for the years ended December 31, 2019, 2018 and 2017.

Operating Leases - Certain Power Purchase Agreement Program leases entered into by PPA IIIa, PPA IIIb, 2014 ESA Holdco, LLC ("PPA IV") and 2015 ESA Holdco, LLC ("PPAV") that are leases in substance, but do not meet the criteria of sales-type leases or direct financing leases in accordance with ASC 840, are accounted for as operating leases. Revenue under these arrangements is recognized as electricity sales and service revenue and is provided to the customer at rates specified under the contracts. During the years ended December 31, 2019, 2018 and 2017, revenue from electricity sales from these PPA arrangements amounted to $29.7 million, $30.9 million and $29.9 million, respectively. During the years ended December 31, 2019, 2018 and 2017, service revenue amounted to $14.6 million, $15.2 million and $15.6 million, respectively.

Financing Leases Under Managed Services Agreements - Certain of our customers use managed services agreements to finance their lease of Bloom Energy Servers which are accounted for as operating leases with the end customer. As a result, revenue is recognized over the life of the managed service agreements as power is generated by the Energy Servers. The Managed Services Program is one of several financing vehicles we use to sell our Energy Servers. Under our Managed Services Program, we sell our equipment to a bank financing party, which pays us for the Energy Server and takes title to the Energy Server. We then enter into a sublease contract with an end customer, which pays us a fixed, monthly fee for its use of the Energy Server and pays us for our maintenance services on the Energy Server. The fees we receive for the maintenance services on the Energy Server is recognized as services revenue. In addition, the payments received from our customers under our Managed Services program for power generated by our Energy Servers are also recorded as services revenue, as well as electricity revenue over the term of the agreement using our standalone selling price model allocation.

The fixed, monthly fee for the use of the Energy Server is then paid to the bank to pay down the lease obligation, with interest thereon being calculated on an effective interest rate basis.

Incentives and Grants

Tariff Agreement - PPA II entered into an agreement with Delmarva, PJM Interconnection (PJM), a regional transmission organization, and the State of Delaware under which PPA II provided the energy generated from its Energy Servers to PJM and received a tariff as collected by Delmarva.

Revenue at the tariff rate was recognized as electricity sales and service revenue as it was generated over the term of the arrangement until the final repowering in December 2019. Revenue relating to power generation at the Delmarva sites of $11.3 million, $23.0 million and $23.3 million for the years ended December 31, 2019, 2018 and 2017, respectively, is included in electricity sales in the consolidated statements of operations. Revenue relating to power generation at the Delmarva sites of $6.8

million, $13.7 million and $13.9 million for the years ended December 31, 2019, 2018 and 2017, respectively, is included in service revenue in the consolidated statements of operations.

Investment Tax Credits ("ITCs") - 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 Power Purchase Agreement Programs, ITCs are primarily passed through to Equity Investors with approximately 1% to 10% of incentives received by us. These incentives are accounted for by using the flow-through method. On February 9, 2018, the U.S. Congress passed legislation to extend the federal investment tax credits for fuel cell systems applicable retroactively to January 1, 2017. Due to this reinstatement of ITC in 2018, the benefit of ITC to total revenue was $45.5 million of revenue benefit related to the retroactive ITC for 2017 acceptances.

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 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 incentives. No ITC recapture has occurred during the years ended December 31, 2019, 2018 and 2017.

Recapture of U.S. Treasury Grants and Similar Grants and Indemnifications

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 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. Our purchase of Energy Servers were by the PPA Entities and, therefore, the PPA Entities bear the risk of repayment if the assets placed in service do not meet the ITC operational criteria in the future. As part of our upgrade of Energy Servers during 2019, we have agreed to indemnify our customer for up to $108.7 million should benefits expected from anticipated ITC grants and established tariffs fail to occur. Based on outside expert guidance, we believe these events to be less than likely to occur and have not established financial reserves.

Warranty Costs

We generally warrant our products sold to our direct customers for one year following the date of acceptance of the products (the “standard one-year warranty”). To estimate the product warranty costs, we continuously monitor product returns for warranty failures and maintains the reserve for the related warranty expense based on various factors including historical warranty claims, field monitoring and results of lab testing. Our performance obligations under our standard product warranty and managed services agreements are generally in the form of product replacement, repair or reimbursement for higher customer electricity costs. The standard one-year warranty covers defects in materials and workmanship under normal use and service conditions and against manufacturing or performance defects. Prior to adoption of ASC 606 *Revenue From Contracts With Customers*, our warranty accrual represents our best estimate of the amount necessary to settle future and existing claims during the warranty period as of the balance sheet date. We accrue for warranty costs based on estimated costs that may be incurred including material costs, labor costs and higher customer electricity costs should the units not work for extended periods.

With the adoption of ASC 606 *Revenue From Contracts With Customers* for the year ended 2019, we only 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*.

As part of both our standard one-year warranty and managed services agreements obligations, we monitor the operations of the underlying systems and provide output and efficiency guaranties (collectively “product performance guaranties”). If the Energy Servers run at a lower efficiency or power output than we committed under our product performance guaranty, we will reimburse the customer for this underperformance. Our performance obligation includes ensuring the customer’s equipment operates at least at the efficiency and power output levels set forth in the customer agreement. Our aggregate reimbursement obligation for this performance guaranty for each customer is capped based on the purchase price of the underlying energy server. Product performance guaranty payments are accounted for as a reduction in service revenue. We accrue for product performance guaranties based on the estimated amounts reimbursable at each reporting period and recognize the costs as a reduction to revenue.

Shipping and Handling Costs

We record costs related to shipping and handling in cost of revenue, 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, 2019, 2018 and 2017.

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.

Stock-Based Compensation - We account for stock options and restricted stock units ("RSUs") awarded to employees and non-employee directors under the provisions of Financial Accounting Standards Board Accounting Standards Codification Topic 718 - *Compensation-Stock Compensation* ("ASC 718") using the Black-Scholes valuation model to estimate fair value. The Black-Scholes valuation model requires us to make estimates and assumptions regarding the underlying stock's fair value, the expected life of the option and RSUs, the risk-free rate of return interest rate, the expected volatility of our common stock price and the expected dividend yield. In developing estimates used to calculate assumptions, we established the expected term for employee options and RSUs, as well as expected forfeiture rates, based on the historical settlement experience and after giving consideration to vesting schedules. 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. Previously recognized costs are reversed for the portion of awards forfeited prior to vesting as and when the forfeitures occurred. We typically record stock-based compensation costs under the straight-line attribution method over the vesting term, which is generally four years for options, and record stock-based compensation costs for performance-based awards using the graded-vesting method. Stock issued to grantees in our stock-based compensation is from authorized and previously unissued shares. Stock-based compensation expense is recorded in the consolidated statements of operations based on the employees' respective function. 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.

Stock-based compensation cost for RSUs is measured based on the fair value of the underlying shares on the date of grant. Up to the date of our IPO, RSUs were subject to a time-based vesting condition and a performance-based vesting condition, both of which require satisfaction before the RSUs vest and settle for shares of common stock. The performance-based condition was tied to a liquidity event such as a sale event of Bloom or the completion of our IPO. The time-based conditions range between six months and four years from the end of the lock-up period after our IPO. Upon completion of our IPO in July 2018, the performance-based condition of our RSUs was satisfied and we began recognizing stock-based compensation over the remaining time-based vesting condition, which ranges from six months and up to four years from IPO.

We use the Black-Scholes valuation model to estimate the fair value of stock purchase rights under our 2018 ESPP. The fair value of the 2018 ESPP purchase rights is recognized as 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-based compensation expense is recorded in the consolidated statements of operations based on the employees' respective function.

For performance-based awards, stock-based compensation costs are recognized over the expected performance achievement period of individual's performance milestone(s) as the achievement of each individual performance milestone become probable. For performance-based awards with a vesting schedule, based entirely on the attainment of market conditions, stock-based compensation costs are recognized for performance and market conditions when the relevant market condition is considered probable of achievement. The fair value of such awards is estimated on the grant date using Monte Carlo simulations, see *Note 12, Stock-Based Compensation and Employee Benefit Plans*.

Compensation costs for equity instruments granted to non-employees is measured on the date of performance at the fair value of the consideration received or the fair value of the equity instruments issued, whichever is more reliably measured. The fair value of the equity instruments is expensed over the term of the non-employee's service period.

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, or NOL, position), based on the amount of compensation cost recognized and our statutory tax rate. With our adoption of ASU 2016-09 *Improvements to Employee Share-Based Payment Accounting (Topic 718)* ("ASU 2016-09") in the first quarter of 2017 on a prospective basis, stock-based compensation excess tax benefits or deficiencies are reflected in the consolidated statements of operations as a component of the provision for income taxes. No tax benefit or expense for stock-based compensation has been recorded for the years ended December 31, 2019, 2018 and 2017 since we remain in an NOL position.

Determining the amount of stock-based compensation to be recorded requires us to develop estimates for the inputs used in the Black-Scholes valuation model to calculate the grant-date fair value of stock options. We use weighted-average assumptions in applying the Black-Scholes valuation model.

The risk-free interest rate for periods within the contractual life of the option is based on the U.S. Treasury zero-coupon issues in effect at the grant date for periods corresponding with the expected term of option. Our estimate of an expected term is calculated based on our historical share option exercise data. We have not and do not expect to pay dividends in the foreseeable future. The estimated stock price volatility is derived based on historical volatility of our peer group, which represents our best estimate of expected volatility.

The amount of stock-based compensation costs recognized during a period is based on the value of that portion of the awards that are ultimately expected to vest. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from estimates. The term “forfeitures” is distinct from “cancellations” or “expirations” and represents only the unvested portion of the surrendered option. We review historical forfeiture data and determines the appropriate forfeiture rate based on that data. We reevaluate this analysis periodically and adjust the forfeiture rate as necessary and ultimately recognize the actual expense over the vesting period only for the shares that vest.

Refer to Note 12, *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 FASB ASC Topic 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 740-10, 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 change, 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 10, *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 stock shareholders, unrealized gain (loss) on available-for-sale securities, change in the effective portion of our interest rate swap agreements and comprehensive (income) loss attributable to noncontrolling interest and redeemable noncontrolling interest.

Fair Value Measurement

FASB ASC Topic 820 - *Fair Value Measurements and Disclosures* ("ASC 820"), 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:

Level 1 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.

Level 2 Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities. Financial instruments utilizing Level 2 inputs include interest rate swaps.

Level 3 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 natural gas fixed price forward contracts derivatives, warrants issued to purchase our preferred stock and embedded derivatives in sales contracts and bifurcated from convertible notes. Derivative liability valuations are performed based on a binomial lattice model and adjusted for illiquidity and/or non-transferability and such adjustments are generally based on available market evidence. Contract embedded derivatives valuations are performed using a Monte Carlo simulation model which considers various potential electricity price curves over the sales contracts terms.

Other Balance Sheet Components

Cash, Cash Equivalents, Short-Term Investments and Restricted Cash - Cash equivalents consist of highly liquid short-term investments with maturities of 90 days or less at the date of purchase.

Short-term investments consist of highly liquid investments with maturities of greater than 90 days at the reporting period end date. Short-term investments are reported at fair value with unrealized gains or losses, net of tax, recorded in accumulated other comprehensive income (loss). Short-term investments are anticipated to be used for current operations and are, therefore, classified as available-for-sale in current assets even though their maturities may extend beyond one year. We periodically review short-term investments for impairment. In the event a decline in value is determined to be other-than-temporary, an impairment loss is recognized. When determining if a decline in value is other-than-temporary, we take into consideration the current market conditions and the duration and severity of and the reason for the decline as well as considering the likelihood that it would need to sell the security prior to a recovery of par value.

The specific identification method is used to determine the cost of any securities disposed with any realized gains or losses recognized as income or expense in the consolidated statements of operations.

As of December 31, 2019, we held no short-term investments. As of December 31, 2018, short-term investments consisted of $104.4 million of U.S. Treasury Bills. The cost of these securities approximated fair value and there was no material gross realized or unrealized gains or losses in the years ended December 31, 2019, 2018 and 2017. There were also no impairments in the investments' value in the years ended December 31, 2019, 2018 and 2017.

Restricted cash is held as collateral to provide financial assurance that we will fulfill obligations and commitments primarily related to our power purchase agreement financings, third party PPA and managed services arrangements. 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.

Derivative Financial Instruments - We enter into derivative natural gas fixed price forward contracts to manage our exposure to the fluctuating price of natural gas under certain of our power purchase agreements entered in connection with the Bloom Electrons program (refer to Note 13, *Power Purchase Agreement Programs*). In addition, we enter into fixed forward interest rate swap arrangements to convert variable interest rates on debt to a fixed rate and on occasion have committed to certain utility grid price protection guarantees in sales agreements. We also issued derivative financial instruments embedded in our 6% Notes as a means by which to provide additional incentive to investors and to obtain a lower cost cash-source of funds.

Derivative transactions are governed by procedures covering areas such as authorization, counterparty exposure and hedging practices. Positions are monitored based on changes in the spot price in the commodity market and their impact on the market value of derivatives. Credit risk on derivatives arises from the potential for counterparties to default on their contractual obligations to us. We limit our credit risk by dealing with counterparties that are considered to be of high credit quality. We do not enter into derivative transactions for trading or speculative purposes.

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) on the consolidated balance sheets and for those that do not qualify for hedge accounting or are not designated hedges are recorded through earnings in the consolidated statements of operations.

While we hedge certain of our natural gas purchase requirements under our power purchase agreements, we do not classify these natural gas fixed price forward contracts as designated hedges for accounting purposes. Therefore, we record the change in the fair value of our natural gas fixed price forward contracts in cost of revenue on the consolidated statements of operations. The fair value of the natural gas fixed price forward contracts is recorded on the consolidated balance sheets as a component of accrued expenses and other current liabilities and as derivative liabilities. As these forward contracts are considered economic hedges, the changes in the fair value of these forward contracts are classified as operating activities within the statement of cash flows, which is consistent with the classification of the cash flows of the hedged item.

Our interest rate swap arrangements qualify as cash flow hedges for accounting purposes as they effectively convert variable rate obligations into fixed rate obligations. We evaluate and calculate the effectiveness of the hedge at each reporting date. The effective change is recorded in accumulated other comprehensive income (loss) and will be recognized as interest expense on settlement. As of January 1, 2019, we adopted Accounting Standards Update ("ASU") 2017-12 Derivatives and Hedging (Topic 815), Targeted Improvements to Accounting for Hedging Activities ("ASU 2017-12"). Per ASU 2017-12, ineffectiveness is no longer required to be measured or disclosed. If a cash flow hedge is discontinued due to changes in the forecasted hedged transactions, hedge accounting is discontinued prospectively and any unrealized gain or loss on the related derivative is recorded in accumulated other comprehensive income (loss) and is reclassified into earnings in the same period during which the hedged forecasted transaction affects earnings. The fair value of the swap arrangement is recorded on the consolidated balance sheets as a component of accrued expenses and other current liabilities and as derivative liabilities. The changes in fair value of swap agreement are classified as operating activities within the statement of cash flows, which is consistent with the classification of the cash flows of the hedged item.

We issued convertible notes with conversion features. These conversion features were evaluated under ASC topic 815-40, were determined to be embedded derivatives and were bifurcated from the debt and were classified prior to the IPO as liabilities on the consolidated balance sheets. We recorded these derivative liabilities at fair value and adjusted the carrying value to their estimated fair value at each reporting date with the increases or decreases in the fair value recorded as a gain (loss) on revaluation of warrant liabilities and embedded derivatives in the consolidated statements of operations. Upon the IPO, the final valuation of the embedded derivative was calculated as of the date of the IPO and was reclassified from a derivative liability to additional paid-in capital.

Customer Financing Receivables - The contractual terms of our customer financing receivables are primarily contained within the PPA Entities' customer lease agreements. Leases are classified as either operating or sales-type leases in accordance with the relevant accounting guidelines and customer financing receivables are generated by Energy Servers leased to PPA Entities' customers in leasing arrangements that qualify as sales-type leases. Customer financing receivables represents 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 sales-type leases are recognized as cost of revenue when the Energy Servers are placed in service.

We review our customer financing receivables by aging category to identify significant customer balances with known disputes or collection issues. In determining the allowance, we make judgments about the credit worthiness of a majority of our customers based on ongoing credit evaluations. We also consider our historical level of credit losses as well as current economic trends that might impact the level of future credit losses. We write off customer financing receivables when they are deemed uncollectible. We do not maintain an allowance for doubtful accounts to reserve for potentially uncollectible customer financing receivables as historically all of our receivables on the consolidated balance sheets have been collected in full.

Accounts Receivable - Accounts receivable primarily represents trade receivables from sales to customers recorded at net realizable value. As we do for our customer financing receivables, we review our accounts receivable by aging category to identify significant customer balances with known disputes or collection issues. In determining the allowance, we make judgments about the creditworthiness of a majority of our customers based on ongoing credit evaluations. We also consider our historical level of credit losses as well as current economic trends that might impact the level of future credit losses. We write off accounts receivable when they are deemed uncollectible. We do not maintain an allowance for doubtful accounts to reserve for potentially uncollectible accounts receivable as historically all of our receivables on the consolidated balance sheets have been collected in full.

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, including inventory from purchase commitments, 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 to is sold or otherwise disposed. The inventory reserves were $14.6 million and $13.0 million as of December 31, 2019 and 2018, respectively.

Property, Plant and Equipment - Property, plant and equipment, including leasehold improvements are stated at cost less accumulated depreciation. Energy Servers are depreciated to their residual values over their useful economic lives which reflect consideration of the terms of their related power purchase 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	35 years

When assets are retired or disposed, the assets and related accumulated depreciation and amortization are removed from our general ledger and the resulting gain or loss is reflected in the consolidated statements of operations.

Foreign Currency Transactions - The functional currency of our foreign subsidiaries is the U.S. dollar since they are considered financially and operationally integrated with their domestic parent. Foreign currency monetary assets and liabilities are remeasured into U.S. dollars at end-of-period exchange rates. Any currency transaction gains and losses are included as a component of other income (expense), net in our consolidated statements of operations and have not been significant for any period presented.

Preferred Stock Warrants - We accounted for freestanding warrants to purchase shares of our convertible preferred stock as liabilities on the consolidated balance sheets at fair value upon issuance. In accordance with ASC 480 - *Distinguishing Liability from Equity* ("ASC 480"), these warrants were classified within warrant liability in the consolidated balance sheets as the underlying shares of convertible preferred stock were contingently redeemable which, therefore, may have obligated us to transfer assets at some point in the future. These warrants were valued on the date of issuance, using the Probability-Weighted Expected Return Model ("PWERM"). The warrants were subject to remeasurement to fair value at each balance sheet date or immediately prior to exercise. Any change in fair value was recognized in the consolidated statements of operations. Our convertible preferred stock warrants were converted into common stock warrants upon the completion of our IPO in July 2018. At that time, the convertible preferred stock warrant liability was reclassified to additional paid-in capital.

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. 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 PPE Entities. Refer to Note 13, *Power Purchase Agreement Programs* for more information.

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, 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.

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.

Recent Accounting Pronouncements

Other than the adoption of the accounting guidance mentioned below, there have been no other significant changes in our reported financial position or results of operations and cash flows resulting from the adoption of new accounting pronouncements.

Accounting Guidance Implemented in Fiscal Year 2019

Revenue Recognition - In May 2014, the FASB issued ASU 2014-09, *Revenue From Contracts With Customers (Topic 606)*, as amended ("ASC 606"). The guidance provides principles for recognizing revenue for the transfer of promised goods or services to customers with the consideration to which the entity expects to be entitled in exchange for those goods or services, as well as guidance on the recognition of costs related to obtaining and fulfilling customer contracts. The guidance also requires expanded disclosures about the nature, amount, timing, and uncertainty of revenues and cash flows arising from customer contracts, including significant judgments and changes in judgments. ASC 606 is effective for our annual period beginning January 1, 2019, and for our interim periods beginning on January 1, 2020. ASC 606 can be adopted using either of two methods: (i) retrospective to each prior reporting period presented with the option to elect certain practical expedients as defined within the guidance (“full retrospective method”); or (ii) retrospective with the cumulative effect of initially applying the guidance recognized at the date of initial application and providing certain additional disclosures as defined per the guidance (“modified retrospective method”). We adopted ASC 606 in the year ended December 31, 2019 using the modified retrospective method. As a policy election, Topic ASC was applied only to contracts that were not complete as of the date of adoption. We recognized the cumulative effect of initially applying ASC 606 as an adjustment to the January 1, 2019 opening balance of accumulated deficit. The prior period consolidated financial statements have not been retrospectively adjusted and continue to be reported under the accounting standards in effect for those periods.

As part of our adoption of ASC 606, we elected to apply the following practical expedients:

- We have not restated contracts that begin and are completed within the same annual reporting period;
- For completed contracts that have variable consideration, we used the transaction price at the date upon which the contract was completed rather than estimating variable consideration amounts in the comparative reporting periods;
- We have excluded disclosures of transaction prices allocated to remaining performance obligations and when we expect to recognize such revenue for all periods prior to the date of initial application;
- We have not retrospectively restated our contracts to account for those modifications that were entered into before January 1, 2019, the earliest reporting period impacted by ASC 606;

See Note 3 *Revenue Recognition* for additional information.

Statement of Cash Flows - In August 2016, the FASB issued ASU 2016-15, *Classification of Certain Cash Receipts and Cash Payments (Topic 230) ("*ASU 2016-15"), which clarifies the classification of the activity in the consolidated statements of cash flows and how the predominant principle should be applied when cash receipts and cash payments have more than one class of cash flows. Adoption will be applied retrospectively to all periods presented. We adopted ASU 2016-15 on January 1, 2019. Adoption of ASU 2016-15 had no impact on our consolidated financial statements.

Hedging Activities - As of January 1, 2019, we adopted Accounting Standards Update ("ASU") 2017-12 *Derivatives and Hedging (Topic 815), Targeted Improvements to Accounting for Hedging Activities* ("ASU 2017-12") to help entities recognize the economic results of their hedging strategies in the financial statements so that stakeholders can better interpret and understand the effect of hedge accounting on reported results. It is intended to more clearly disclose an entity’s risk exposures and how we manage those exposures through hedging, and it is expected to simplify the application of hedge accounting guidance. The new guidance is effective for annual periods beginning after December 15, 2018, with early adoption permitted. There was not a material impact to our consolidated financial statements upon adoption of ASU 2017-12.

Income Taxes - As of January 1, 2019, we adopted ASU 2016-16, *Income Taxes-Intra-Entity Transfers of Assets Other Than Inventory (Topic 740) ("*ASU 2016-16"), which requires that entities recognize the income tax consequences of an intra-entity transfer of an asset, other than inventory, when the transfer occurs. ASU 2016-16 is effective for us in our Annual Report on Form 10-K for the year ended December 31, 2019 and is required to be applied on a modified retrospective basis through a cumulative-effect adjustment directly to retained earnings as of the beginning of the adoption period. Adoption of ASU 2016-16 had no impact on our consolidated financial statements.

Income Taxes - As of January 1, 2019, we adopted ASU 2018-02 *Income Statement-Reporting Comprehensive Income (Topic 220) Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*, which permits reclassification of certain tax effects in Other Comprehensive Income ("OCI") caused by the U.S. tax reform enacted in

December 2017 to retained earnings. We do not have any tax effect (due to full valuation allowance) in our OCI account, thus this guidance has no impact on our consolidated financial statements.

Codification Improvements - In April 2019, the FASB issued ASU 2019-04, *Codification Improvements to Topic 326, Financial Instruments-Credit Losses; Topic 815, Derivatives and Hedging; and Topic 825, Financial Instruments* ("ASU 2019-04"), that clarifies and improves areas of guidance related to the recently issued standards on credit losses (ASU 2016-13), hedging (ASU 2017-12), and recognition and measurement of financial instruments (ASU 2016-01), respectively. The amendments generally have the same effective dates as their related standards. If already adopted, the amendments of ASU 2016-01 and ASU 2016-13 are effective for fiscal years beginning after December 15, 2019 and the amendments of ASU 2017-12 are effective as of the beginning of a company's next annual reporting period. Early adoption is permitted. As discussed above, we adopted ASU 2017-12 on January 1, 2019 and the amendments of ASU 2019-04 did not have a material impact on our consolidated financial statements.

Cloud Computing - In August 2018, the FASB issued ASU 2018-15, *Intangibles-Goodwill and Other-Internal-Use Software (Subtopic 350-40) Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract* ("ASU 2018-15"), to clarify the guidance on the costs of implementing a cloud computing hosting arrangement that is a service contract. Under ASU 2018-15, the entity is required to follow the guidance in Subtopic 350-40, *Internal-Use Software*, to determine which implementation costs under the service contract to be capitalized as an asset and which costs to expense. ASU 2018-15 is effective for us for the annual periods beginning in 2021 and the interim periods in 2022 on a retrospective or prospective basis and early adoption is permitted. We adopted ASU 2018-15 on a prospective basis in the fiscal year ended December 31, 2019 and ASU 2018-15 did not have a material impact on the consolidated financial statements and related disclosures.

Accounting Guidance Not Yet Adopted

Leases - In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*, as amended ("ASC 842"), which provides new authoritative guidance on lease accounting. Among its provisions, the standard changes the definition of a lease, requires lessees to recognize right-of-use assets and lease liabilities on the balance sheet for operating leases and also requires additional qualitative and quantitative disclosures about lease arrangements. All leases in scope will be classified as either operating or financing. Operating and financing leases will require the recognition of an asset and liability to be measured at the present value of the lease payments. ASC 842 also makes a distinction between operating and financing leases for purposes of reporting expenses on the income statement. We are the lessee under various agreements for facilities and equipment that are currently accounted for as operating leases and expect to continue to enter into new such leases. Additionally, we expect to continue to enter into Managed Services related financing leases in the future and are the lessor of Energy Servers that are subject to power purchase arrangements with customers under our PPA and Managed Services programs that are currently accounted for as leases.

We are currently evaluating the impact of the adoption of this update on our financial statements. We expect that the most significant impacts will be assessing whether new power purchase arrangements with customers meet the new definition of a lease and recognizing right of use assets and lease liabilities for arrangements currently accounted for as operating leases where we are the lessee. We expect to adopt this guidance on a prospective basis on January 1, 2021.

Financial Instruments - In June 2016, the FASB issued ASU 2016-13, *Financial Instruments- Credit Losses (Topic 326)*. The pronouncement was issued to provide more decision-useful information about the expected credit losses on financial instruments and changes the loss impairment methodology. This pronouncement will be effective for us from fiscal year 2021. A prospective transition approach is required for debt securities for which an other than temporary impairment had been recognized before the effective date. We are currently evaluating the impact of the adoption of this update on our financial statements.

Stock Compensation - In June 2018, the FASB issued ASU 2018-07, *Compensation - Stock Compensation: Improvements to Nonemployee Share-Based Payment Accounting* ("ASU 2018-07") which aligns the accounting for share-based payment awards issued to employees and nonemployees. Measurement of equity-classified nonemployee awards will now be valued on the grant date and will no longer be remeasured through the performance completion date. ASU 2018-07 also changes the accounting for nonemployee awards with performance conditions to recognize compensation cost when achievement of the performance condition is probable, rather than upon achievement of the performance condition, as well as eliminating the requirement to reassess the equity or liability classification for nonemployee awards upon vesting, except for certain award types. ASU 2018-07 is effective for us for interim and annual reporting periods beginning after December 15, 2019. Early adoption is permitted. We plan to adopt ASU 2018-07 on a modified retrospective approach in January 2020. We do not expect the adoption of ASU 2018-07 to have a material effect on our financial statements and related disclosures.

Fair Value Measurement - In August 2018, the FASB issued ASU 2018-13, *Fair Value Measurement Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement* ("ASU 2018-13"). ASU 2018-13 has eliminated, amended and added disclosure requirements for fair value measurements. Entities will no longer be required to disclose the amount of, and reasons for, transfers between Level 1 and Level 2 of the fair value hierarchy, the policy of timing of transfers between levels of the fair value hierarchy and the valuation processes for Level 3 fair value measurements. Companies will be required to disclose the range and weighted average used to develop significant unobservable inputs for Level 3 fair value measurements. ASU 2018-13 is effective for annual and interim periods beginning after December 15, 2019. Early adoption is permitted. ASU 2018-13 will have an impact on our disclosures. We are evaluating the effect on our financial statements and related disclosures.

2. Restatement and Revision of Previously Issued Consolidated Financial Statements

We have restated herein our consolidated financial statements as of and for the year ended December 31, 2018 and revised herein our consolidated financial statements as of and for the year ended December 31, 2017. We have also restated and revised related amounts within the accompanying footnotes to the consolidated financial statements to conform to the corrected amounts in the financial statements.

Restatement Background

On February 11, 2020, our management, in consultation with the Audit Committee of our Board of Directors, determined that Bloom's previously issued consolidated financial statements as of and for the year ended December 31, 2018, as well as financial statements for the three month period ended March 31, 2019, the three and six month periods ended June 30, 2019 and 2018 and the three and nine month periods ended September 30, 2019 and 2018 should no longer be relied upon due to misstatements related to our Managed Services Agreements and similar arrangements and we would restate such financial statements to make the necessary accounting corrections. The revenue for the Managed Services Agreements and similar transactions will now be recognized over the duration of the contract instead of upfront. In addition, management determined that the impact of these misstatements to periods prior to the three months ended June 30, 2018 was not material to warrant restatement of reported figures, however, our consolidated financial statements as of and for the year ended December 31, 2017 and the relevant unaudited selected quarterly financial data for the three month period ended March 31, 2018 would be revised to correct these misstatements. The restatement also includes corrections for additional identified immaterial misstatements in certain of the impacted periods.

The misstatements are described in greater detail below.

Description of Misstatements

Under our Managed Services program, we sell our equipment to a bank financing party under a sale-leaseback transaction, which pays us for the Energy Server and takes title to the Energy Server. We then enter into a service contract with an end customer, who pays the bank a fixed, monthly fee for its use of the Energy Server and pays us for our maintenance and operation of the Energy Server.

The majority of these Managed Services Agreements and similar transactions were originally recorded as sales, subject to an operating lease, in which revenues and associated costs were recognized at the time of installation and acceptance of the Bloom Energy Server at the customer site.

In December 2019, in the course of reviewing a Managed Services transaction that closed on November 27, 2019, an issue was identified related to the accounting for our Managed Services transactions. The issue primarily related to whether the terms of our Managed Services Agreements and similar arrangements, including the events of default provisions, satisfied the requirements for sales under the revenue accounting standards. Subsequently, it was determined that the previous accounting for the Managed Services Agreements and similar transactions was misstated, as the Managed Services Agreements and similar transactions should have been accounted for as financing transactions under lease accounting standards.

The impact of the correction of the misstatement is to recognize amounts received from the bank financing party as a financing obligations, and the Energy Server is recorded within property, plant and equipment, net on our consolidated balance sheets. We recognize revenue for the electricity generated by the systems, based on payments received by the bank from the customer, and the corresponding financing obligations to the bank is also amortized as these payments are received by the bank from the customer, with interest thereon being calculated on an effective interest rate basis. Depreciation expense is also recognized over the estimated useful life of the Energy Server.

In addition, it was determined that stock-based compensation costs relating to manufacturing employees that were previously expensed as incurred incorrectly, should have been capitalized as a component of Energy Server manufacturing costs to inventory, deferred cost of revenues, construction-in-progress and property, plant and equipment in accordance with SEC Staff Accounting Bulletin Topic 14. These costs will now be expensed on consumption of the related inventory and over the economic useful life of the property, plant and equipment, as applicable.

Also, as part of a review of historical revenue agreements as a result of the above errors, it was noted that the Company failed to identify embedded derivatives in certain revenue agreements for an escalator price protection (“EPP”) feature given to our customers. As a result, the Company has recorded a derivative liability, with an offset to revenue, to account for the fair value of this feature at inception and will record the liability at its then fair value at each period end with any changes in fair value recognized in other income (expense).

Finally, there were certain other immaterial misstatements identified or which had been previously identified which are also being corrected in connection with the restatement and/or revision of previously issued financial statements.

Description of Restatement and Revision Reconciliation Tables

In the following tables, we have presented a reconciliation of our consolidated balance sheets, statement of operations and cash flows from our prior periods as previously reported to the restated and revised amounts as of and for the years ended December 31, 2018 and 2017, respectively. The Consolidated Statements of Comprehensive Loss and the Consolidated Statements of Convertible Redeemable Preferred Stock, Redeemable Noncontrolling Interest, Stockholders' Deficit and Noncontrolling Interest for the years ended December 31, 2018 and 2017 have been restated and revised, respectively, for the restatement and revision impacts to Net Loss and, for the latter statements, for the correction of an uncorrected misstatement within Additional Paid-In Capital for $0.8 million in 2018. See the statement of operations reconciliation tables below for additional information on the restatement and revision impacts to Net Loss. For the misstatements arising in periods commencing prior to 2017, the cumulative impact of all periods prior to January 1, 2017 has been reflected as an adjustment to opening accumulated deficit as of that date in the Consolidated Statements of Convertible Redeemable Preferred Stock, Redeemable Noncontrolling Interest, Stockholders' Deficit and Noncontrolling Interest.

Bloom Energy Corporation
Consolidated Balance Sheet
(in thousands, except share and per share data)

	December 31, 2018			
	As Previously Reported	Restatement Impacts	Restatement Reference	As Restated
Assets				
Current assets:				
Cash and cash equivalents	$ 220,728	$ —		$ 220,728
Restricted cash	28,657	—		28,657
Short-term investments	104,350	—		104,350
Accounts receivable	84,887	3,897	1	88,784
Inventories	132,476	2,789	2	135,265
Deferred cost of revenue	62,147	(18,338)	3	43,809
Customer financing receivable	5,594	—		5,594
Prepaid expenses and other current assets	33,742	3,005	4	36,747
Total current assets	672,581	(8,647)		663,934
Property, plant and equipment, net	481,414	235,337	5	716,751
Customer financing receivable, non-current	67,082	—		67,082
Restricted cash, non-current	31,100	—		31,100
Deferred cost of revenue, non-current	102,699	(102,654)	3	45
Other long-term assets	34,792	8,090	6	42,882
Total assets	$ 1,389,668	$ 132,126		$ 1,521,794
Liabilities, Redeemable Noncontrolling Interest, Stockholders' Deficit and Noncontrolling Interests				
Current liabilities:				
Accounts payable	$ 66,889	$ —		$ 66,889
Accrued warranty	19,236	(1,268)	7	17,968
Accrued expenses and other current liabilities	69,535	(2,697)	8	66,838
Financing obligations	—	8,128	9	8,128
Deferred revenue and customer deposits	94,158	(26,526)	10	67,632
Current portion of recourse debt	8,686	—		8,686
Current portion of non-recourse debt	18,962	—		18,962
Current portion of non-recourse debt from related parties	2,200	—		2,200
Total current liabilities	279,666	(22,363)		257,303
Derivative liabilities	10,128	4,015	11	14,143
Deferred revenue and customer deposits, net of current portion	241,794	(154,486)	10	87,308
Financing obligations, non-current	—	385,650	9	385,650
Long-term portion of recourse debt	360,339	—		360,339
Long-term portion of non-recourse debt	289,241	—		289,241
Long-term portion of recourse debt from related parties	27,734	—		27,734
Long-term portion of non-recourse debt from related parties	34,119	—		34,119
Other long-term liabilities	55,937	(29,741)	8	26,196
Total liabilities	1,298,958	183,075		1,482,033
Redeemable noncontrolling interest	57,261	—		57,261
Stockholders' deficit:				
Common stock	11	—		11
Additional paid-in capital	2,480,597	755	12	2,481,352
Accumulated other comprehensive income	131	—		131

	December 31, 2018			
	As Previously Reported	Restatement Impacts	Restatement Reference	As Restated
Accumulated deficit	(2,572,400)	(51,704)		(2,624,104)
Total stockholders’ deficit	(91,661)	(50,949)		(142,610)
Noncontrolling interest	125,110	—		125,110
Total liabilities, redeemable noncontrolling interest, stockholders' deficit and noncontrolling interest	$ 1,389,668	$ 132,126		$ 1,521,794

[1] Accounts receivable — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements, for which the amount recorded to accounts receivable represents amounts invoiced for capacity billings to end customers which have not yet been collected by the financing entity as of the period end.

[2] Inventories — The correction of these misstatements resulted from the change of accounting for inventory, including net capitalization of stock-based compensation cost of $8.1 million, reclassification of inventories of $6.0 million held for shipments to customers under the Managed Services Program and similar arrangements to construction in progress within property, plant and equipment, net and an increase to inventory to correct a misstatement related to an in-transit shipment of $0.7 million.

[3] Deferred cost of revenue, current and non-current — The correction of these misstatements resulted from reclassifying deferred cost of revenue to property, plant and equipment, net for the leased Energy Servers under the Managed Services Agreements and similar sale-leaseback arrangements of $19.6 million current and $102.7 million non-current, net capitalization of stock-based compensation costs of $2.2 million into current deferred cost of revenue together with the correction of an immaterial misstatements identified to reduce deferred cost of revenue of $0.9 million.

[4] Prepaid expenses and other current assets — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements where prepaid property tax and insurance payments are now classified within prepaid expenses, rather than offset against deferred revenue.

[5] Property, plant and equipment, net — The correction of these misstatements resulted from the change of accounting for Managed Services transactions and similar arrangements, whereby product and install cost of revenues are now recorded as property, plant and equipment, net in the cases where the risks of ownership have not completely transferred to the financing party of $232.1 million. This includes a net capitalization of stock-based compensation cost for these assets of $3.2 million.

[6] Other long-term assets — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements whereby the timing difference of capacity billings to end customers and the payments received from the financing entity is recorded within long term receivables and prepaid property tax and insurance payments are now classified within other long-term assets, rather than offset against long-term deferred revenue.

[7] Accrued warranty — The correction of these misstatements resulted from the change of accounting for accrued warranty which is now recorded on an as-incurred basis for our Managed Services Agreements and similar arrangements, reducing accrued warranty by $0.5 million and the change of accounting for the grid pricing escalation guarantees we provided in some of our sales arrangements, which are now recorded as derivative liabilities, reducing accrued warranty by $0.7 million.

[8] Accrued expense and other current liabilities and other long-term liabilities — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements, for which historical accrued liabilities recorded at inception of the agreements, as well as subsequent reductions of those liabilities, were reversed, and an increase to accrued liabilities to correct a misstatement related to an in-transit inventory shipment of $0.7 million.

[9] Financing obligations, current and non-current — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements, whereby instead of recognizing the upfront proceeds received from the bank as revenue, the proceeds received are classified as financing obligations.

[10] Deferred revenue and customer deposits, current and non-current — The correction of these misstatements resulted from the change of accounting for the recognition of product and installation revenue from upfront or ratable recognition to recognition of the capacity payments received from the end customer as power is generated by the Energy Servers as electricity revenue.

[11] Derivative liabilities — The correction of these misstatements resulted from the change of accounting for embedded derivatives related to grid pricing escalation guarantees we provided in some of our sales arrangements. These are now recorded as derivative liabilities and were previously treated as an accrued liability.

[12] APIC — Relates to the correction of an unadjusted misstatement in the valuation of our 6% Notes derivative, resulting in a credit to additional paid-in capital and additional expense of $0.8 million.

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

	For the year ended December 31, 2018			
	As Previously Reported	Restatement Impacts	Restatement Reference	As Restated
Revenue:				
Product	$ 512,322	$ (111,684)	a	$ 400,638
Installation	91,416	(23,221)	a	68,195
Service	82,385	882	a	83,267
Electricity	55,915	24,633	a	80,548
Total revenue	742,038	(109,390)		632,648
Cost of revenue:				
Product	374,590	(93,315)	c, d	281,275
Installation	119,474	(24,168)	c	95,306
Service	94,639	6,050	b, d	100,689
Electricity	36,265	13,363	c	49,628
Total cost of revenue	624,968	(98,070)		526,898
Gross profit	117,070	(11,320)		105,750
Operating expenses:				
Research and development	89,135	—		89,135
Sales and marketing	62,975	(168)	e	62,807
General and administrative	118,817	—		118,817
Total operating expenses	270,927	(168)		270,759
Loss from operations	(153,857)	(11,152)		(165,009)
Interest income	4,322	—		4,322
Interest expense	(76,935)	(20,086)	f	(97,021)
Interest expense to related parties	(8,893)	—		(8,893)
Other expense, net	(999)	—		(999)
Loss on revaluation of warrant liabilities and embedded derivatives	(21,590)	(549)	g	(22,139)
Loss before income taxes	(257,952)	(31,787)		(289,739)
Income tax provision	1,537	—		1,537
Net loss	(259,489)	(31,787)		(291,276)
Less: net loss attributable to noncontrolling interests and redeemable noncontrolling interests	(17,736)	—		(17,736)
Net loss attributable to Class A and Class B common stockholders	$ (241,753)	$ (31,787)		$ (273,540)
Net loss per share available to Class A and Class B common stockholders, basic and diluted	$ (4.54)			$ (5.14)

[a] Revenue impacted by Managed Services restatements — The correction of these misstatements resulted from the change from upfront recognition of product and installation revenue to recognition of the capacity payments received from the end customer as power is generated by the Energy Servers as electricity revenue over the term of our Managed Services Agreements and similar sale-leaseback arrangements, which also impacted our service revenue allocation.

[b] Service cost of revenue impacted by grid pricing escalation guarantees — The correction of these misstatements resulted in a decrease in service cost of revenue of $0.5 million.

c Cost of revenue impacted by Managed Services restatements — The correction of these misstatements resulted from the change of from upfront recognition of product and installation cost of revenue to recognition of the depreciation expense on the capitalized Energy Servers over their useful life of 21 years for our Managed Services Agreements and similar sale-leaseback transactions, resulting in a decrease in product cost of revenue of $75.0 million and installation cost of revenue of $25.1 million, offset by an increase in electricity cost of revenue of $13.3 million, together with the correction of another immaterial misstatements identified to record installation cost of revenue of$0.9 million.

d Cost of revenue impacted by stock-based compensation allocation — The correction of these misstatements resulted from the capitalization of stock-based compensation costs, with a net benefit to product cost of revenue of $18.3 million and an increase in service cost of revenue of $6.5 million, due to the expensing of stock-based compensation related to field replacement units.

[e] Sales and marketing — The correction of these misstatements resulted from the change of accounting for sales commission expense on an as earned basis, to accounting for the expense over the term of our Managed Services Agreements and similar sale-leaseback arrangements.

[f] Interest expense — The correction of these misstatements resulted from the change of accounting for sales that should have been accounted for as financing transactions, in which the upfront consideration received from the financing party is accounted for as a financing obligations and interest expense is recognized over the term of the Managed Services Agreement using the effective interest method.

g Gain (loss) on revaluation of warrant liabilities and embedded derivatives — The correction of these misstatements resulted from the change of accounting for the grid pricing escalation guarantees we provided in some of our sales arrangements which is now recorded as a derivative liability that needs to be fair valued each period end. The liability has reduced in value by $0.2 million in 2018, resulting in a credit to this line item. In addition, we corrected a misstatement in the valuation of our 6% Notes derivative, resulting in $0.8 million of additional expense in the period.

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

	For the year ended December 31, 2017			
	As Previously Reported	Revision Impacts	Revision Reference	As Revised
Revenue:				
Product	$ 179,768	$ (22,576)	a	$ 157,192
Installation	63,226	(5,289)	a	57,937
Service	76,904	(2,012)	a, b	74,892
Electricity	56,098	19,504	a	75,602
Total revenue	375,996	(10,373)		365,623
Cost of revenue:				
Product	210,773	(18,412)	c, d	192,361
Installation	59,929	(4,959)	c	54,970
Service	83,597	1,531	b, d	85,128
Electricity	39,741	9,734	c	49,475
Total cost of revenue	394,040	(12,106)		381,934
Gross loss	(18,044)	1,733		(16,311)
Operating expenses:				
Research and development	51,146	—		51,146
Sales and marketing	32,415	(489)	e	31,926
General and administrative	55,674	15	e	55,689
Total operating expenses	139,235	(474)		138,761
Loss from operations	(157,279)	2,207		(155,072)
Interest income	759	—		759
Interest expense	(96,358)	(15,681)	f	(112,039)
Interest expense to related parties	(12,265)	—		(12,265)
Other income (expense), net	(491)	—		(491)
Loss on revaluation of warrant liabilities and embedded derivatives	(14,995)	(289)	g	(15,284)
Loss before income taxes	(280,629)	(13,763)		(294,392)
Income tax provision	636	—		636
Net loss	(281,265)	(13,763)		(295,028)
Less: net loss attributable to noncontrolling interests and redeemable noncontrolling interests	(18,666)	—		(18,666)
Net loss attributable to Class A and Class B common stockholders	$ (262,599)	$ (13,763)		$ (276,362)
Net loss per share available to Class A and Class B common stockholders, basic and diluted	$ (25.62)			$ (26.97)

[a] Revenue impacted by Managed Services restatements — The correction of these misstatements resulted from the change from upfront recognition of product and installation revenue to recognition of the capacity payments received from the end customer as power is generated by the Energy Servers as electricity revenue over the term of our Managed Services Agreements and similar sale-leaseback arrangements, which also impacted our service revenue allocation by $1.1 million.

[b] Service revenue and service cost of revenue impacted by grid pricing escalation guarantees — The correction of these misstatements resulted in a decrease in service cost of revenue of $0.3 million and a decrease of service revenue of $3.1 million.

c Cost of revenue impacted by Managed Services restatements — The correction of these misstatements resulted from the change from upfront recognition of product and installation cost of revenue to recognition of the depreciation expense on the capitalized Energy Servers over their useful life of 21 years for our Managed Services Agreements and similar sale-leaseback transactions, resulting in product cost of revenue of $15.2 million, installation cost of revenue of $5.0 million and electricity cost of revenue of $9.7 million.

[d] Cost of revenue impacted by stock-based compensation allocation — The correction of these misstatements resulted from the capitalization of stock-based compensation costs, with a net benefit to product cost of revenue of $3.2 million and an increase in service cost of revenue of $1.8 million due to the expensing of stock-based compensation related to field replacement units.

[e] Sales and marketing and general and administrative — The correction of these misstatements primarily resulted from the change of accounting for sales commission expense on an as earned basis, to accounting for the expense over the term of our Managed Services Agreements and similar sale-leaseback arrangements.

[f] Interest expense — The correction of these misstatements resulted from the change of accounting for sales that should have been accounted for as financing transactions, in which the upfront consideration received from the financing party is accounted for as a financing obligations and interest expense is recognized over the term of the Managed Services Agreement using the effective interest method.

[g] Gain (loss) on revaluation of warrant liabilities and embedded derivatives —The correction of these misstatements resulted from the change of accounting for the grid pricing escalation guarantees we provided in some of our sales arrangements which is now recorded as a derivative liability that needs to be fair valued each period end. The liability has increased in value by $0.3 million resulting in a loss on revaluation of embedded derivatives.

Bloom Energy Corporation
Consolidated Statements of Cash Flows
(in thousands)

	For the year ended December 31, 2018			
	As Previously Reported	Restatement Impacts	Restatement Reference	As Restated
Cash flows from operating activities:				
Net loss	$ (259,489)	$ (31,787)		$ (291,276)
Adjustments to reconcile net loss to net cash used in operating activities:				
Depreciation and amortization	43,459	10,428	A	53,887
Write-off of property, plant and equipment, net	939	—		939
Revaluation of derivative contracts	28,471	550	B	29,021
Stock-based compensation	180,284	(11,802)	C	168,482
Loss on long-term REC purchase contract	200	—		200
Revaluation of stock warrants	(9,108)	—		(9,108)
Amortization of debt issuance cost	25,437	—		25,437
Changes in operating assets and liabilities:				
Accounts receivable	(54,570)	(453)	D	(55,023)
Inventories	(42,216)	5,242	E	(36,974)
Deferred cost of revenue	88,324	(74,101)	F	14,223
Customer financing receivable and other	4,878	—		4,878
Prepaid expenses and other current assets	(7,064)	(968)	G	(8,032)
Other long-term assets	1,897	(2,099)	H	(202)
Accounts payable	18,307	—		18,307
Accrued warranty	2,426	(928)	I	1,498
Accrued expense and other current liabilities	(6,800)	816	J	(5,984)
Deferred revenue and customer deposits	(91,996)	70,222	K	(21,774)
Other long-term liabilities	18,204	1,349	L	19,553
Net cash used in operating activities	(58,417)	(33,531)		(91,948)
Cash flows from investing activities:				
Purchase of property, plant and equipment	(14,659)	(30,546)	M	(45,205)
Payments for acquisition of intangible assets	(3,256)	—		(3,256)
Purchase of marketable securities	(103,914)	—		(103,914)
Proceeds from maturity of marketable securities	27,000	—		27,000
Net cash used in investing activities	(94,829)	(30,546)		(125,375)
Cash flows from financing activities:				
Repayment of debt	(18,770)	—		(18,770)
Repayment of debt to related parties	(1,390)	—		(1,390)
Proceeds from financing obligations	—	70,265	N	70,265
Repayment of financing obligations	—	(6,188)	N	(6,188)
Distributions to noncontrolling and redeemable noncontrolling interests	(15,250)	—		(15,250)
Proceeds from issuance of common stock	1,521	—		1,521
Proceeds from public offerings, net of underwriting discounts and commissions	292,529	—		292,529
Payments of initial public offering issuance costs	(5,521)	—		(5,521)
Net cash provided by financing activities	253,119	64,077		317,196
Net increase in cash, cash equivalents, and restricted cash	99,873	—		99,873
Cash, cash equivalents, and restricted cash:				
Beginning of period	180,612	—		180,612
End of period	$ 280,485	$ —		$ 280,485
Supplemental disclosure of cash flow information:				
Cash paid during the period for interest	$ 39,465	$ 20,084	N	$ 59,549
Cash paid during the period for taxes	1,748	—		1,748

[A] Depreciation and amortization — The correction of these misstatements resulted from the change of accounting for Energy Servers under the Managed Services Program and similar arrangements that would have been product and install cost of revenue, but are now recorded as property, plant and equipment, and depreciated over their useful lives of 21 years.

[B] Revaluation of derivative contracts — The correction of these misstatements resulted from the change of accounting for the grid pricing escalation guarantees we provided in some of our sales arrangements. These commitments were previously treated as a contingent liability and recorded as an accrued liability. We now consider the commitments a derivative liability, with the initial value recorded as a reduction in product revenue and then any changes in the value adjusted through other expense, net each period thereafter, resulting in a credit of $0.2 million, with $0.8 million of additional expense recorded to correct a misstatement in the valuation of our 6% Notes derivative.

[C] Stock-based compensation — The correction of these misstatements resulted from the change of accounting for stock-based compensation, including net capitalization of stock-based compensation cost into inventory of $10.3 million. The correction of this misstatement also resulted in the capitalization of $1.5 million of stock-based compensation costs related to assets, under the Managed Services Program now recorded as construction in progress within property, plant and equipment, net.

[D] Accounts receivable — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements where the timing difference of capacity billings to end customers and the payments received from the financing entity is recorded within accounts receivable.

[E] Inventories — The correction of these misstatements resulted from the change of accounting for inventories, held for shipments planned to customers under the Managed Services Program and other similar arrangements now accounted for as construction in progress within property, plant and equipment, net.

[F] Deferred cost of revenue, current and non-current — The correction of these misstatements resulted from the cumulative net change of accounting moving deferred cost of revenue to property, plant and equipment, net for the leased Energy Servers under the Managed Services Agreements and similar sale-leaseback arrangements of $71.9 million, and the net capitalization of stock-based compensation costs of $2.2 million in current deferred cost of revenue.

[G] Prepaid expenses and other current assets — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements where prepaid property tax and insurance payments are now classified within prepaid expenses, rather than offset against deferred revenue.

[H] Other long-term assets — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements, including the timing difference of capacity billings to end customers of $0.1 million, payments received from the financing entity now recorded within long term receivables of $1.9 million, and commission payments now classified within long term commission expenses of $0.1 million.

[I] Accrued warranty — The correction of these misstatements resulted from the change of accounting for accrued warranty which is now recorded on an as-incurred basis on our Managed Services Agreements and similar arrangements. The correction of these misstatements resulted from the change of accounting for the grid pricing escalation guarantees we've provided in some of our sales arrangements. These commitments were previously treated as a contingent liability that was considered remote and therefore, no accrual was made. We now consider $0.3 million accrual has made, with the initial value of treated as a reduction in product revenue and then any changes in the value adjusted through other expense, net each period thereafter.

[J] Accrued expense and other current liabilities and other long-term liabilities — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements where instead of recognizing the bank financing as revenue, the bank financing loan proceeds received and due are classified as lease loan liability.

[K] Deferred revenue and customer deposits, current and non-current — The correction of these misstatements resulted from the change of accounting for the recognition of product and installation revenue from upfront or ratable recognition to the recognition of the capacity payments received from the end customer as power is generated by the Energy Servers as electricity revenue.

[L] Other long-term liabilities — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements where instead of recognizing the bank financing as revenue, the bank financing loan proceeds received and due beyond the next twelve months are classified as lease loan liability.

[M] Purchase of property, plant and equipment — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements, whereby costs previously recognized as product and install costs of goods sold are now recorded as property, plant and equipment, net in the cases where the risks of ownership have not completely transferred to the financing party.

[N] Proceeds and repayments from financing obligations — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements where instead of recognizing the upfront proceeds received from the bank as revenue, the bank proceeds received and due are classified as proceeds from financing obligations and the capacity payments received from the end customer are classified as repayment of financing obligations and interest paid.

Bloom Energy Corporation
Consolidated Statements of Cash Flows
(in thousands)

	For the year ended December 31, 2017			
	As Previously Reported	Revision Impacts	Revision Reference	As Revised
Cash flows from operating activities:				
Net loss	$ (281,265)	$ (13,763)		$ (295,028)
Adjustments to reconcile net loss to net cash used in operating activities:				
Depreciation and amortization	46,105	8,271	A	54,376
Write-off of property, plant and equipment, net	48	—		48
Revaluation of derivative contracts	14,754	288	B	15,042
Stock-based compensation	30,479	(1,378)	C	29,101
Gain on long-term REC purchase contract	(70)	—		(70)
Revaluation of stock warrants	(2,975)	—		(2,975)
Amortization of debt issuance cost	47,312	—		47,312
Changes in operating assets and liabilities:				
Accounts receivable	4,849	(1,607)	D	3,242
Inventories	(7,105)	(3,531)	E	(10,636)
Deferred cost of revenue	(70,979)	39,701	F	(31,278)
Customer financing receivable and other	5,459	—		5,459
Prepaid expenses and other current assets	(2,175)	1,193	G	(982)
Other long-term assets	4,625	(3,869)	H	756
Accounts payable	7,076	—		7,076
Accrued warranty	(7,045)	(320)	I	(7,365)
Accrued expense and other current liabilities	8,599	(602)	J	7,997
Deferred revenue and customer deposits	91,893	(43,571)	K	48,322
Other long-term liabilities	43,239	(5,602)	L	37,637
Net cash used in operating activities	(67,176)	(24,790)		(91,966)
Cash flows from investing activities:				
Purchase of property, plant and equipment	(5,140)	(56,314)	M	(61,454)
Purchase of marketable securities	(29,043)	—		(29,043)
Proceeds from maturity of marketable securities	2,250	—		2,250
Net cash used in investing activities	(31,933)	(56,314)		(88,247)
Cash flows from financing activities:				
Borrowings from issuance of debt	100,000	—		100,000
Repayment of debt	(20,507)	—		(20,507)
Repayment of debt to related parties	(912)	—		(912)
Debt issuance costs	(6,108)	—		(6,108)
Proceeds from financing obligations	—	84,314	N	84,314
Repayment of financing obligations	—	(3,210)	N	(3,210)
Proceeds from noncontrolling and redeemable noncontrolling interests	13,652	—		13,652
Distributions to noncontrolling and redeemable noncontrolling interests	(23,659)	—		(23,659)
Proceeds from issuance of common stock	432	—		432
Payments of initial public offering issuance costs	(1,092)	—		(1,092)
Net cash provided by financing activities	61,806	81,104		142,910
Net decrease in cash, cash equivalents, and restricted cash	(37,303)	—		(37,303)
Cash, cash equivalents, and restricted cash:				
Beginning of period	217,915	—		217,915
End of period	$ 180,612	$ —		$ 180,612
Supplemental disclosure of cash flow information:				
Cash paid during the period for interest	$ 21,948	$ 15,680	N	$ 37,628
Cash paid during the period for taxes	616	—		616

[A] Depreciation and amortization — The correction of these misstatements resulted from the change of accounting for Energy Servers under the Managed Services Program and other similar arrangements that would have been product and install costs of goods sold, but are now recorded as property, plant and equipment, and depreciated over their useful lives of 21 years.

[B] Revaluation of derivative contracts - The correction of these misstatements resulted from the change of accounting for the grid pricing escalation guarantees we provided in some of our sales arrangements. These commitments were previously treated as a contingent liability and recorded as an accrued liability. We now consider the commitments a derivative liability, with the initial value recorded as a reduction in product revenue and then any changes in the value adjusted through other expense, net each period thereafter.

[C] Stock-based compensation — The correction of these misstatements resulted from the change of accounting for stock-based compensation, including net capitalization of stock-based compensation cost into inventory of $0.6 million. The correction of this misstatement also resulted in the capitalization of $0.7 million of stock-based compensation, cost related to assets, under the Managed Services Program now recorded as construction in progress within property, plant and equipment, net.

[D] Accounts receivable — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements where the timing difference of capacity billings to end customers and the payments received from the financing entity is recorded within accounts receivable.

[E] Inventories — The correction of these misstatements resulted from the change of accounting for inventories, held for shipments planned to customers under the Managed Services Program and other similar arrangements now accounted for as construction in progress within property, plant and equipment, net.

[F] Deferred cost of revenue, current and non-current — The correction of these misstatements resulted from the change of accounting moving deferred cost of revenue to property, plant and equipment, net for the leased Energy Servers under the Managed Services Agreements and similar sale-leaseback arrangements of $39.1 million, and the net capitalization of stock-based compensation costs of $0.6 million in current deferred cost of revenue.

[G] Prepaid expenses and other current assets — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements where prepaid property tax and insurance payments are now classified within prepaid expenses, rather than offset against deferred revenue.

[H] Other long-term assets — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements, including the timing difference of capacity billings to end customers of $1.7 million, payments received from the financing entity now recorded within long term receivables of $1.8 million, and commission payments now classified within long term commission expenses of $0.4 million.

[I] Accrued warranty — The correction of these misstatements resulted from the change of accounting for accrued warranty which is now recorded on an as-incurred basis on our Managed Services Agreements and similar arrangements. The correction of these misstatements resulted from the change of accounting for the grid pricing escalation guarantees we've provided in some of our sales arrangements. These commitments were previously treated as a contingent liability that was considered remote and therefore, no accrual was made. We now consider $0.3 million accrual has made, with the initial value of treated as a reduction in product revenue and then any changes in the value adjusted through other expense, net each period thereafter.

[J] Accrued expense and other current liabilities and other long-term liabilities — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements where instead of recognizing the bank financing as revenue, the bank financing loan proceeds received and due are classified as lease loan liability.

[K] Deferred revenue and customer deposits, current and non-current — The correction of these misstatements resulted from the change of accounting for the recognition of product and installation revenue from upfront or ratable recognition to the recognition of the capacity payments received from the end customer as power is generated by the Energy Servers as electricity revenue.

[L] Other long-term liabilities — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements where instead of recognizing the bank financing as revenue, the bank financing loan proceeds received and due beyond the next twelve months are classified as lease loan liability.

[M] Purchase of property, plant and equipment — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements, whereby costs previously recognized as product and install costs of goods sold are now recorded as property, plant and equipment, net in the cases where the risks of ownership have not completely transferred to the financing party.

[N] Proceeds and repayments from financing obligations — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements where instead of recognizing the upfront proceeds received from the bank as revenue, the bank proceeds received and due are classified as proceeds from financing obligations and the capacity payments received from the end customer are classified as repayment of financing obligations and interest paid.

3. Revenue Recognition

Adoption of ASC 606

The cumulative effect of the changes made to our consolidated January 1, 2019 consolidated balance sheet for the adoption of ASC 606 was as follows (in thousands):

	Balances at December 31, 2018	Adjustments from Adoption of ASC 606	Balances at January 1, 2019
	As Restated		As Recast
Assets			
Current assets:			
Cash and cash equivalents	$ 220,728	$ —	$ 220,728
Restricted cash	28,657	—	28,657
Short-term investments	104,350	—	104,350
Accounts receivable	88,784	995	89,779
Inventories	135,265	—	135,265
Deferred cost of revenue	43,809	—	43,809
Customer financing receivable	5,594	—	5,594
Prepaid expenses and other current assets	36,747	140	36,887
Total current assets	663,934	1,135	665,069
Property, plant and equipment, net	716,751	—	716,751
Customer financing receivable, non-current	67,082	—	67,082
Restricted cash (non-current)	31,100	—	31,100
Deferred cost of revenue, non-current	45	—	45
Other long-term assets	42,882	2,472	45,354
Total assets	$ 1,521,794	$ 3,607	$ 1,525,401
Liabilities, Redeemable Noncontrolling Interest, Stockholders’ Deficit and Noncontrolling Interest			
Current liabilities:			
Accounts payable	$ 66,889	$ —	$ 66,889
Accrued warranty	17,968	(1,032)	16,936
Accrued expenses and other current liabilities	66,838	—	66,838
Financing obligations	8,128	—	8,128
Deferred revenue and customer deposits	67,632	4,653	72,285
Current portion of recourse debt	8,686	—	8,686
Current portion of non-recourse debt	18,962	—	18,962
Current portion of non-recourse debt from related parties	2,200	—	2,200
Total current liabilities	257,303	3,621	260,924
Derivative liabilities	14,143	—	14,143
Deferred revenue and customer deposits, net of current portion	87,308	17,982	105,290
Financing obligations, non-current	385,650	—	385,650
Long-term portion of recourse debt	360,339	—	360,339
Long-term portion of non-recourse debt	289,241	—	289,241
Long-term portion of recourse debt from related parties	27,734	—	27,734
Long-term portion of non-recourse debt from related parties	34,119	—	34,119
Other long-term liabilities	26,196	—	26,196
Total liabilities	1,482,033	21,603	1,503,636
Redeemable noncontrolling interest	57,261	—	57,261
Stockholders’ deficit:			
Common stock: $0.0001 par value; Class A shares and, Class B shares	11	—	11
Additional paid-in capital	2,481,352	—	2,481,352
Accumulated other comprehensive income	131	—	131
Accumulated deficit	(2,624,104)	(17,996)	(2,642,100)
Total stockholders’ deficit	(142,610)	(17,996)	(160,606)
Noncontrolling interest	125,110	—	125,110
Total liabilities, redeemable noncontrolling interest, stockholders' deficit and noncontrolling interest	$ 1,521,794	$ 3,607	$ 1,525,401

In accordance with the ASC 606 requirements, the impact of adoption on our consolidated balance sheet was as follows as of December 31, 2019 (in thousands):

	December 31, 2019		
	As Reported	Balances Without Adoption of ASC 606	Effect of Change Higher / (Lower)
Assets			
Current assets:			
Cash and cash equivalents	$ 202,823	$ 202,823	$ —
Restricted cash	30,804	30,804	—
Accounts receivable	37,828	47,442	(9,614)
Inventories	109,606	109,606	—
Deferred cost of revenue	58,470	58,470	—
Customer financing receivable	5,108	5,108	—
Prepaid expenses and other current assets	28,068	27,860	208
Total current assets	472,707	482,113	(9,406)
Property, plant and equipment, net	607,059	607,059	—
Customer financing receivable, non-current	50,747	50,747	—
Restricted cash, non-current	143,761	143,761	—
Deferred cost of revenue, non-current	6,665	6,665	—
Other long-term assets	41,652	37,849	3,803
Total assets	$ 1,322,591	$ 1,328,194	$ (5,603)
Liabilities, Redeemable Noncontrolling Interest, Stockholders' Deficit and Noncontrolling Interest			
Current liabilities:			
Accounts payable	$ 55,579	$ 55,579	$ —
Accrued warranty	10,333	11,952	(1,619)
Accrued expenses and other current liabilities	70,284	70,284	—
Financing obligations	10,993	10,993	—
Deferred revenue and customer deposits	89,192	90,075	(883)
Current portion of recourse debt	304,627	304,627	—
Current portion of non-recourse debt	8,273	8,273	—
Current portion of recourse debt from related parties	20,801	20,801	—
Current portion of non-recourse debt from related parties	3,882	3,882	—
Total current liabilities	573,964	576,466	(2,502)
Derivative liabilities	17,551	17,551	—
Deferred revenue and customer deposits, net of current portion	125,529	84,594	40,935
Financing obligations, non-current	446,165	446,165	—
Long-term portion of recourse debt	75,962	75,962	—
Long-term portion of non-recourse debt	192,180	192,180	—
Long-term portion of non-recourse debt from related parties	31,087	31,087	—
Other long-term liabilities	28,013	28,013	—
Total liabilities	1,490,451	1,452,018	38,433
Redeemable noncontrolling interest	443	443	—
Stockholders' deficit:			
Common stock: $0.0001 par value; Class A shares and, Class B shares	12	12	—
Additional paid-in capital	2,686,759	2,686,759	—

	December 31, 2019		
	As Reported	Balances Without Adoption of ASC 606	Effect of Change Higher / (Lower)
Accumulated other comprehensive income	19	19	—
Accumulated deficit	(2,946,384)	(2,902,348)	(44,036)
Total stockholders’ deficit	(259,594)	(215,558)	(44,036)
Noncontrolling interest	91,291	91,291	—
Total liabilities, redeemable noncontrolling interest, stockholders' deficit and noncontrolling interest	$ 1,322,591	$ 1,328,194	$ (5,603)

In accordance with ASC 606 requirements, the impact of adoption on our consolidated statement of operations for the year ended December 31, 2019 was as follows (in thousands):

	Year ended December 31, 2019		
	As Reported	**Balances Without Adoption of ASC 606**	**Effect of Change Higher / (Lower)**
Revenue:			
Product	$ 557,336	$ 601,857	$ (44,521)
Installation	60,826	54,716	6,110
Service	95,786	91,944	3,842
Electricity	71,229	71,229	—
Total revenue	785,177	819,746	(34,569)
Cost of revenue:			
Product	435,479	436,064	(585)
Installation	76,487	76,487	—
Service	100,238	106,782	(6,544)
Electricity	75,386	75,386	—
Total cost of revenue	687,590	694,719	(7,129)
Gross profit	97,587	125,027	(27,440)
Operating expenses:			
Research and development	104,168	104,168	—
Sales and marketing	73,573	74,973	(1,400)
General and administrative	152,650	152,650	—
Total operating expenses	330,391	331,791	(1,400)
Loss from operations	(232,804)	(206,764)	(26,040)
Interest income	5,661	5,661	—
Interest expense	(87,480)	(87,480)	—
Interest expense to related parties	(6,756)	(6,756)	—
Other income (expense), net	706	706	—
Loss on revaluation of warrant liabilities and embedded derivatives	(2,160)	(2,160)	—
Loss before income taxes	(322,833)	(296,793)	(26,040)
Income tax provision	633	633	—
Net loss	(323,466)	(297,426)	(26,040)
Net loss attributable to noncontrolling interests and redeemable noncontrolling interests	(19,052)	(19,052)	—
Net loss attributable to Class A and Class B common stockholders	(304,414)	(278,374)	(26,040)
Less: deemed dividend to noncontrolling interest	(2,454)	(2,454)	—
Net loss available to Class A and Class B common stockholders	$ (306,868)	$ (280,828)	$ (26,040)
Net loss per share available to Class A and Class B common stockholders, basic and diluted	$ (2.67)	$ (2.44)	$ (0.23)

The impact of the adoption of ASC 606 on our consolidated statement of cash flows for the year ended December 31, 2019, relating to cash flows from operating activities was an increase to net loss of $26.0 million which was offset by a decrease in accounts receivable of $10.6 million, increases in prepaid expenses and other current assets of $0.1 million, and increases in other long-term assets of $1.3 million. These sources of cash from changes in operating assets were partially offset by increases in deferred revenue and customer deposits of $17.4 million and a decrease in accrued warranty of $0.6 million. There is no net impact on operating activities and no impact in investing and financing activities.

Contract Liabilities

Deferred revenue and customer deposits activity related to the adoption of ASC 606 consisted of the following (in thousands):

	Year ended 12/31/2018 (As Restated)	Impacts of ASC606 Adoption	As of 1/1/2019 (As Recast)	As of 12/31/2019 (As Recast)
Deferred revenue	$ (141,458)	$ (8,154)	$ (149,612)	$ (175,619)
Customer deposits	(13,482)	(14,481)	(27,963)	(39,101)
Deferred revenue and customer deposits	$ (154,940)	$ (22,635)	$ (177,575)	$ (214,720)

Deferred revenue activity during the year ended December 31, 2019 after the ASC 606 adoption consisted of the following (in thousands):

	Year Ended December 31, 2019
	As Reported
Deferred revenue on January 1, 2019	$ 149,612
Additions	709,843
Revenue recognized	(683,836)
Deferred revenue on December 31, 2019	$ 175,619

Deferred revenue is equivalent to the total transaction price allocated to the performance obligations that are unsatisfied, or partially unsatisfied, as of December 31, 2019. These performance obligations relate to the provision of maintenance services under current contracts and future renewal periods which provide customers with material rights over a period that we estimate will be largely commensurate with the period of their expected use of the associated Energy Server. As a result we expect to recognize these amounts as revenue over a period of up to 21 years, predominantly on a cost-to-cost basis that reflects the cost of providing these services.

Revenue by source

We disaggregate revenue from contracts with customers into four revenue categories: (i) product, (ii) installation, (iii) services and (iv) electricity, as shown below (in thousands):

	Years Ended December 31,	
	2019	2018
	As Reported, With Adoption of ASC 606	As Reported, Under ASC 605
Revenue from contracts with customers:		
Product revenue	$ 557,336	$ 400,638
Installation revenue	60,826	68,195
Services revenue	95,786	83,267
Electricity revenue	10,840	23,023
Total revenue from contract with customers	724,788	575,123
Revenue from contracts accounted for as leases:		
Electricity revenue	60,389	57,525
Total revenue	$ 785,177	$ 632,648

For the year ended December 31, 2019, approximately 77% of our revenues are from the United States and 23% comes from the Asia Pacific region.

4. Financial Instruments

Cash, Cash Equivalents and Restricted Cash

The carrying value of cash and cash equivalents approximate fair value and are as follows (in thousands):

	December 31,			
	2019		2018	
As Held:				
Cash	$	100,773	$	136,642
Money market funds		276,615		143,843
	$	377,388	$	280,485
As Reported:				
Cash and cash equivalents	$	202,823	$	220,728
Restricted cash		174,565		59,757
	$	377,388	$	280,485

Restricted cash consisted of the following (in thousands):

	December 31,			
	2019		2018	
Current:				
Restricted cash	$	28,494	$	25,740
Restricted cash related to PPA Entities		2,310		2,917
Restricted cash, current	$	30,804	$	28,657
Non-current:				
Restricted cash	$	10	$	3,246
Restricted cash related to PPA Entities [1]		143,751		27,854
Restricted cash, non-current		143,761		31,100
	$	174,565	$	59,757

[1] We have variable interest entities which represent a portion of the consolidated balances are recorded within the "restricted cash," and other financial statement line items in the Consolidated Balance Sheets (see Note 13, Power Purchase Agreement Programs). This amount includes $108.7 million and $20.0 million of restricted cash non-current, held in PPA II and PPA IIIb entities, respectively. As of December 31, 2019, such entities are no longer considered variable interest entities.

Short-Term Investments

As of December 31, 2019, we had no short-term investments. As of December 31, 2018, we had short-term investments in U.S. Treasury Bills of $104.4 million.

Derivative Instruments

We have derivative financial instruments related to natural gas fixed price forward contracts and interest rate swaps. See Note 8, *Derivative Financial Instruments* for a full description of our derivative financial instruments.

5. Fair Value

Financial Assets and Liabilities Measured at Fair Value on a Recurring Basis

The tables below set forth, by level, our financial assets that were 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):

	Fair Value Measured at Reporting Date Using							
December 31, 2019	Level 1		Level 2		Level 3		Total	
Assets								
Cash equivalents:								
Money market funds	$	276,615	$	—	$	—	$	276,615
Interest rate swap agreements		—		3		—		3
	$	276,615	$	3	$	—	$	276,618
Liabilities								
Accrued expenses and other current liabilities	$	996	$	—	$	—	$	996
Derivatives:								
Natural gas fixed price forward contracts		—		—		6,968		6,968

Embedded EPP derivatives	—	—	6,176	6,176
Interest rate swap agreements	—	9,241	—	9,241
	$ 996	$ 9,241	$ 13,144	$ 23,381

	Fair Value Measured at Reporting Date Using			
December 31, 2018	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Cash equivalents:				
Money market funds	$ 143,843	$ —	$ —	$ 143,843
Short-term investments	104,350	—	—	104,350
Interest rate swap agreements	—	82	—	82
	$ 248,193	$ 82	$ —	$ 248,275
Liabilities				
Accrued expenses and other current liabilities	$ 1,331	$ —	$ —	$ 1,331
Derivatives:				
Natural gas fixed price forward contracts	—	—	9,729	9,729
Embedded EPP derivatives	—	—	4,015	4,015
Interest rate swap agreements	—	3,630	—	3,630
	$ 1,331	$ 3,630	$ 13,744	$ 18,705

Money Market Funds - Money market funds are valued using quoted market prices for identical securities and are therefore classified as Level 1 financial assets.

Short-Term Investments - Short-term investments, which are comprised of U.S. Treasury Bills with maturities of 12 months or less from the purchase date, are valued using quoted market prices for identical securities and are therefore classified as Level 1 financial assets.

Interest Rate Swap Agreements - Interest rate swap agreements are valued using quoted prices for similar contracts and are therefore classified as Level 2 financial assets. Interest rate swaps are designed as hedging instruments and are recognized at fair value on our consolidated balance sheets. As of December 31, 2019, $0.6 million of the gain on the interest rate swaps accumulated in other comprehensive income (loss) is expected to be reclassified into earnings in the next twelve months.

Natural Gas Fixed Price Forward Contracts - Natural gas fixed price forward contracts are valued using a combination of factors including the counterparty's credit rating and estimates of future natural gas prices and therefore, as no observable inputs to support market activity are available, are classified as Level 3 financial assets.

The following table provides the number and fair value of our natural gas fixed price forward contracts (in thousands):

	December 31,			
	2019		2018	
	Number of Contracts (MMBTU)[2]	Fair Value	Number of Contracts (MMBTU)[2]	Fair Value
Liabilities[1]				
Natural gas fixed price forward contracts (not under hedging relationships)	1,991	$ 6,968	3,096	$ 9,729

[1] Recorded in current liabilities and derivative liabilities in the consolidated balance sheets.

[2] One MMBTU is a traditional unit of energy used to describe the heat value (energy content) of fuels.

For the years ended December 31, 2019 and 2018, we marked-to-market the fair value of our natural gas fixed price forward contracts and recorded a loss of $0.8 million and a gain of $2.2 million, respectively, and recorded gains on the settlement of these contracts of $3.6 million and $3.4 million, respectively, in cost of revenue on our consolidated statement of operations.

Embedded Derivative on 6% Convertible Promissory Notes - Between December 2015 and September 2016, we issued $260.0 million of 6% Convertible Promissory Notes (6% Notes) that mature in December 2020. The 6% Notes are convertible at the option of the holders at a conversion price of $11.25 per share. The embedded redemption feature of the 6% Notes was therefore classified as an embedded derivative.

The embedded redemption feature of the 6% Notes was valued using the binomial lattice method, which utilizes significant inputs that are unobservable in the market. The fair value was determined by estimated event dates with probabilities of likely events under the scenario based upon facts existing through the date of our IPO. It was therefore classified as a Level 3 financial liability. Upon the expiration of embedded derivative features triggered by the IPO, we reclassified the fair value of the derivative liability into additional paid-in capital. The final valuation of the conversion feature was calculated as of the date of the IPO to be $178.0 million and was reclassified from derivative liability to additional paid-in capital on the balance sheet.

Embedded EPP Derivatives in Sales Contracts - We estimated 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.

Preferred Stock Warrants - We estimated the fair value of the preferred stock warrants using a probability-weighted expected return model which considers various potential liquidity outcomes and assigned probabilities to each to arrive at the weighted equity value. As there were no observable inputs supported by market activity, the preferred stock warrants were therefore classified as a Level 3 financial liability.

The preferred stock warrants were converted to common stock warrants effective with the IPO and reclassified to additional paid-in capital. The fair value of the preferred stock warrants was zero as of December 31, 2019 and 2018. The changes in fair value were recorded in gain (loss) on revaluation of warrant liabilities in our consolidated statements of operations.

There were no transfers between fair value measurement classifications during the years ended December 31, 2019 and 2018. The changes in the Level 3 financial assets were as follows (in thousands):

	Natural Gas Fixed Price Forward Contracts	Preferred Stock Warrants	Embedded Derivative Liability	Embedded EPP Derivative	Total
Balances at December 31, 2017	$ 15,368	$ 9,825	$ 140,771	$ 4,217	$ 170,181
Settlement of natural gas fixed price forward contracts	(3,412)	—	—	0	(3,412)
Embedded derivative on notes and sales contracts	—	—	6,288	3	6,291
Changes in fair value	(2,227)	(8,943)	30,904	(205)	19,529
Reclassification of preferred stock warrants liability to common stock warrants and derivative liability into additional paid-in-capital	—	(882)	(177,963)	—	(178,845)
Balances at December 31, 2018	9,729	—	—	4,015	13,744
Settlement of natural gas fixed price forward contracts	(3,605)	—	—	—	(3,605)
Changes in fair value	844	—	—	2,161	3,005
Balances at December 31, 2019	$ 6,968	$ —	$ —	$ 6,176	$ 13,144

Significant changes in any assumption input in isolation can result in a significant change in fair value measurement. Generally, an increase in the market price of our shares of common stock, an increase in natural gas prices, an increase in the volatility of our shares of common stock and an increase in the remaining term of the conversion feature would each result in a directionally similar change in the estimated fair value of our derivative liability. Increases in such assumption values would increase the associated liability while decreases in these assumption values would decrease the associated liability. An increase in the risk-free interest rate or a decrease in the market price of our shares of common stock would result in a decrease in the estimated fair value measurement and thus a decrease in the associated liability.

Financial Assets and Liabilities Not Measured at Fair Value on a Recurring Basis

Customer Receivables and Debt Instruments - We estimate fair value for customer financing receivables, senior secured notes, term loans and convertible promissory notes 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, 2019		December 31, 2018	
	Net Carrying Value	Fair Value	Net Carrying Value	Fair Value
Customer receivables:				
Customer financing receivables	$ 55,855	$ 44,002	$ 72,676	$ 51,541
Debt instruments:				
Recourse				
LIBOR + 4% term loan due November 2020	1,536	1,590	3,214	3,311
5% convertible promissory note due December 2020	36,482	32,070	34,706	31,546
6% convertible promissory notes due December 2020	273,410	302,047	263,284	353,368
10% notes due July 2024	89,962	97,512	95,555	99,260
Non-recourse				
5.22% senior secured notes due March 2025	—	—	78,566	80,838
7.5% term loan due September 2028	34,969	41,108	36,319	39,892
LIBOR + 5.25% term loan due October 2020	—	—	23,916	25,441
6.07% senior secured notes due March 2030	80,016	87,618	82,337	85,917
LIBOR + 2.5% term loan due December 2021	120,436	120,510	123,384	123,040

Long-Lived Assets - Our long-lived assets include property, plant and equipment and Energy Servers capitalized in connection with our Managed Services Program 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. During the year ended December 31, 2019 we upgraded the 30 megawatts of Energy Servers in PPA II and the 5.4 megawatts of Energy Servers in PPA IIIb by decommissioning these systems and selling and installing new Energy Servers. As a result of these upgrades, the useful lives of all other remaining Energy Servers included within our long-lived assets were reassessed and we concluded that no change in the useful lives or impairment of these remaining Energy Servers was identified in the year ended December 31, 2019. See Note 13, *Purchase Power Agreement Programs* for further information.

6. Balance Sheet Components

Inventories

The components of inventory consisted of the following (in thousands):

	December 31,	
	2019	2018
		As Restated
Raw materials	$ 67,829	$ 50,856
Work-in-progress	21,207	18,676
Finished goods	20,570	65,733
	$ 109,606	$ 135,265

Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets consisted of the following (in thousands):

	December 31,	
	2019	2018
		As Restated
Government incentives receivable	$ 893	$ 1,001
Prepaid HW & SW maintenance	3,763	1,464
Receivables from employees	6,130	5,922
Other prepaid expense and other current assets	17,282	28,360
	$ 28,068	$ 36,747

Property, Plant and Equipment, Net

Property, plant and equipment, net consisted of the following (in thousands):

	December 31,	
	2019	2018
		As Restated
Energy Servers	$ 650,600	$ 757,574
Computers, software and hardware	20,275	16,536
Machinery and equipment	101,650	99,209
Furniture and fixtures	8,339	4,337
Leasehold improvements	35,694	18,629
Building	40,512	40,512
Construction in progress	12,611	41,180
	869,681	977,977
Less: Accumulated depreciation	(262,622)	(261,226)
	$ 607,059	$ 716,751

Construction in progress decreased $28.6 million from 2018, primarily due to our move to our new corporate headquarters during the first quarter of 2019. After the move was completed, $17.6 million was reclassified to leasehold improvements within property, plant and equipment. In addition, the remaining decrease of $11.0 million was due to acceptances of Energy Servers under our Managed Services sale-leaseback program which are reclassified from construction in progress to Energy Servers within property, plant and equipment upon acceptance.

Depreciation expense related to property, plant and equipment was $78.6 million, $53.1 million and $54.4 million for the years ended December 31, 2019, 2018 and 2017, respectively.

Property, plant and equipment under operating leases by the PPA Entities was $371.4 million and $397.5 million as of December 31, 2019 and 2018, respectively. The accumulated depreciation for these assets was $95.5 million and $77.4 million as of December 31, 2019 and 2018, respectively. Depreciation expense related to our property, plant and equipment under operating leases by the PPA Entities was $27.1 million, $25.5 million and $25.5 million for the years ended December 31, 2019, 2018 and 2017 respectively.

During the year ended December 31, 2019, there was a decommissioning in PPA II, including the replacement during 2019 of 30.0 megawatts of installed Energy Servers with 27.5 megawatts of new systems sold, resulting in product cost of goods sold due to $52.5 million for the write-off of Energy Servers and $78.4 million for the cost of new systems sold, and electricity cost of revenue of $22.6 million of accelerated depreciation charged.

During the year ended December 31, 2019, there was a decommissioning in PPA IIIb, including the replacement during 2019 of 5.0 megawatts of installed Energy Servers, resulting in product cost of goods sold of $18.0 million for the write-off of Energy Servers, and electricity cost of revenue of $1.7 million of accelerated depreciation charged in fourth quarter of 2019 related to the revised expected lives of installed systems, which we recognized in our consolidated statement of operations

See *Note 13, Power Purchase Agreement Programs - PPA II Upgrade of Energy Servers* and *PPA IIIb Upgrade of Energy Servers* for additional information.

Customer Financing Receivable

The components of investment in sales-type financing leases consisted of the following (in thousands):

	December 31, 2019	December 31, 2018
Total minimum lease payments to be received	$ 76,886	$ 100,816
Less: Amounts representing estimated executing costs	(19,931)	(25,180)
Net present value of minimum lease payments to be received	56,955	75,636
Estimated residual value of leased assets	890	1,051
Less: Unearned income	(1,990)	(4,011)
Net investment in sales-type financing leases	55,855	72,676
Less: Current portion	(5,108)	(5,594)
Non-current portion of investment in sales-type financing leases	$ 50,747	$ 67,082

The future scheduled customer payments from sales-type financing leases were as follows as of December 31, 2019 (in thousands):

	2020	2021	2022	2023	2024	Thereafter
Future minimum lease payments, less interest	$ 5,108	$ 5,428	$ 5,784	$ 6,155	$ 6,567	$ 25,923

Other Long-Term Assets

Other long-term assets consisted of the following (in thousands):

	December 31,	
	2019	2018
		As Restated
Prepaid and other long-term assets	$ 29,153	$ 34,093
Deferred commissions	5,007	1,083
Equity-method investments	5,733	6,046
Long-term deposits	1,759	1,660
	$ 41,652	$ 42,882

Accrued Warranty

Accrued warranty liabilities consisted of the following (in thousands):

	December 31,	
	2019	2018
		As Restated
Product warranty	$ 2,345	$ 3,378
Product performance	7,536	6,290
Maintenance services contracts	453	8,300
	$ 10,334	$ 17,968

Changes in the product warranty and product performance liabilities were as follows (in thousands):

Balances at December 31, 2016 (As Revised)	$ 8,082
Accrued warranty, net (As Revised)	5,979
Warranty expenditures during period (As Revised)	(6,740)
Balances at December 31, 2017 (As Revised)	7,321
Accrued warranty, net (As Restated)	9,301
Warranty expenditures during period (As Restated)	(6,954)
Balances at December 31, 2018 (As Restated)	9,668
Cumulative effect upon adoption of ASC 606	1,032
Accrued warranty, net	1,849
Warranty expenditures during period	(2,668)
Balances at December 31, 2019	$ 9,881

Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consisted of the following (in thousands):

	December 31,	
	2019	2018
		As Restated
Compensation and benefits	$ 17,173	$ 16,742
Current portion of derivative liabilities	4,834	3,232
Sales related liabilities	416	1,421
Accrued installation	10,348	6,859
Sales tax liabilities	3,849	1,798
Interest payable	3,875	4,675
Other	29,789	32,111
	$ 70,284	$ 66,838

Other Long-Term Liabilities

Other long-term liabilities consisted of the following (in thousands):

	December 31,	
	2019	2018
		As Restated
Delaware grant	$ 10,469	$ 10,469
Other	17,544	15,727
	$ 28,013	$ 26,196

In March 2012, we entered into an agreement with the Delaware Economic Development Authority to provide a grant of $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. We have received $12.0 million of the grant which is contingent upon us meeting certain milestones related to the construction of the manufacturing facility and the employment of full-time workers at the facility through September 30, 2023. As of December 31, 2019, we have paid $1.5 million in October 2017 for recapture provisions and have recorded $10.5 million in other long-term liabilities for potential repayments. See Note 14, *Commitments and Contingencies* for a full description of the grant.

7. Outstanding Loans and Security Agreements

The following is a summary of our debt as of December 31, 2019 (in thousands):

	Unpaid Principal Balance	Net Carrying Value Current	Net Carrying Value Long-Term	Net Carrying Value Total	Unused Borrowing Capacity	Interest Rate	Maturity Dates	Entity	Recourse
LIBOR + 4% term loan due November 2020	$ 1,571	$ 1,536	$ —	$ 1,536	$ —	LIBOR plus margin	November 2020	Company	Yes
5% convertible promissory note due December 2020	33,104	36,482	—	36,482	—	5.0%	December 2020	Company	Yes
6% convertible promissory notes due December 2020	289,299	273,410	—	273,410	—	6.0%	December 2020	Company	Yes
10% notes due July 2024	93,000	14,000	75,962	89,962	—	10.0%	July 2024	Company	Yes
Total recourse debt	416,974	325,428	75,962	401,390	—				
7.5% term loan due September 2028	38,337	3,882	31,087	34,969	—	7.5%	September 2028	PPA IIIa	No
6.07% senior secured notes due March 2030	80,988	3,151	76,865	80,016	—	6.1%	March 2030	PPA IV	No
LIBOR + 2.5% term loan due December 2021	121,784	5,122	115,315	120,437	—	LIBOR plus margin	December 2021	PPA V	No
Letters of Credit due December 2021	—	—	—	—	1,220	2.25%	December 2021	PPA V	No
Total non-recourse debt	241,109	12,155	223,267	235,422	1,220				
Total debt	$ 658,083	$ 337,583	$ 299,229	$ 636,812	$ 1,220				

The following is a summary of our debt as of December 31, 2018 (in thousands):

	Unpaid Principal Balance	Net Carrying Value			Unused Borrowing Capacity	Interest Rate	Maturity Dates	Entity	Recourse
		Current	Long-Term	Total					
LIBOR + 4% term loan due November 2020	$ 3,286	$ 1,686	$ 1,528	$ 3,214	$ —	LIBOR plus margin	November 2020	Company	Yes
5% convertible promissory note due December 2020	33,104	—	34,706	34,706	—	8.0%	December 2020	Company	Yes
6% convertible promissory notes due December 2020	296,233	—	263,284	263,284	—	6.0%	December 2020	Company	Yes
10% notes due July 2024	100,000	7,000	88,555	95,555	—	10.0%	July 2024	Company	Yes
Total recourse debt	432,623	8,686	388,073	396,759	—				
5.22% senior secured term notes due March 2025	79,698	11,994	66,572	78,566	—	5.2%	March 2025	PPA II	No
7.5% term loan due September 2028	40,538	2,200	34,119	36,319	—	7.5%	September 2028	PPA IIIa	No
LIBOR + 5.25% term loan due October 2020	24,723	827	23,089	23,916	—	LIBOR plus margin	October 2020	PPA IIIb	No
6.07% senior secured notes due March 2030	83,457	2,469	79,868	82,337	—	6.1%	March 2030	PPA IV	No
LIBOR + 2.5% term loan due December 2021	125,456	3,672	119,712	123,384	—	LIBOR plus margin	December 2021	PPA V	No
Letters of Credit due December 2021	—	—	—	—	1,220	2.25%	December 2021	PPA V	No
Total non-recourse debt	353,872	21,162	323,360	344,522	1,220				
Total debt	$ 786,495	$ 29,848	$ 711,433	$ 741,281	$ 1,220				

Recourse debt refers to debt that Bloom Energy Corporation has an obligation to pay. Non-recourse debt refers to debt that is recourse to only specified assets or our subsidiaries. The differences between the unpaid principal balances and the net carrying values apply to debt discounts and deferred financing costs. We were in compliance with all financial covenants as of December 31, 2019 and 2018.

Recourse Debt Facilities

LIBOR + 4% Term Loan due November 2020 - In May 2013, we entered into a $5.0 million credit agreement and a $12.0 million financing agreement to help fund the building of a new facility in Newark, Delaware. The $5.0 million credit agreement expired in December 2016. The $12.0 million financing agreement has a term of 90 months, payable monthly at a variable rate equal to one month LIBOR plus the applicable margin. The weighted average interest rate as of December 31, 2019 and 2018 was 6.3% and 5.9%, respectively. The loan requires monthly payments and is secured by the manufacturing facility. In addition, the credit agreements also include a cross-default provision which provides that the remaining balance of borrowings under the agreements will be due and payable immediately if a lien is placed on the Newark facility in the event we default on any indebtedness in excess of $100,000 individually or $300,000 in the aggregate. Under the terms of these credit agreements, we are required to comply with various restrictive covenants. As of December 31, 2019 and 2018, the unpaid principal balance of debt outstanding was $1.6 million and $3.3 million, respectively.

5% Convertible Promissory Notes due 2020 (Originally 8% Convertible Promissory Notes due December 2018) - Between December 2014 and June 2016, we issued $193.2 million of three-year convertible promissory notes ("8% Notes") to certain investors. The 8% Notes had a fixed interest rate of 8% compounded monthly, due at maturity or at the election of the investor with accrued interest due in December of each year.

On January 18, 2018, amendments were finalized to extend the maturity dates for all the 8% Notes to December 2019. At the same time, the portion of the notes that was held by Constellation NewEnergy, Inc. ("Constellation") was extended to December 2020 and the interest rate decreased from 8% to 5% ("5% Notes").

Investors held the right to convert the unpaid principal and accrued interest of both the 8% Notes and 5% Notes to Series G convertible preferred stock at any time at the price of $38.64 per share. In July 2018, upon our IPO, the $221.6 million of principal and accrued interest of outstanding 8% Notes automatically converted into additional paid-in capital, the conversion of which included all the related-party noteholders. The 8% Notes converted to shares of Series G convertible preferred stock and, concurrently, each such share of Series G convertible preferred stock converted automatically into one share of Class B common stock. Upon our IPO, conversions of 5,734,440 shares of Class B common stock were issued and the 8% Notes were retired. Constellation, the holder of the 5% Notes, have not elected to convert as of December 31, 2019. The outstanding unpaid principal and accrued interest debt balance of the 5% Notes of $36.5 million was classified as current as of December 31, 2019, and the outstanding unpaid principal and accrued interest debt balances of the 5% Notes of $34.7 million was classified as non-current as of December 31, 2018.

6% Convertible Promissory Notes due December 2020 - Between December 2015 and September 2016, we issued $260.0 million convertible promissory notes due December 2020, ("6% Notes") to certain investors. The 6% Notes bore a 5.0% fixed interest rate, payable monthly either in cash or in kind, at our election. We amended the terms of the 6% Notes in June 2017 to increase the interest rate from 5% to 6% and to reduce the collateral securing the notes.

As of December 31, 2019 and 2018, the amount outstanding on the 6% Notes, which includes interest paid in kind through the IPO date, was $289.3 million and $296.2 million, respectively. Upon our IPO, the debt is convertible at the option of the holders at the conversion price of $11.25 per share into common stock at any time through the maturity date. In January 2018, we amended the terms of the 6% Notes to extend the convertible put option, which investors could elect only if the IPO did not occur prior to December 2019. After the IPO, we paid the interest in cash when due and no additional interest accrued on the consolidated balance sheet on the 6% Notes. In November 2019, one note holder exchanged a portion of their 6% Notes at the conversion price of $11.25 per share into 616,302 shares of common stock.

On or after July 27, 2020, we may redeem, at our option, all or part of the 6% Notes if the last reported sale price of our common stock has been at least $22.50 for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending within the three trading days immediately preceding the date on which we provide written notice of redemption In certain circumstances, the 6% Notes are also redeemable at our option in connection with a change of control.

Under the terms of the indenture governing the 6% Notes, we are required to comply with various restrictive covenants, including meeting reporting requirements, such as the preparation and delivery of audited consolidated financial statements, and restrictions on investments. In addition, we are required to maintain collateral which secures the 6% Notes in an amount equal to 200% of the principal amount of and accrued and unpaid interest on the outstanding notes. This minimum collateral test is not a negative covenant and does not result in a default if not met. However, the minimum collateral test does restrict us with respect to investing in non-PPA subsidiaries. If we do not meet the minimum collateral test, we cannot invest cash into any non-PPA subsidiary that is not a guarantor of the notes. The 6% Notes also include a cross-acceleration provision which provides that the holders of at least 25% of the outstanding principal amount of the 6% Notes may cause such notes to become immediately due and payable if we or any of our subsidiaries default on any indebtedness in excess of $15.0 million such that the repayment of such indebtedness is accelerated.

10% Notes due July 2024 - In June 2017, we issued $100.0 million of senior secured notes ("10% Notes"). The 10% Notes mature in 2024 and bear a 10.0% fixed rate of interest and with principal amortization started July 2019, payable semi-annually. The 10% Notes have a continuing security interest in the cash flows payable to us as servicing, operations and maintenance fees and administrative fees from certain active power purchase agreements in our Bloom Electrons program. Under the terms of the indenture governing the notes, we are required to comply with various restrictive covenants including, among other things, to maintain certain financial ratios such as debt service coverage ratios, to incur additional debt, issue guarantees, incur liens, make loans or investments, make asset dispositions, issue or sell share capital of our subsidiaries and pay dividends, meet reporting requirements, including the preparation and delivery of audited consolidated financial statements, or maintain certain restrictions on investments and requirements in incurring new debt. In addition, we are required to maintain collateral which secures the 10% Notes based on debt ratio analyses. This minimum collateral test is not a negative covenant and does not result in a default if not met. However, the minimum debt service coverage ratio test does restrict our access to the excess cash escrowed in a collection account which would otherwise be released to us on a bi-annual basis after principal amortization and interest payment. The outstanding unpaid principal and accrued interest debt balance of the 10% Notes of $14.0 million and $7.0 million were classified as current as of December 31, 2019 and 2018, respectively and the outstanding unpaid principal and accrued interest debt balances of the 10% Notes of $76.0 million and $88.6 million were classified as non-current as of December 31, 2019 and 2018, respectively.

Non-recourse Debt Facilities

5.22% Senior Secured Term Notes - In March 2013, PPA Company II refinanced its existing debt by issuing 5.22% Senior Secured Notes due March 30, 2025. The total amount of the loan proceeds was $144.8 million, including $28.8 million to repay outstanding principal of existing debt, $21.7 million for debt service reserves and transaction costs and $94.3 million to fund the remaining system purchases. In June 2019, as part of the PPA II upgrade of Energy Servers, we paid off the outstanding debt and interest of these notes for the outstanding amount of $77.6 million. The Note Purchase Agreement required us to maintain a debt service reserve, the balance of $11.2 million which was written off in June 2019 and was $11.2 million as of December 31, 2018, which was included as part of long-term restricted cash in the consolidated balance sheets.

7.5% Term Loan due September 2028 - In December 2012 and later amended in August 2013, PPA IIIa entered into a $46.8 million credit agreement to help fund the purchase and installation of our Energy Servers. The loan bears a fixed interest rate of 7.5% payable quarterly. The loan requires quarterly principal payments which began in March 2014. The credit agreement requires us to maintain a debt service reserve for all funded systems, the balance of which was $3.8 million and $3.7 million as of December 31, 2019 and 2018, respectively, and which was included as part of long-term restricted cash in the consolidated balance sheets. The loan is secured by all assets of PPA IIIa.

LIBOR + 5.25% Term Loan due October 2020 - In September 2013, PPA IIIb entered into a credit agreement to help fund the purchase and installation of our Energy Servers. In accordance with that agreement, PPA IIIb issued floating rate debt based on LIBOR plus a margin of 5.2%, paid quarterly. The aggregate amount of the debt facility was $32.5 million. In December 2019, as part of the PPA IIIa upgrade of Energy Servers, we paid off the outstanding debt and interest of these notes for the outstanding amount of $24.2 million. The credit agreement required us to maintain a debt service reserve for all funded systems, the balance of which was $1.8 million which was written off in December 2019 and was $1.7 million as of December 31, 2018 and which was included as part of long-term restricted cash in the consolidated balance sheets.

6.07% Senior Secured Notes due March 2025 - In July 2014, PPA IV issued senior secured notes amounting to $99.0 million to third parties to help fund the purchase and installation of our Energy Servers. The notes bear a fixed interest rate of 6.07% payable quarterly which began in December 2015 and ends in March 2030. The notes are secured by all the assets of the PPA IV. The Note Purchase Agreement requires us to maintain a debt service reserve, the balance of which was $8.0 million as of December 31, 2019 and $7.5 million as of December 31, 2018, and which was included as part of long-term restricted cash in the consolidated balance sheets.

LIBOR + 2.5% Term Loan due December 2021 - In June 2015, PPA V entered into a $131.2 million credit agreement to fund the purchase and installation of our Energy Servers. The lenders are a group of five financial institutions and the terms included commitments to a letter of credit ("LC") facility (see below). The loan was initially advanced as a construction loan during the development of the PPA V Project and converted into a term loan on February 28, 2017 (the “Term Conversion Date”). As part of the term loan’s conversion, the LC facility commitments were adjusted.

In accordance with the credit agreement, PPA V was issued a floating rate debt based on LIBOR plus a margin, paid quarterly. The applicable margins used for calculating interest expense are 2.25% for years 1-3 following the Term Conversion Date and 2.5% thereafter. For the Lenders’ commitments to the loan and the commitments to the LC loan, the PPA V also pays commitment fees at 0.50% per annum over the outstanding commitments, paid quarterly. The loan is secured by all the assets of the PPA V and requires quarterly principal payments which began in March 2017. In connection with the floating-rate credit agreement, in July 2015 the PPA V entered into pay-fixed, receive-float interest rate swap agreements to convert its floating-rate loan into a fixed-rate loan.

Letters of Credit due December 2021 - In June 2015, PPA V entered into a $131.2 million term loan due December 2021. The agreement also included commitments to a LC facility with the aggregate principal amount of $6.4 million, later adjusted down to $6.2 million. The amount reserved under the letter of credit as of December 31, 2019 and 2018 was $5.0 million. The unused capacity as of December 31, 2019 and 2018 was and $1.2 million and $1.2 million, respectively.

Related Party Debt

Portions of the above described recourse and non-recourse debt are held by various related parties. See Note 16, *Related Party Transactions* for a full description.

Repayment Schedule and Interest Expense

The following table presents detail of our entire outstanding loan principal repayment schedule as of December 31, 2019 (in thousands):

2020	$ 350,129
2021	139,370
2022	26,046
2023	29,450
2024	35,941
Thereafter	77,147
	$ 658,083

Interest expense of $94.2 million, $105.9 million and $124.3 million for the years ended December 31, 2019, 2018 and 2017, respectively, was recorded in interest expense on the consolidated statements of operations.

8. Derivative Financial Instruments

Interest Rate Swaps

We use various financial instruments to minimize the impact of variable market conditions on our results of operations. We use interest rate swaps to minimize the impact of fluctuations of interest rate changes on our outstanding debt where LIBOR is applied. We do not enter into derivative contracts for trading or speculative purposes.

The fair values of the derivatives designated as cash flow hedges as of December 31, 2019 and 2018 on our consolidated balance sheets were as follows (in thousands):

	December 31,	
	2019	**2018**
Assets		
Prepaid expenses and other current assets	$ 3	$ 42
Other long-term assets	—	40
	$ 3	$ 82
Liabilities		
Accrued expenses and other current liabilities	$ 782	$ 4
Derivative liabilities	8,459	3,626
	$ 9,241	$ 3,630

PPA Company IIIb - In September 2013, PPA IIIb entered into an interest rate swap arrangement to convert a variable interest rate debt to a fixed rate. We designated and documented its interest rate swap arrangement as a cash flow hedge. The swap's term ends on October 1, 2020, which is concurrent with the final maturity of the debt floating interest rates reset on a quarterly basis. We evaluate and calculate the effectiveness of the hedge at each reporting date. The effective change was recorded in accumulated other comprehensive income (loss) and was recognized as interest expense on settlement. The notional amounts of the swap were zero, $24.7 million and $25.6 million as of December 31, 2019, 2018 and 2017 respectively. We measure the swap at fair value on a recurring basis. Fair value is determined by discounting future cash flows using LIBOR rates with appropriate adjustment for credit risk.

We recorded a loss of $82,000, a loss of $68,000 and a loss of $64,000 during the years ended December 31, 2019, 2018 and 2017, respectively, attributable to the change in swap's fair value. These gains and losses were included in other income (expense), net in the consolidated statement of operations.

Pursuant to the PPA IIIb upgrade of Energy Servers, the debt was paid off along with any interest accrued and the interest swap was settled for $0.2 million in 2019 and recorded to interest expense in the consolidated statement of operations.

PPA Company V - In July 2015, PPA Company V entered into nine interest rate swap agreements to convert a variable interest rate debt to a fixed rate. The loss on the swaps prior to designation was recorded in current-period earnings. In July 2015, we designated and documented its interest rate swap arrangements as cash flow hedges. Three of these swaps matured in 2016, three will mature on December 21, 2021 and the remaining three will mature on September 30, 2031. We evaluate and calculate the effectiveness of the hedge at each reporting date. The effective change was recorded in accumulated other comprehensive income (loss) and was recognized as interest expense on settlement. The notional amounts of the swaps were $184.2 million, $186.6 million and $188.5 million as of December 31, 2019, 2018 and 2017, respectively.

We measure the swaps at fair value on a recurring basis. Fair value is determined by discounting future cash flows using LIBOR rates with appropriate adjustment for credit risk. We recorded a gain of $0.2 million, a gain of $0.1 million and a gain of $0.1 million attributable to the change in valuation during the years ended December 31, 2019, 2018 and 2017, respectively. These gains were included in other income (expense), net in the consolidated statement of operations.

The changes in fair value of the derivative contracts designated as cash flow hedges and the amounts recognized in accumulated other comprehensive income (loss) and in earnings were as follows (in thousands):

	Year ended December 31,	
	2019	2018
Beginning balance	$ 3,548	$ 5,852
Loss (gain) recognized in other comprehensive loss	6,131	(1,729)
Amounts reclassified from other comprehensive loss to earnings	(216)	(369)
Net loss (gain) recognized in other comprehensive income (loss)	5,915	(2,098)
Gain recognized in earnings	(225)	(206)
Ending balance	$ 9,238	$ 3,548

Natural Gas Derivatives

On September 1, 2011, we entered into a natural gas fixed price forward contract with a gas supplier. This fuel forward contract is used as part of our program to manage the risk for controlling the overall cost of natural gas. Our PPA I is the only PPA Company for which natural gas was provided by us. This fuel forward contract meets the definition of a derivative under U.S. GAAP. We have not elected to designate this contract as a hedge and, accordingly, any changes in its fair value is recorded within cost of revenue in the statements of operations. The fair value of the contract is determined using a combination of factors including the counterparty’s credit rate and estimates of future natural gas prices.

For the years ended December 31, 2019, 2018 and 2017, we marked-to-market the fair value of our natural gas fixed price forward contract and recorded a loss of $0.8 million, a gain of $2.2 million and a loss of $1.0 million, respectively. For the years ended December 31, 2019, 2018 and 2017, we recorded gains of $3.6 million, $3.4 million and $4.2 million, respectively, on the settlement of these contracts. Gains and losses are recorded in cost of revenue on the consolidated statement of operations.

Embedded Derivatives

6% Convertible Promissory Notes - On December 15, 2015, January 29, 2016, and September 10, 2016, we issued $160.0 million, $25.0 million, and $75.0 million, respectively, of 6% Convertible Promissory Notes ("6% Notes") that mature in December 2020. The 6% Notes were contractually convertible at the option of the holders at a conversion price per share equal to the lower of $20.61 or 75% of the offering price of our common stock sold in an initial public offering. Upon the IPO, the options were convertible at the option of the holders at the conversion price of $11.25 per share.

The valuation of this embedded put feature was recorded as a derivative liability in the consolidated balance sheet, measured each reporting period. Fair value was determined using the binomial lattice method. We recorded a gain of $31.5 million and a loss of $18.2 million attributable to the change in valuation for the years ended December 31, 2018 and 2017, respectively. These gains and losses were included within loss on revaluation of warrant liabilities and embedded derivatives in the consolidated statement of operations. Upon the IPO, the final valuation of the conversion feature was calculated as of the date of the IPO and was reclassified from a derivative liability to additional paid-in capital. The fair value of the embedded derivatives within the notes was $178.0 million upon reclassification.

Embedded EPP Derivatives in Sales Contracts - We estimated the fair value of the embedded EPP derivatives in certain sales contracts 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 Escalation Protection Plan ("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 other income (expense), net. We recorded a loss of $2.2 million, a gain of $0.2 million and a loss of $0.3 million attributable to the change in fair value for the years ended December 31, 2019, 2018 and 2017, respectively. These gains and losses were included within loss on revaluation of warrant liabilities and embedded derivatives in the consolidated statements of operations. The fair value of these derivatives was $6.2 million, $4.0 million and $4.2 million as of December 31, 2019, 2018 and 2017, respectively.

9. Common Stock Warrants

Common Stock Warrants

During 2018, all of the preferred and common stock warrants we issued in connection with loan agreements and a dispute settlement converted to warrants to purchase shares of Class B common stock. As of December 31, 2019, we had Class B common stock warrants outstanding to purchase 481,181 and 12,940 shares of Class B common stock at exercise prices of $27.78 and $38.64, respectively. As of December 31, 2018, we had Class B common stock warrants outstanding to purchase 481,181 and 312,939 shares of Class B common stock at exercise prices of $27.78 and $38.64, respectively.

10. Income Taxes

The components of income (loss) before the provision for income taxes are as follows (in thousands):

	Years Ended December 31,		
	2019	**2018**	**2017**
		As Restated	**As Revised**
United States	$ (324,467)	$ (291,574)	$ (297,473)
Foreign	1,634	1,835	3,081
Total	$ (322,833)	$ (289,739)	$ (294,392)

The provision for income taxes is comprised of the following (in thousands):

	Years Ended December 31,		
	2019	**2018**	**2017**
Current:			
Federal	$ —	$ —	$ —
State	26	191	25
Foreign	595	1,407	621
Total current	621	1,598	646
Deferred:			
Federal	—	—	—
State	—	—	—
Foreign	12	(61)	(10)
Total deferred	12	(61)	(10)
Total provision for income taxes	$ 633	$ 1,537	$ 636

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,		
	2019	2018	2017
		As Restated	As Revised
Tax at federal statutory rate	$ (67,795)	$ (60,845)	$ (100,093)
State taxes, net of federal effect	26	191	25
Impact on noncontrolling interest	4,001	3,725	6,347
Non-U.S. tax effect	264	960	(437)
Nondeductible expenses	144	6,796	5,698
Stock-based compensation	6,484	3,892	4,854
U.S. tax reform impact	—	—	239,117
U.S. tax on foreign earnings (GILTI)	221	127	—
Change in valuation allowance	57,288	46,691	(154,875)
Provision for income taxes	$ 633	$ 1,537	$ 636

For the year ended December 31, 2019, we recorded a provision for income taxes of $0.6 million on a pre-tax loss of $322.8 million, for an effective tax rate of (0.2)%. For the year ended December 31, 2018, we recorded a provision for income taxes of $1.5 million on a pre-tax loss of $289.7 million, for an effective tax rate of (0.5)%. For the year ended December 31, 2017, we recorded a provision for income taxes of $0.6 million on a pre-tax loss of $294.4 million, for an effective tax rate of (0.2)%. The effective tax rate for 2019, 2018 and 2017 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,	
	2019	2018
		As Restated
Tax credits and NOLs	$ 494,084	$ 468,402
Leased liabilities	122,145	108,113
Depreciation and amortization	8,523	9,631
Deferred revenue	6,688	457
Accruals and reserves	5,874	4,462
Stock-based compensation	61,808	62,793
Other items - DTA	24,443	17,863
Gross deferred tax assets	723,565	671,721
Valuation allowance	(633,591)	(571,277)
Net deferred tax assets	89,974	100,444
Investment in PPA entities	(13,494)	(21,587)
Debt issuance cost	(4,055)	(8,586)
Leased assets	(65,978)	(62,681)
Other items - DTL	(5,803)	(6,817)
Gross deferred tax liabilities	(89,330)	(99,671)
Net deferred tax asset	$ 644	$ 773

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 $633.6 million and $571.3 million as of December 31, 2019 and 2018, respectively. The net change in the total valuation allowance for the years ended December 31, 2019 and 2018 was an increase of $62.3 million and an increase of $24.0 million, respectively.

At December 31, 2019, we had federal and state net operating loss carryforwards of $1.8 billion and $1.6 billion, respectively, to reduce future taxable income. Of the federal net operating loss carryforwards, $1.7 billion will begin to expire in 2022 and $125.2 million will carryforward indefinitely, while state net operating losses begin to expire in 2028. In addition, we had approximately $20.5 million of federal research credit, $6.6 million of federal investment tax credit, and $14.0 million of state research credit carryforwards. The federal tax credit carryforwards begin to expire in 2022.The state credit carryforwards may be carried forward indefinitely. 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, 2019. 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 which occurred during the period covered by the analysis.

During the year ended December 31, 2019, the amount of uncertain tax positions increased by $4.2 million. We have not recorded any uncertain tax liabilities associated with its tax positions.

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

	Years Ended December 31,	
	2019	**2018**
Unrecognized tax benefits beginning balance	$ 30,311	$ 28,331
Gross decrease for tax positions of prior year	(93)	(468)
Gross increase for tax positions of prior year	615	353
Gross increase for tax positions of current year	3,647	2,095
Unrecognized tax benefits end balance	$ 34,480	$ 30,311

If fully recognized in the future, there would be no impact to the effective tax rate, and $31.5 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, are included in income tax expense and there were no interest or penalties accrued during or for the years ended December 31, 2019 and 2018.

We are subject to taxation in the United States and various states and foreign jurisdictions. We currently do not have any income tax examinations in progress nor have we had any income tax examinations since our inception. 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. FASB guidance issued 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.

Our accumulated undistributed foreign earnings as of December 31, 2019 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.

11. Net Loss per Share Attributable to Common Stockholders

Net loss per share (basic) attributable to common stockholders is calculated by dividing net loss attributable to common stockholders by the weighted-average shares of common stock outstanding for the period. Net loss per share (diluted) is computed by using the "if-converted" method when calculating the potential dilutive effect, if any, of convertible shares whereby net loss attributable to common stockholders is adjusted by the effect of dilutive securities such as awards under equity compensation plans and inducement awards under separate restricted stock unit, or RSUs, award agreements. Net loss per share (diluted) attributable to common stockholders is then calculated by dividing the resulting adjusted net loss attributable to common stockholders by the combined weighted-average number of fully diluted common shares outstanding.

In July 2018, we completed an initial public offering of our common shares wherein 20,700,000 shares of Class A common stock were sold into the market. Added to existing shares of Class B common stock were shares mandatorily converted from various financial instruments as a result of the IPO. See Note 9, *Common Stock Warrants.*

There were no adjustments to net loss attributable to common stockholders in determining net loss attributable 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.

We recognized a deemed dividend of $2.5 million on November 26, 2019 related to our buyout of the tax equity partner's equity interest in PPA IIIb. The deemed dividend was recorded as a result of the buyout amount exceeding the hypothetical liquidation book value of the tax equity investor's equity interest in PPA IIIb on the date the buyout occurred. This charge impacted net income attributable to common stockholders and earnings per share in the year ended December 31, 2019.

Net loss per share is the same for each class of common stock as they are entitled to the same liquidation and dividend rights with the exception of voting rights. As a result, net loss per share (basic) and net loss per share (diluted) attributed to common stockholders are the same for both Class A and Class B common stock and are combined for presentation. The following table sets forth the computation of our net loss per share (basic) and net loss per share (diluted) attributable to common stockholders (in thousands, except per share amounts):

	Years Ended December 31,		
	2019	**2018**	**2017**
		As Restated	**As Revised**
Numerator:			
Net loss attributable to Class A and Class B common stockholders	$ (304,414)	$ (273,540)	$ (276,362)
Less: deemed dividend to noncontrolling interest	(2,454)	—	—
Net loss available to Class A and Class B common stockholders	$ (306,868)	$ (273,540)	$ (276,362)
Denominator:			
Weighted average shares of common stock, basic and diluted	115,118	53,268	10,248
Net loss per share available to Class A and Class B common stockholders, basic and diluted	$ (2.67)	$ (5.14)	$ (26.97)

The following common stock equivalents (in thousands) were excluded from the computation of our net loss per share attributable to common stockholders (diluted) for the periods presented as their inclusion would have been antidilutive:

	Years Ended December 31,		
	2019	**2018**	**2017**
Convertible and non-convertible redeemable preferred stock and convertible notes	27,213	27,230	85,476
Stock options to purchase common stock	4,631	4,962	2,950
Convertible redeemable preferred stock warrants	—	—	60
Convertible redeemable common stock warrants	—	—	312
	31,844	32,192	88,798

12. Stock-Based Compensation and Employee Benefit Plans

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.

Grants under the 2002 Plan generally vest ratably over a four-year 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, 2019, options to purchase 1,856,154 shares of Class B common stock were outstanding with a weighted average exercise price of $23.21 per share.

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 restricted stock awards ("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 period from the vesting commencement date and expire ten years from 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, 2019, options to purchase 9,982,756 shares of Class B common stock were outstanding with a weighted average exercise price of $27.12 per share and no shares were available for future grant. As of December 31, 2019, we had outstanding RSUs that may be settled for 6,656,094 shares of Class B common stock under the 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 and will serve as the successor to the 2012 Plan. We have reserved 20,278,268 shares of Class A common stock under the 2018 Plan and no more than 26,666,667 shares of Class A common stock will be issued pursuant to the exercise of incentive stock options.

The 2018 Plan authorizes the award of stock options, restricted stock awards, stock appreciation rights, RSUs, performance awards 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 a four-year period from the vesting commencement date and expire ten years from grant date.

As of December 31, 2019, options to purchase 5,998,406 shares of Class A common stock were outstanding with a weighted average exercise price of $9.42 per share and 3,456,172 shares of outstanding RSUs that may be settled for Class A common stock which were granted pursuant to the plan. As of December 31, 2019, we had 17,233,144 shares of Class A common stock available for future grant.

Stock-Based Compensation Expense

We used the following weighted-average assumptions in applying the Black-Scholes valuation model:

	Years Ended December 31,		
	2019	**2018**	**2017**
Risk-free interest rate	1.7% - 2.6%	2.5% - 3.1%	2.0% - 2.1%
Expected term (years)	6.4 - 6.7	6.2 - 6.7	6.1 - 6.6
Expected dividend yield	—	—	—
Expected volatility	45.7% - 50.2%	52.4% - 56.1%	55.6% - 61.0%

The following table summarizes the components of stock-based compensation expense in the consolidated statements of operations (in thousands):

	Years Ended December 31,		
	2019	**2018**	**2017**
		As Restated	**As Revised**
Cost of revenue	$ 45,429	$ 29,680	$ 6,355
Research and development	40,949	39,029	5,560
Sales and marketing	32,478	32,284	4,685
General and administrative	77,435	67,489	12,501
	$ 196,291	$ 168,482	$ 29,101

Stock-based Compensation - During the years ended December 31, 2019, 2018 and 2017, we recognized $196.3 million, $168.5 million and $29.1 million of total stock-based compensation costs, respectively. As of December 31, 2019, 2018 and 2017, we capitalized $7.3 million, $13.6 million and $1.8 million of stock-based compensation cost, respectively, into inventory and property, plant and equipment.

Stock Option and RSU Activity

The following table summarizes the stock option activity under our stock plans during the reporting period (in thousands), except per share amounts:

	Outstanding Options					
	Number of Shares		Weighted Average Exercise Price	Remaining Contractual Life (Years)		Aggregate Intrinsic Value
						(in thousands)
Balances at December 31, 2017	11,604,403	$	26.42	6.01	$	52,682
Granted	4,202,284		19.79			
Exercised	(398,704)		3.98			
Cancelled	(849,563)		12.51			
Balances at December 31, 2018	14,558,420		25.93	6.78		3,084
Granted	4,956,064		5.6			
Exercised	(358,564)		4.26			
Cancelled	(1,318,604)		25.33			
Balances at December 31, 2019	17,837,316		20.76	6.94		14,964
Vested and expected to vest at December 31, 2019	17,159,824		21.17	6.85		13,471
Exercisable at December 31, 2019	9,161,918		28.82	4.89		500

Stock Options - During the years ended December 31, 2019, 2018 and 2017, we recognized $36.2 million, $33.3 million and $29.2 million of stock-based compensation costs for stock options, respectively.

During the years ended December 31, 2019, 2018 and 2017, the intrinsic value of stock options exercised was $2.6 million, $9.2 million and $3.4 million, respectively.

We granted 4,956,064 options for Class A common stock during the year ended December 31, 2019 and 4,202,284 options for Class A and Class B common stock during the year ended December 31, 2018. The weighted-average grant-date fair value of the awards was $5.60 and $19.79, respectively.

As of December 31, 2019 and 2018, we had unrecognized compensation costs related to unvested stock options of $41.9 million and $70.4 million, respectively. This cost is expected to be recognized over the remaining weighted-average period of 2.8 years and 2.8 years, respectively. We had no excess tax benefits in the years ended December 31, 2019 and 2018. Cash received from stock options exercised totaled $1.5 million and $1.6 million for the years ended December 31, 2019 and 2018, respectively.

A summary of our RSUs activity and related information is as follows:

	Number of Awards Outstanding	Weighted Average Grant Date Fair Value
Unvested Balance at December 31, 2017	3,140,578	$ 30.95
Granted	13,873,506	16.02
Vested	(17,793)	19.67
Forfeited	(211,491)	21.22
Unvested Balance at December 31, 2018	16,784,800	18.74
Granted	3,219,959	11.81
Vested	(8,921,807)	18.03
Forfeited	(970,686)	17.34
Unvested Balance at December 31, 2019	10,112,266	17.29

Restricted Stock Units (RSUs) - The estimated fair value of RSU awards is based on the fair value of our common stock on the date of grant. The total weighted-average grant-date fair value of RSUs granted during the years ended December 31, 2019, 2018 and 2017, was $11.81, $16.02 and $30.96, respectively.

During the years ended December 31, 2019, 2018 and 2017, we recognized $141.3 million, $142.4 million and $1.3 million of stock-based compensation costs for RSUs, respectively.

As of December 31, 2019, we had $52.0 million of unrecognized stock-based compensation cost related to unvested RSUs. This cost is expected to be recognized over a weighted average period of 1.1 years. As of December 31, 2018, we had $163.8 million of unrecognized stock-based compensation cost related to unvested RSUs. This expense was expected to be recognized over a weighted average period of 0.8 years.

The following table presents the stock activity and the total number of shares available for grant under our stock plans as of December 31, 2019:

	Plan Shares Available for Grant
Balances at December 31, 2017	1,037,616
Added to plan	40,924,861
Granted	(18,075,790)
Cancelled	1,061,054
Expired	(7,489,894)
Balances at December 31, 2018	17,457,847
Added to plan	7,585,422
Granted	(8,176,023)
Cancelled	2,289,290
Expired	(1,923,392)
Balances at December 31, 2019	17,233,144

2018 Employee Stock Purchase Plan

In April 2018, we adopted the 2018 Employee Stock Purchase Plan ("ESPP"). The ESPP became effective upon our IPO in July 2018. The 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 our 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 1% of the total outstanding shares of our common stock and common stock equivalents as of the immediately preceding December 31 (rounded to the nearest whole share). For the year ended December 31, 2019, we added 1,415,507 shares to the ESPP under these provisions.

The 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, 2019 and 2018, we recognized $10.3 million and $4.6 million of stock-based compensation costs for the ESPP, respectively. We issued 1,718,433 shares in 2019 and there were 3,030,407 shares available for issuance under the ESPP as of December 31, 2019.

We use the Black-Scholes option pricing model to determine the fair value of shares purchased under the 2018 ESPP with the following weighted average assumptions on the date of grant:

	Year Ended December 31,	
	2019	**2018**
Risk-free interest rate	1.5% - 2.6%	2.2% - 2.7%
Expected term (years)	0.5 - 2.0	0.6 - 2.0
Expected dividend yield	—	—
Expected volatility	45.9% - 54.0%	47.0% - 52.7%

2019 Executive Awards

In November 2019, the Board of Directors approved stock option awards ("2019 Executive Awards") to certain executive staff. The 2019 Executive Awards consist of three vesting tranches with a vesting schedule based on the attainment of market conditions and assuming continued employment and service through each vesting date.

Stock-based compensation costs associated with the 2019 Executive Awards is recognized over the service period, even though no tranches of the 2019 Performance Awards vest unless a market condition is achieved. The grant date fair value of the options is determined using a Monte Carlo simulation.

Employee Benefit Plan

We maintain a tax-qualified 401(k) retirement plan for all employees who satisfy certain eligibility requirements including requirements relating to age. Under the 401(k) plan, employees may elect to defer up to 60% of eligible compensation, subject to applicable annual IRS Code limits. We do not match any contributions made by employees, including executives, but have the discretion to do so. Therefore, the costs of the plan were immaterial for the years ended December 31, 2019 and 2018. We intend for the 401(k) plan to qualify under Section 401(a) and 501(a) of the Internal Revenue Code so that contributions and income earned on contributions are not taxable to employees until withdrawn from the plan.

13. Power Purchase Agreement Programs

Overview

In mid-2010, we began offering our Energy Servers through our Bloom Electrons program, which we denote as Power Purchase Agreement Programs, financed via investment entities. Under these arrangements, an operating entity is created (the "Operating Company") which purchases our Energy Servers from us. The end customer then enters into a power purchase agreement ("PPA") with the Operating Company to purchase the power generated by our Energy Servers at a specified rate per kilowatt hour for a specified term which can range from 10 to 21 years. In some cases, similar to direct purchases and leases, the standard one-year warranty and performance guaranties 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 guaranties over the term of the PPA. In other cases, the master services agreements including warranties and guaranties 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 and our third-party equity investors (together "Equity Investors") contribute funds into a limited liability investment entity ("Investment Company") that owns and is parent to the Operating Company (together, the "PPA Entities"). These PPA Entities constitute variable investment entities ("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 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.

On June 14, 2019, we entered into a PPA II upgrade of Energy Servers transaction, and as a result we determined that we no longer retained a controlling interest in the Operating Company in PPA II and therefore, the Operating Company was no longer consolidated as a VIE into our consolidated financial statements as of June 30, 2019. See further discussion below. On November 27, 2019, we entered into a PPA IIIb upgrade of Energy Servers transaction where we bought out the equity interest of the third-party investor, decommissioned the Energy Servers in the Operating Company and sold new Energy Servers deployed at customer sites through our managed services financing option. The PPA IIIb Investment Company and Operating Company became wholly-owned by us but no longer met the definition of a VIE. However, we continue consolidating PPA IIIb in our consolidated financial statements. See further discussion below.

In accordance with our Power Purchase Agreement Programs, 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 utilized their entire available financing capacity and have completed the purchase of their Energy Servers. Any debt incurred by the Operating Companies is non-recourse to us. Under these structures, each Investment Company is treated as a partnership for U.S. federal income tax purposes. Equity Investors receive investment tax credits and accelerated tax depreciation benefits. In 2016, we purchased the tax equity investor's interest in PPA I, which resulted in a change in our ownership interest in PPA I while we continued to hold the controlling financial interest in this company. In 2019, we bought out the tax equity investors' interest in DSGH, the PPA II Investment Company, and admitted two new equity investors as a member of the PPA II Operating Company, retaining only a minor contingent future equity interest in the Operating Company. One of the new equity investors became the managing member which resulted in a change in our ownership interest in the Operating Company and discontinued our controlling financial interest in the PPA II Operating Company. In December 2019, we purchased the tax equity investors' interest in PPA IIIb, which resulted in a change in the ownership structure from a variable interest entity to a wholly owned subsidiary indirectly owned by the Company.

PPA II Upgrade of Energy Servers

Original Transaction

A wholly-owned subsidiary of Bloom and a wholly-owned subsidiary of Credit Suisse Group AG ("Mehetia") jointly owned Diamond State Generation Holdings, LLC ("Class A Holdco"). Class A Holdco owned 100% of the membership interests in Diamond State Generation Partners, LLC ("DSGP"). Pursuant to an earlier transaction, DSGP owned and operated 30 megawatts of Energy Servers across two sites in Delaware that achieved operations in 2012 and 2013 and provided alternative energy generation for state tariff rate payers (the "Original Project"). The Original Project had been financed in part by the issuance of non-recourse promissory notes to DSGP (the "Project Debt").

Overall Upgrade

We upgraded the existing 30 megawatts of Energy Servers used in the Original Project by replacing them with 27.5 megawatts of new Energy Servers. To effect the full upgrade we repurchased all of existing Energy Servers, the proceeds of which were used by DSGP to pay down the Project Debt and to enable Class A Holdco to buy out Mehetia's interests. To finance the new Energy Servers used in the upgrade, DSGP raised capital from two new members: SP Diamond State Class B Holdings, LLC ("Class B Holdco"), a wholly owned subsidiary of Southern Power Company ("Southern") and Assured Guaranty Municipal Corporation ("Class C Holdco"). The existing Energy Servers were removed after we repurchased them from DSGP, prior to selling and installing the new Energy Servers. The upgrade was done across two phases.

First Upgrade

On June 14, 2019, the Company entered into an agreement committing to repurchase 30 megawatts of existing Energy Servers. The repurchases happened over time in installments, in each case immediately prior to the installation of corresponding new Energy Servers. Mehetia's equity interests were redeemed in part in connection with each repurchase. The Project Debt was repaid in connection with the first repurchase installment. 19 megawatts of existing Energy Servers were repurchased during the second and third quarter of 2019.

At the same time that Bloom entered into the repurchase agreement, Class B Holdco committed to acquire a majority interest in DSGP. DSGP entered into an agreement governing the engineering, procurement, construction and sale of the new Energy Servers (the "EPC Agreement"). DSGP used the funds contributed by Class B Holdco to purchase 17.7 megawatts of new Energy Servers from the Company in accordance with the EPC Agreement (the "First Upgrade").

Second Upgrade

On December 23, 2019, we repurchased and removed the remaining 11 megawatts of the existing older generation Energy Servers from DSGP. The proceeds of the repurchase were used to redeem Mehetia's remaining equity interest in Class A Holdco. After the repurchase, the remaining existing Energy Servers were removed.

At the same time, to finance the purchase of 9.8 megawatts of new Energy Servers, Class C Holdco was admitted to DSGP as a member of DSGP and DSGP entered into another EPC Agreement with the Company for the installation of the new Energy Servers. DSGP used the funds contributed by Class C Holdco to purchase the new Energy Servers from Bloom under the EPC Agreement (the "Second Upgrade").

As of December 31, 2019, there are three members of DSGP: Class B Holdco which financed the First Upgrade, Class C Holdco, which financed the Second Upgrade, and Class A Holdco, an indirectly wholly owned subsidiary of the Company, which retains a de minimis contingent future equity interest in DSGP.

As of December 31, 2019, 27.5 megawatts of new Energy Servers in Delaware were commissioned.

Commercial Documents

The Company also entered into an operations and maintenance agreement for the ongoing care of all of the new Energy Servers (the "O&M Agreement"). The operations and maintenance fees under the O&M Agreement are paid on a fixed dollar per kilowatt basis.

The terms and conditions of the EPC Agreement and the O&M Agreement, including the suite of guaranties and warranties provided with respect to the performance of the Energy Servers are customary for our transactions of this type. The performance related guaranty and warranty were provided for each investor's Energy Servers, while the efficiency guaranties and warranties were measured across the entire 27.5 megawatts of Energy Servers.

Credit Support

In the First Upgrade, in addition to standard indemnifications, we agreed to indemnify Class B Holdco for (i) losses incurred in the event of certain regulatory, legal, or legislative developments in connection with the Tariff capped at an aggregate amount of $97.2 million, which cap steps down each year until it is an amount equal to zero after June 30, 2025 and (ii) for the loss of certain federal tax benefits, up to $7.5 million. We posted letters of credit as credit support for both indemnities ("Class B Credit Support").

In the Second Upgrade, in addition to standard indemnifications, we agreed to indemnify Class C Holdco for (i) losses incurred in the event of certain regulatory, legal, or legislative developments in connection with the Tariff capped at an aggregate amount of $45 million, which cap steps down each year until it is an amount equal to zero after December, 2025. We also indemnified Class C Holdco for the loss of certain federal tax benefits, losses incurred as a result of certain environmental risks and certain failures under the O&M Agreement with respect to the Energy Servers it financed. We amended the initial Class B Credit Support letter of credits and reissued a single letter of credit for the benefit of DSGP ("DSGP Credit Support") in an amount of $108.7 million which amount will decrease over time. The DSGP Credit Support partially collateralizes our indemnity obligations to Class B Holdco and Class C Holdco. We expect the DSGP Credit Support to be extinguished by 2025.

At the time of the First Upgrade and the Second Upgrade, and as of December 31, 2019, we believe the events giving rise to these indemnifications to be remote and, therefore, no liability has been recorded in our consolidated financial statements with respect thereto.

Impact of First Upgrade and Second Upgrade of Energy Servers on Consolidated Financial Statements

As a result of the First Upgrade, we reconsidered whether we should continue to consolidate DSGP. We use a qualitative approach in assessing the consolidation requirement for each of our PPA Entities. This approach focuses on determining whether we have the power to direct those activities of the PPA Entities that most significantly affect 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 Entities. We determined that we no longer retain a controlling interest in DSGP and therefore it will no longer be consolidated as a variable interest entity into our consolidated financial statements as of June 30, 2019. The First Upgrade and Second Upgrade resulted in the following impacts on our consolidated balance sheet as of December 31, 2019: (i) cash, cash equivalents and restricted cash increased by $113.9 million, of which $108.7 million is included in restricted cash. The increase is comprised of approximately $253.9 million cash receipts for the sale of 27.5 megawatts new systems to DSGP, offset by $83.5 million used for the repayment of project debt including $77.6 million of outstanding principal and interest, as well as a make-whole payment fee of $5.9 million, and $56.5 million distribution to Mehetia related to the redemption of noncontrolling interest; (ii) property, plant and equipment, net decreased by $75.1 million due to the depreciation and write-off of 30 megawatts of existing Energy Servers; (iii) noncontrolling interest in Mehetia went down by $56.5 million related to the First Upgrade and Second Upgrade.

Impacts on our consolidated statement of operations for the year ended December 31, 2019 are summarized as follows: (i) net product and installation revenue recognized of $223.9 million, as the result of selling 27.5 megawatts of new Energy Servers to DSGP; (ii) cost of revenue of $153.5 million including both the write-off of decommissioned Energy Systems $52.5 million, accelerated depreciation of $22.6 million of the Energy Servers prior to decommissioning, and the cost of new Energy Servers of $78.4 million; (iii) $5.9 million of administrative costs due to debt payoff make-whole expense; and (iv) $1.2 million of interest expense due to write-off of debt issuance cost.

Impacts on our consolidated statements of cash flows for the year ended December 31, 2019 are summarized as follows: net cash used by financing activities increased $139.2 million due to the repayment of debt of $76.8 million, a debt make-whole payment of $5.9 million, and payments to noncontrolling and redeemable noncontrolling interests of $56.5 million.

PPA IIIb Upgrade of Energy Servers

Transaction Overview

As part of the PPA IIIb project established in 2013, the Company, 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 5.4 megawatts of Energy Servers.

On November 27, 2019, the Company entered into certain agreements through a wholly-owned subsidiary to (i) buy out the existing debt and equity investors in Project Company such that Project Company became indirectly wholly-owned by the Company, and (ii) upgrade 5.4 megawatts of the existing Energy Servers owned and managed by Project Company by selling and installing new Energy Servers.

Immediately following the buyout, Project Company repaid all outstanding loans and indebtedness to Project Company’s lenders in the approximate amount of $24.2 million plus swap breakage costs estimated at approximately $0.2 million, and terminated its agreements, including related liens on Project Company assets, with such lenders. Project Company subsequently entered into a sale-leaseback transaction under our Managed Services Program with Key Equipment Finance, a division of KeyBank National Association, a national banking association (“KeyBank”), to finance the upgrade of the PPA IIIb project Energy Servers, pursuant to which KeyBank will own the assets and Bloom will service them. The sale-leaseback transaction is subject to Bloom’s standard warranties and guaranties.

Previously, the Company had financed multiple Energy Servers with KeyBank by entering into sale-leaseback transactions. As of December 31, 2019, KeyBank has financed approximately 39.9 megawatts of Energy Servers. $20.0 million of the proceeds from the current upgrade financing has been pledged for a seven-year period to secure the Company's operations and maintenance obligations with respect to the totality of the Company's obligations to KeyBank. All or a portion of such funds would be released if we meets certain credit rating and/or market capitalization milestones prior to the end of the pledge period. If the Company does not meet the required criteria within a five-year period, the funds would be released over the following two years as long as the Energy Servers continue to perform in compliance with their warranties.

As of December 31, 2019, 5 megawatts of the PPA IIIb project have been decommissioned and written-off by us, with the remaining 0.4 megawatts located at one site decommissioned during the first quarter of 2020. As of December 31, 2019, we have sold and deployed 5 megawatts of new Energy Servers to the PPA IIIb project, bought out the original PPA IIIb investor, and have paid off the outstanding debt related to the original PPA IIIb project.

Obligations to the PPA IIIb Financiers

We have restricted cash of $20.0 million of the proceeds from the phase two upgrade financing which has been pledged for a seven-year period to secure our operations and maintenance obligations with respect to the totality of our obligations to KeyBank. 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 a five-year period, the funds would be released to us over the following two years as long as the Energy Servers continue to perform in compliance with their warranties.

Impact of PPA IIIb Upgrade of Energy Servers on Consolidated Financial Statements

The PPA IIIb upgrade was executed and mostly completed during December 2019, resulting in the following summarized impacts on our consolidated balance sheet as of December 31, 2019: (i) cash, cash equivalents and restricted cash increased by $25.2 million, mainly due to $52.0 million received from the financing of new Energy Servers, offset by debt and interest settlement of $24.4 million, and equity buyout of $2.4 million; (ii) other assets decreased $14.6 million primarily due to customer financing lease receivable write-off of $11.3 million associated with 1.6 megawatts of old Energy Servers and decommissioning and write-off costs of $18.0 million associated with 3.4 megawatts of old Energy Servers, offset by $14.7 million increase in property, plant and equipment due to 5 megawatts of new Energy Servers; (iii) liabilities increased by $28 million due to $51.9 million lease liability for new Energy Servers of the Managed Services Program, offset by $23.9 million decrease due to the settlement of all outstanding debt; and (iv) the payment of a deemed dividend to the investor of $2.4 million.

Impacts on our consolidated statement of operations for the year ended December 31, 2019 are summarized as follows: (i) $11.3 million decrease in revenue due to the write-off of the customer financing lease receivable; (ii) an increase in cost of revenue of $19.7 million primarily due to the write-off of decommissioned operating lease Energy Servers of $18.0 million and accelerated depreciation of $1.7 million; and (iii) administrative costs of $1.8 million primarily due to the write-off of production insurance expense on the decommissioned Energy Servers.

Impacts on our consolidated statement of cash flows for the year ended December 31, 2019 are summarized as follows: net cash used by financing activities increased $26.3 million due to the repayment of debt principal of $23.9 million and the payment of a deemed dividend to the investor of $2.4 million.

PPA Entities' Activities Summary

The table below shows the details of the five Investment Companies' VIEs that were active during 2019 and their cumulative activities from inception to the periods indicated (dollars in thousands):

	PPA II	PPA IIIa	PPA IIIb	PPA IV	PPA V
Overview:					
Maximum size of installation (in megawatts)	30	10	6	21	40
Installed size (in megawatts) [1]	—	10	—	19	37
Term of power purchase agreements (in years)	21	15	15	15	15
First system installed	Jun-12	Feb-13	Aug-13	Sep-14	Jun-15
Last system installed	Nov-13	Jun-14	Jun-15	Mar-16	Dec-16
Income (loss) and tax benefits allocation to Equity Investor	99%	99%	99%	90%	99%
Cash allocation to Equity Investor	99%	99%	99%	90%	90%
Income (loss), tax and cash allocations to Equity Investor after the flip date	5%	5%	5%	No flip	No flip
Variable Investment Entity termination	June 2019	N/A	November 2019	N/A	N/A
Equity Investor [2]	N/A	US Bank	N/A	Exelon Corporation	Exelon Corporation
Put option date [3]	N/A	1st anniversary of flip point	N/A	N/A	N/A
Company cash contributions	$ 22,442	$ 32,223	$ 22,658	$ 11,669	$ 27,932
Company non-cash contributions [4]	$ —	$ 8,655	$ 2,082	$ —	$ —
Equity Investor cash contributions	$ 139,993	$ 36,967	$ 20,152	$ 84,782	$ 227,344
Debt financing	$ 144,813	$ 44,968	$ 28,676	$ 99,000	$ 131,237
Activity as of December 31, 2019:					
Distributions to Equity Investor	$ 176,364	$ 4,803	$ 4,462	$ 6,692	$ 70,591
Debt repayment—principal	$ 144,813	$ 6,631	$ 28,676	$ 18,012	$ 9,453
Activity as of December 31, 2018:					
Distributions to Equity Investor	$ 116,942	$ 4,063	$ 1,807	$ 4,568	$ 66,745
Debt repayment—principal	$ 65,114	$ 4,431	$ 3,953	$ 15,543	$ 5,780
Activity as of December 31, 2017:					
Distributions to Equity Investor	$ 111,296	$ 3,324	$ 1,404	$ 2,565	$ 60,286
Debt repayment—principal	$ 53,726	$ 3,041	$ 3,077	$ 13,697	$ 2,834

[1] Installed base decreased from December 31, 2018 due to the repurchase of 36 megawatts of our Energy Servers during 2019 under the PPA II and PPA IIIb upgrade of Energy Servers. See disclosures above.

[2] Investor name represents ultimate parent of subsidiary financing the project.

[3] 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.

[4] 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.

Some of our PPA Entities contain structured provisions whereby the allocation of income and equity to the Equity Investors changes at some point in time after the formation of the PPA Entity. The change in allocations to Equity Investors (or the "flip") occurs based either on a specified future date or once the Equity Investors reaches its targeted rate of return. For PPA Entities with a specified future date for the flip, the flip occurs January 1 of the calendar year immediately following the year that includes the fifth anniversary of the date the last site achieves commercial operation.

The noncontrolling interests in PPA IIIa are redeemable as a result of the put option held by the Equity Investors as of December 31, 2019. The noncontrolling interests in PPA II, IIIa and PPA IIIb were redeemable as a result of the put option held by the Equity Investors as of December 31, 2018. The redemption value is the put amount. At December 31, 2019, and 2018, the carrying value of redeemable noncontrolling interests of $0.4 million and $57.3 million, respectively, exceeded the maximum redemption value.

PPA Entities' Aggregate Assets and Liabilities

Generally, Operating Company assets can be used to settle only the Operating Company obligations and Operating Company creditors do not have recourse to us. The aggregate carrying values of our VIEs for their assets and liabilities in our consolidated balance sheets, after eliminations of intercompany transactions and balances, were as follows (in thousands):

	December 31,	
	2019 [1]	2018 [2]
Assets		
Current assets:		
Cash and cash equivalents	$ 1,894	$ 5,295
Restricted cash	2,244	2,917
Accounts receivable	4,194	7,516
Customer financing receivable	5,108	5,594
Prepaid expenses and other current assets	3,587	4,909
Total current assets	17,027	26,231
Property and equipment, net	275,481	399,060
Customer financing receivable, non-current	50,747	67,082
Restricted cash	15,045	27,854
Other long-term assets	607	2,692
Total assets	$ 358,907	$ 522,919
Liabilities		
Current liabilities:		
Accounts payable	$ —	$ 724
Accrued expenses and other current liabilities	1,391	1,442
Deferred revenue and customer deposits	662	786
Current portion of debt	12,155	21,162
Total current liabilities	14,208	24,114
Derivative liabilities	8,459	3,626
Deferred revenue	6,735	8,696
Long-term portion of debt	223,267	323,360
Other long-term liabilities	2,355	1,798
Total liabilities	$ 255,024	$ 361,594

[1] These amounts include our VIEs: PPA IIIa, PPA IV and PPA V.

[2] These amounts include our VIEs: PPA II, PPA IIIa, PPA IIIb, PPA IV and PPA V.

As stated above, we are a minority shareholder in the PPA Entities for the administration of our Bloom Electrons program. PPA Entities contain debt that is non-recourse to us. The PPA Entities also own Energy Server assets for which we do not have title. Although we will continue to have Power Purchase Agreement Program entities in the future and offer customers the ability to purchase electricity without the purchase of our Energy Servers, we do not intend to be a minority investor in any new Power Purchase Agreement Program entities.

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 following table shows Bloom Energy's stand-alone, the PPA Entities combined and these consolidated balances as of December 31, 2019, and December 31, 2018 (in thousands):

	December 31, 2019			December 31, 2018		
	Bloom Energy	PPA Entities	Consolidated	Bloom Energy	PPA Entities	Consolidated
				As Restated		As Restated
Assets						
Current assets	$ 455,680	$ 17,027	$ 472,707	$ 637,703	$ 26,231	$ 663,934
Long-term assets	508,004	341,880	849,884	361,172	496,688	857,860
Total assets	$ 963,684	$ 358,907	$ 1,322,591	$ 998,875	$ 522,919	$ 1,521,794
Liabilities						
Current liabilities	$ 234,328	$ 2,053	$ 236,381	$ 224,503	$ 2,952	$ 227,455
Current portion of debt	325,428	12,155	337,583	8,686	21,162	29,848
Long-term liabilities	599,709	17,549	617,258	499,177	14,120	513,297
Long-term portion of debt	75,962	223,267	299,229	388,073	323,360	711,433
Total liabilities	$ 1,235,427	$ 255,024	$ 1,490,451	$ 1,120,439	$ 361,594	$ 1,482,033

14. Commitments and Contingencies

Commitments

Facilities Leases

We lease most of our facilities, office buildings and equipment under operating leases that expire at various dates through December 2028. Our lease for our former corporate offices in Sunnyvale, California expired in December 2018. We entered into a lease for our corporate headquarters located in San Jose, California, for 181,000 square feet of office space commencing January 2019 and expiring in December 2028. Our headquarters is used for administration, research and development and sales and marketing.

Additionally, we lease various manufacturing facilities in Sunnyvale, California and Mountain View, California. Our current lease for our Sunnyvale manufacturing facilities, entered into in April 2005, expires in 2020. Our current lease for our manufacturing facilities at Mountain View, entered into in December 2011, expired in December 2019 and is extended on a month to month arrangement. These plants together comprise approximately 281,265 square feet of space. We lease additional office space as field offices in the United States and around the world including in India, the Republic of Korea, China and Taiwan.

During the years ended December 31, 2019, 2018 and 2017, rent expense for all occupied facilities was $7.8 million, $6.3 million and $5.2 million, respectively.

Equipment Leases

Beginning in December 2015, we are a party to master lease agreements that provide for the sale of our Energy Servers to third parties and the simultaneous leaseback of the systems which we then sublease to customers. The lease agreements expire on various dates through 2025 and there was no recorded rent expense for the years ended December 31, 2019, 2018 and 2017.

At December 31, 2019, future minimum lease payments under operating leases and financing obligations were as follows (in thousands):

	Operating Leases Obligations	Financing Obligations	Sublease Payments[1]
2020	$ 7,250	$ 37,840	$ (37,840)
2021	5,495	38,726	(38,726)
2022	4,168	39,680	(39,680)
2023	4,230	40,582	(40,582)
2024	4,357	38,442	(38,442)
Thereafter	17,913	117,592	(117,592)
Total lease payments	$ 43,413	312,862	$ (312,862)
Less: imputed interest		(184,184)	
Total lease obligations		128,678	
Less: current obligations		(10,993)	
Long-term lease obligations		$ 117,685	

[1] Sublease Payments primarily represents the fees received by the bank from our end customer for the electricity generated by our Energy Servers leased under our Managed Services and other similar arrangements, which also pay down our financing obligation to the bank.

Managed Services Financing Obligations - Our managed services arrangements are classified as capital leases and are recorded as financing transactions, while the sublease arrangements with the end customer are classified as operating leases. Payments received from the financier are recorded as financing obligations. These obligations are included in each agreements' contract value and are recorded as short-term or long-term liabilities based on the estimated payment dates. The long-term financing obligations were $446.2 million and $385.6 million as of December 31, 2019 and 2018, respectively. The difference between these obligations and the principal obligations in the table above will be offset against the carrying value of the related Energy Servers at the end of the lease and the remainder recognized as a gain at that point. We recognize revenue for the electricity generated by allocating the total proceeds of the sublease payments based on the relative standalone selling prices to electricity revenue and to service revenue.

Purchase Commitments with Suppliers and Contract Manufacturers - In order to reduce manufacturing lead-times and to ensure 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 its forecasts. We can generally give notice of order cancellation at least 90 days prior to the delivery date. However, we issue purchase orders to our component suppliers and third-party manufacturers that may not be cancelable. As of December 31, 2019 and 2018, we had no material open purchase orders with our component suppliers and third-party manufacturers that are not cancelable.

Power Purchase Agreement Program - Under the terms of the Bloom Electrons program (see Note 13, *Power Purchase Agreement Programs*), customers agree to purchase power from our Energy Servers at negotiated rates, generally for periods of up to twenty-one years. We are responsible for all operating costs necessary to maintain, monitor and repair the Energy Servers, including the fuel necessary to operate the systems under certain PPA contracts. The risk associated with the future market price of fuel purchase obligations is mitigated with commodity contract futures.

The PPA Entities guarantee the performance of Energy Servers at certain levels of output and efficiency to its customers over the contractual term. The PPA Entities monitor the need for any accruals arising from such guaranties, 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 guaranties are accrued in periods when the guaranties are not met and are recorded in cost of service revenue in the consolidated statements of operations. We paid $3.5 million, $0.9 million and $3.7 million for the years ended December 31, 2019, 2018 and 2017, respectively.

In June 2015, PPA V entered into a $131.2 million credit agreement to fund the purchase and installation of our Energy Servers. The lenders have commitments to a letter of credit ("LC") facility with the aggregate principal amount of $6.2 million. The LC facility is to fund the Debt Service Reserve Account. The amount reserved under the LC as of December 31, 2019 and 2018 was $5.0 million and $5.0 million, respectively.

In 2019, pursuant to the PPA II upgrade of Energy Servers, we agreed to indemnify SPDS for losses that may be incurred in the event of certain regulatory, legal or legislative development and established a cash-collateralized letter of credit for this purpose. As of December 31, 2019, the balance of this cash-collateralized letter of credit was $108.7 million.

In 2019, pursuant to the PPA IIIb upgrade of Energy Servers, we have restricted cash of $20.0 million which has 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.

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 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 grant contains two types of milestones that we must complete to retain the entire amount of the grant proceeds. The first milestone was 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 the cumulative total compensation paid by us is required to be at least $324.0 million by September 30, 2023. As of December 31, 2019, we had 323 full time workers in Delaware and paid $120.1 million in cumulative compensation. As of December 31, 2018, we had 335 full time workers in Delaware and paid $92.0 million in cumulative compensation. We have so far received $12.0 million of the grant which is contingent upon meeting 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, including up to $3.1 million on September 30, 2021 and up to an additional $2.5 million on September 30, 2023. As of December 31, 2019, we paid $1.5 million for recapture provisions and have recorded $10.5 million in other long-term liabilities for potential recapture.

Self-Generation Incentive Program ("SGIP") - Our PPA Entities' customers receive payments under the SGIP which is a program specific to the State of California that provides financial incentives for the installation of qualifying new self-generation equipment that we own. The SGIP program issues 50% of the fully anticipated amount in the first year the equipment is placed into service. The remaining incentive is then paid based on the size of the equipment (i.e., nameplate kilowatt capacity) over the subsequent five years.

The SGIP program has operational criteria primarily related to fuel mixture and minimum output for the first five years after the qualified equipment is placed in service. If the operational criteria are not fulfilled, it could result in a partial refund of funds received. However, for certain PPA Entities, we make SGIP reservations on behalf of the PPA Entity and, therefore, the PPA Entity bears the risk of loss if these funds are not paid.

Investment Tax Credits ("ITCs") - 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 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. Ours purchase of Energy Servers were by the PPA Entities and, therefore, the PPA Entities bear the risk of repayment if the assets placed in service do not meet the ITC operational criteria in the future.

Legal Matters - From time to time, we are involved in disputes, claims, litigation, investigations, proceedings and/or other legal actions consisting of commercial, securities and employment matters that arise in the ordinary course of business. We review all legal matters at least quarterly and assesses whether an accrual for loss contingencies needs to be recorded. The assessment reflects the impact of negotiations, settlements, rulings, advice of legal counsel and other information and events pertaining to a particular situation. 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 matters 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 on future periods.

In July 2018, two former executives of Advanced Equities, Inc., Keith Daubenspeck and Dwight Badger, filed a Statement of Claim with the American Arbitration Association in Santa Clara, CA, against us, Kleiner Perkins, Caufield & Byers, LLC ("KPCB"), New Enterprise Associates, LLC ("NEA") and affiliated entities of both KPCB and NEA seeking to compel arbitration and alleging a breach of a confidential agreement executed between the parties on June 27, 2014 (the "Confidential Agreement"). On May 7, 2019, KPCB and NEA were dismissed with prejudice. On June 15, 2019, a Second Amended Statement of Claim was filed against us alleging securities fraud, fraudulent inducement, a breach of the Confidential Agreement, and violation of the California unfair competition law. On July 16, 2019, we filed our Answering Statement and Affirmative Defenses. On September 27, 2019, we filed a motion to dismiss the Statement of Claim. On March 24, 2020, the Tribunal denied our motion to dismiss in part, and ordered that Claimant's relief is limited to rescission of the Confidential Agreement or remedies consistent with rescission, and not expectation damages. We do not believe Claimant's claims supporting rescission have merit nor that Claimants can remit to us the monetary benefits they already obtained under the Confidential Agreement. We have recorded no loss contingency related to this claim.

In June 2019, Messrs. Daubenspeck and Badger filed a complaint against our CEO, our CFO and our former CFO in the United States District Court for the Northern District of Illinois, Case No. 1:19-cv-04305, asserting nearly identical claims as those in the pending arbitration discussed above. The lawsuit has been stayed pending the outcome of the arbitration. We believe the complaint to be without merit and, as a result, we have recorded no loss contingency related to this claim.

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 initial public offering alleging violations under Sections 11 and 15 of the Securities Act of 1933, as amended, for alleged misleading statements or omissions in our Form S-1 Registration Statement filed with the Securities and Exchange Commission in connection with our July 25, 2018 initial public offering. Two related class action cases were subsequently filed in the Santa Clara County Superior Court against the same defendants containing the same allegations; Rodriquez 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 we intend to vigorously defend.

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 alleging violations under Section 11 and 15 of the Securities Act of 1933, as amended, for alleged misleading statements or omissions in our Form S-1 Registration Statement filed with the Securities and Exchange Commission in connection with our July 25, 2018 initial public offering. On September 3, 2019, James Hunt was appointed as lead plaintiff and Levi & Korsinsky was appointed as plaintiff's counsel. On November 4, 2019, plaintiffs filed an amended complaint adding the underwriters in our initial public offering, claims under Sections 10b and 20a of the Securities Exchange Act of 1934 and extending the class period to September 16, 2019. We believe the complaint to be without merit and we intend to vigorously defend.

In November 2019, Michael Bolouri filed a class action complaint in the federal district court for the Northern District of California against us, certain members of our senior management, certain of our directors and the underwriters in our initial public offering, alleging violations under Section 11 and 15 of the Securities Act of 1933, as amended, and violations under Sections 10b and 20a of the Securities Exchange Act of 1934 for alleged misleading statements or omissions in our Form S-1 Registration Statement filed with the Securities and Exchange Commission in connection with our July 25, 2018 initial public offering and continuing through September 16, 2019. On December 11, 2019, a notice of voluntary dismissal was filed by the plaintiff and the case has now been dismissed.

In September 2019, we received a books and records demand from purported Company stockholder Dennis Jacob ("Jacob Demand"). The Jacob Demand cites allegations from the September 17, 2019 report prepared by admitted short seller Hindenburg Research. In November 2019, we received a substantially similar books and records demand from the same law firm on behalf of purported Company stockholder Michael Bolouri ("Bolouri Demand" and, together with the Jacob Demand, the "Demands"). On January 13, 2020, Messrs. Jacob and Bolouri filed a complaint in the Delaware Court of Chancery to enforce the Demands in the matter styled *Jacob v. Bloom Energy Corp.*, C.A. No. 2020-0023-JRS. On March 9, 2020, Messrs. Jacob and Bolouri filed an amended complaint in the Delaware Court of Chancery to add allegations regarding the restatement.

In March 2020, Francisco Sanchez filed a class action complaint in Santa Clara County Superior Court against us alleging certain wage and hour violations under the California Labor Code and Industrial Welfare Commission Wage Orders and that we engaged in unfair business practices under the California Business and Professions Code. We are still investigating the allegations but believe the complaint to be without merit and, as a result, we have recorded no loss contingency related to this claim.

15. Segment Information

Segment and the Chief Operating Decision Maker

Our chief operating decision makers ("CODMs"), our Chief Executive Officer and the Chief Financial Officer, review financial information presented on a consolidated basis for purposes of allocating resources and evaluating financial performance. The CODMs allocate 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 CODMs assess 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.

Concentration of Geographic Risk

Geographic Risk - The majority of our revenue and long-lived assets are attributable to operations in the United States for all periods presented. Additionally, we sell our Energy Servers in Japan, China, India, and the Republic of Korea (collectively, our "Asia Pacific region"). In the year ended December 31, 2019 and 2018, total revenue in the Asia Pacific region was 23% and 14%, respectively, of our total revenue.

16. Related Party Transactions

Our operations included the following related party transactions (in thousands):

	Years Ended December 31,		
	2019	2018	2017
Total revenue from related parties	$ 228,100	$ 32,381	$ 2,176
Interest expense to related parties	6,756	8,893	12,265
Consulting expenses paid to related parties [1] (included in general and administrative expense)	—	125	206

[1]As of July 2019, we no longer have a consultant considered to be a related party.

As of December 31, 2019 and 2018, we had $55.8 million and $64.1 million, respectively, in debt and convertible notes from investors considered to be related parties.

Bloom Energy Japan Limited

In May 2013, we entered into a joint venture with Softbank Corp., which is accounted for as an equity method investment. Under this arrangement, we sell Energy Servers and provide maintenance services to the joint venture. For the year ended December 31, 2019 and 2018, we recognized related party total revenue of $4.2 million and $32.4 million, respectively. Accounts receivable from this joint venture was $2.4 million as of December 31, 2019 and $3.3 million as of December 31, 2018.

Diamond State Generation Partners, LLC

On June 14, 2019, we entered into a transaction with SP Diamond State Class B Holdings (SPDS) for the PPA II upgrade of Energy Servers. In connection with the closing of this transaction, SPDS was admitted as a member of Diamond State Generation Partners, LLC ("DSGP"). DSGP, an operating company was a wholly owned subsidiary of DSGH prior to June 14, 2019. As a result of the PPA II upgrade of Energy Servers transaction, we determined that we no longer retain a controlling interest in DSGP and therefore it will no longer be consolidated as a variable interest entity, or VIE, into our consolidated financial statements as of June 30, 2019. DSGP is considered to be a related party as, through our interest in DSGH, we held an interest in DSGP through December 23, 2019. As a result of the PPA II Upgrade, we recognized related party revenue of approximately $223.9 million, comprised of product revenue of approximately $216.9 million and installation revenue of $7.0 million, for the year ended December 31, 2019. See Note 13, *Power Purchase Agreement Programs - PPA II Upgrade of Energy Servers*. We had no accounts receivable from DSGP as of December 31, 2019.

Consulting Arrangement

In January 2009, we entered into a consulting agreement with General Colin L. Powell, a member of our board of directors, pursuant to which General Powell performs certain strategic planning and advisory services for us. In 2018, General Powell's compensation was revised to $125,000.0 per year, plus reimbursement for reasonable expenses. In July 2019, the consulting agreement was amended to further reduce the compensation payable to General Powell such that he is no longer designated as a related party for reporting purposes.

Debt to Related Parties

The following is a summary of our debt and convertible notes from investors considered to be related parties as of December 31, 2019 (in thousands):

	Unpaid Principal Balance	Net Carrying Value		
		Current	Long-Term	Total
Recourse debt from related parties:				
6% convertible promissory notes due December 2020 from related parties	$ 20,801	$ 20,801	$ —	$ 20,801
Non-recourse debt from related parties:				
7.5% term loan due September 2028 from related parties	38,337	3,882	31,088	34,970
Total debt from related parties	$ 59,138	$ 24,683	$ 31,088	$ 55,771

The following is a summary of our debt and convertible notes from investors considered to be related parties as of December 31, 2018 (in thousands):

	Unpaid Principal Balance	Net Carrying Value		
		Current	Long-Term	Total
Recourse debt from related parties:				
6% convertible promissory notes due December 2020 from related parties	$ 27,734	$ —	$ 27,734	$ 27,734
Non-recourse debt from related parties:				
7.5% term loan due September 2028 from related parties	40,538	2,200	34,119	36,319
Total debt from related parties	$ 68,272	$ 2,200	$ 61,853	$ 64,053

In November 2019, one related party note holder exchanged $6.9 million of their 6% Notes at the conversion price of $11.25 per share into 616,302 shares of common stock. We repaid $2.2 million and $1.4 million of the non-recourse 7.5% term loan principal balance in the years December 31, 2019 and 2018, respectively, and we paid $3.0 million and $3.1 million of interest in the years December 31, 2019 and 2018, respectively. See *Note 7, Outstanding Loans and Security Agreements* for additional information on our debt facilities.

17. Subsequent Events

Senior Secured Notes Private Placement

On March 31, 2020, we entered into a note purchase agreement (the “Note Purchase Agreement”) with certain investors pursuant to which such investors have agreed to purchase, and we have agreed to issue, $70.0 million of 10.25% Senior Secured Notes due 2027 (the “Senior Secured Notes”) in a private placement (the “Senior Secured Notes Private Placement”). The Senior Secured Notes will be governed by an indenture (the “Senior Secured Notes Indenture”) entered into among us, the guarantors party thereto and U.S. Bank National Association, in its capacity as trustee and collateral agent. The Senior Secured Notes are secured by certain of our operations and maintenance agreements.

The Note Purchase Agreement contains customary representations, warranties and covenants of the parties. Pursuant to the Note Purchase Agreement, the issuance of the Senior Secured Notes and related funding is expected to be consummated no later than May 29, 2020, and is conditioned upon the satisfaction of certain closing conditions set forth in the Note Purchase Agreement, including the release of certain collateral by the 6% Convertible Noteholders, a satisfactory rating by a rating agency and receipt by the Purchasers of customary certificates, legal opinions and other documents.

Interest on the Notes will be payable on March 31, June 30, September 30 and December 31 of each year, commencing June 30, 2020. The Indenture will contain customary events of default and covenants relating to, among other things, the incurrence of debt, affiliate transactions, liens and restricted payments. On or after March 27, 2022, we may redeem all of the Notes at a price equal to 108.00% of the principal amount of the Notes plus accrued and unpaid interest, with such optional redemption prices decreasing to 104.00% on and after March 27, 2023, 102.00% on and after March 27, 2024 and 100.00% on and after March 27, 2026. Before March 27, 2022, we may redeem the Notes upon repayment of a make-whole premium. If we experience a change of control, we must offer to purchase for cash all or any part of each holder’s Notes at a purchase price equal to 101% of the principal amount of the Notes, plus accrued and unpaid interest.

Amendment of Convertible Notes

Amendment Support Agreement

On March 31, 2020, we entered into an Amendment Support Agreement (the “Amendment Support Agreement”) with the beneficial owners (the “Noteholders”) of our outstanding 6.0% Convertible Notes due 2020 (the “Convertible Notes”) pursuant to which such Noteholders have agreed to consent to, among other things, certain amendments to the indenture (the “Proposed Amendments”).

The Proposed Amendments will, among other things:

- Increase the interest rate of the Convertible Notes to 10% per annum,

- Extend the maturity date of the Convertible Notes to December 1, 2021, except that $70.0 million will remain due and payable on September 1, 2020;

- Amend the conversion price applicable to the Convertible Notes to $8.00, representing an initial conversion rate of 125.0000 shares of Class B Common Stock per $1,000 principal amount of Notes (subject to customary adjustments);

- Add covenants relating to, among other things, the redemption of the Convertible Notes with the proceeds of certain transactions (including equity and debt financings or sales of intellectual property), repayment of outstanding indebtedness and restricted payments and a provision requiring KR Sridhar to remain as CEO of Bloom Energy unless caused by illness, incapacity or death;

- Release certain collateral securing the Convertible Notes that will secure the Senior Secured Notes; and

- Require that we repay at least $70.0 million of the Convertible Notes on or before September 1, 2020.

Pursuant to the Amendment Support Agreement, the Proposed Amendments were implemented by (i) amending and restating the Original Indenture (as so amended and restated, the “Amended and Restated Indenture”), (ii) amending and restating the Convertible Notes in the form to be attached to the Amended and Restated Indenture, and (iii) executing and delivering an amendment to the security agreement governing the collateral securing the Convertible Notes (the “Security Agreement Amendment” and together with the Amended and Restated Indenture and the Security Agreement Amendment, the “Amendment Documents”), and (iv) executing and delivering certain other documents, instruments, certificates and agreements in connection with and/or as required by the foregoing, in each case on or prior to April 20, 2020 and subject to the satisfaction of certain customary and other conditions set forth in the Amendment Support Agreement, including the payment of expenses and the delivery of customary certificates, legal opinions and other documents.

On March 31, 2020, we also entered into a Support Agreement (the “Stockholder Support Agreement”) with KR Sridhar, the Chief Executive Officer of the Company (in such capacity, the “Stockholder”) and the beneficial owner of a majority of the voting power of the Company, pursuant to which the Stockholder has agreed to vote in favor of permitting us to settle all conversions of Convertible Notes in shares of our Class A Common Stock or Class B Common Stock, as applicable, in compliance with all applicable rules of the New York Stock Exchange (the “Stockholder Approval”).

Convertible Note Purchase Agreement

In connection with the execution and delivery of the Amendment Documents, on March 31, 2020, we entered into a convertible note purchase agreement (the “Convertible Note Purchase Agreement”) with Foris Ventures, LLC and New Enterprise Associates 10, Limited Partnership (together, the “Purchasers”), both affiliates of ours, pursuant to which such Purchasers were issued $30 million aggregate principal amount of additional Convertible Notes (the “Additional Convertible Notes”) under the Amended and Restated Indenture. The issuance of the Additional Convertible Notes is expected to occur substantially concurrently with the execution and delivery of the Amendment Documents.

Constellation Note Modification Agreement

In connection with the execution and delivery of the Amendment Documents, on March 31, 2020, we entered into an Amended and Restated Subordinated Secured Convertible Note Modification Agreement (the “Constellation Note Modification Agreement”) with Constellation NewEnergy, Inc. (“Constellation”) pursuant to which certain terms of our outstanding Amended and Restated Subordinated Secured Convertible Note issued to Constellation were modified to be no less favorable than the corresponding terms of the Convertible Notes as amended by the Amended and Restated Indenture.

COVID-19 Pandemic

The recent outbreak of the novel coronavirus COVID-19, which was declared a pandemic by the World Health Organization on March 11, 2020, has led to adverse impacts on the U.S. and global economies and created uncertainty regarding potential impacts to our supply chain, operations, and customer demand. Although we have been able to maintain certain of our operations as an “Essential Business” in California and Delaware, other operations have been delayed or suspended under applicable government orders and guidance.

Our headquarters and certain of our manufacturing facilities are located in Santa Clara County, California. On March 17, 2020, Santa Clara County became subject to a government mandated “shelter in place” order, which was superseded by an Executive Order issued by the Governor of California that extends indefinitely. Similarly, effective March 25, 2020, our manufacturing facilities in Newark, Delaware became subject to the Governor of Delaware’s Declaration of a State of Emergency Due to a Public Health Threat initially issued on March 12, 2020 and in effect until further notice. As our manufacturing operations have been designated as “Essential Businesses”, both manufacturing facilities are continuing to operate. However, our installation activities in all areas, but especially New York, Connecticut, New Jersey, California and Massachusetts, are adversely impacted by similar mandates in these jurisdictions, as well as where certain of our customers have shut down or otherwise limited access to their facilities. Additionally, while construction activities have to date been deemed “Essential Businesses” and allowed to proceed in many jurisdictions, we have experienced interruptions and delays caused by confusion related to exemptions for “Essential Businesses” amongst our suppliers and their sub-contractors.

In response, we have closed our headquarters building and directed employees, unless they are directly supporting essential manufacturing production operations or maintenance activities, to work from their homes. This has caused disruptions in certain of our operations, including our research and development, sales, marketing, installation and operations and maintenance activities.

We are also experiencing delays from certain vendors and suppliers that have been affected more directly by COVID-19. Our international operations, including in South Korea and India, have been disrupted by the COVID-19 pandemic and by governmental responses to the pandemic. In India, orders by the National Disaster Management Authority and the Ministry of Home Affairs issued March 24, 2020 have “prescribed a lockdown for containment of COVID-19 Epidemic in the country,” according to the Press Information Bureau of the Government of India. These orders have had the effect of disrupting the supply chain on which we rely for certain parts critical to our manufacturing and maintenance capabilities, which impacts both our sale and installation of new products and our operations and maintenance of previously-sold Energy Servers. Both the primary and secondary sources of a particular part on which we rely are in India. As of the filing of this Form 10-K, we have identified an alternative supplier based in China which is expected to be able to provide the necessary parts by the end of April

2020. Relative to South Korea, we have not seen significant impacts to date in orders and as we do not perform installation services in South Korea, our risks in South Korea are further limited.

We also rely on third party financing for our customer's purchases of our Energy Servers. We have already experienced one delayed closing due to a financier's inability to close in light of its own liquidity concerns.

We have also experienced delays and interruptions to our installation activities where customers have shut down or otherwise limited access to their facilities. Additionally, while construction activities have to date been deemed "essential business" and allowed to proceed in many jurisdictions, we have experienced interruptions and delays caused by confusion related to exemptions for "Essential Businesses" amongst our suppliers and their sub-contractors.

The COVID-19 pandemic is expected to negatively impact our results of operations, financial position, and liquidity, but we cannot reasonably estimate the future impact at this time.

Other Events

There have been no other subsequent events that occurred during the period subsequent to the date of these financial statements that would require adjustment to our disclosure in the financial statements as presented.

18. Unaudited Selected Quarterly Financial Data

The consolidated statements of operations data, presented on a quarterly basis for the years ended December 31, 2019 and 2018, are unaudited. These data have been prepared in accordance with U.S. GAAP for interim financial information and, in the opinion of management, reflect all adjustments, which include only normal recurring adjustments, necessary for a fair statement of the results of operations for the periods presented.

We have restated herein our previously issued unaudited selected quarterly financial data for the quarters ended March 31, 2019, June 30, 2019 and 2018, September 30, 2019 and 2018, and December 31, 2018 and revised our unaudited selected quarterly financial data for the quarter ended March 31, 2018. See Note 2, *Restatement and Revision of Previously Issued Consolidated Financial Statements*, for further information.

In addition, our unaudited selected quarterly financial data for the quarters ended March 31, 2019, June 30, 2019 and September 30, 2019, as previously reported, did not originally reflect the adoption of ASU 2014-09 related to the presentation of ASC 606 *Revenue From Contracts With Customers*. ASC 606 was adopted in the fourth quarter of 2019 and was applied on the modified retrospective method for periods commencing January 1, 2019. Our condensed consolidated statements of operations data for the interim periods within fiscal year 2019 have been recast accordingly. See Note 1, *Accounting Guidance Implemented in Fiscal Year 2019*, *Revenue Recognition*, for additional information related to our adoption of ASU 2014-09.

The following presents our consolidated statements of operations by quarter (in thousands) (unaudited):

	2019				2018			
	Three Months Ended							
	Dec. 31	Sept. 30	June 30	March 31	Dec. 31	Sept. 30	June 30	March 31
		As Restated and Recast			As Restated			As Revised
Revenue:								
Product	$ 158,427	$ 163,902	$ 144,081	$ 90,926	$ 103,937	$ 102,433	$ 78,497	$ 115,771
Installation	14,429	21,102	13,076	12,219	11,066	24,691	19,643	12,795
Service	25,628	23,665	23,026	23,467	21,778	21,056	20,299	20,134
Electricity	15,059	15,638	20,143	20,389	20,364	20,439	19,863	19,882
Total revenue	213,543	224,307	200,326	147,001	157,145	168,619	138,302	168,582
Cost of revenue:								
Product	141,782	91,697	113,228	88,772	86,154	69,053	49,603	76,465
Installation	16,901	26,141	17,685	15,760	20,651	35,506	29,951	9,198
Service	17,127	36,427	18,763	27,921	31,818	24,470	19,702	24,699
Electricity	12,785	27,317	22,300	12,984	11,601	12,180	12,062	13,785
Total cost of revenue	188,595	181,582	171,976	145,437	150,224	141,209	111,318	124,147
Gross profit	24,948	42,725	28,350	1,564	6,921	27,410	26,984	44,435
Operating expenses:								
Research and development	22,148	23,389	29,772	28,859	32,970	27,021	14,413	14,731
Sales and marketing	17,357	17,649	18,194	20,373	24,951	21,396	8,167	8,293
General and administrative	33,315	36,599	43,662	39,074	47,471	40,999	15,359	14,988
Total operating expenses	72,820	77,637	91,628	88,306	105,392	89,416	37,939	38,012
Income (loss) from operations	(47,872)	(34,912)	(63,278)	(86,742)	(98,471)	(62,006)	(10,955)	6,423
Interest income	862	1,214	1,700	1,885	1,996	1,467	444	415
Interest expense	(21,635)	(21,323)	(22,722)	(21,800)	(21,757)	(22,125)	(27,147)	(25,992)
Interest expense to related parties	(1,933)	(1,605)	(1,606)	(1,612)	(1,628)	(1,966)	(2,672)	(2,627)
Other income (expense), net	138	525	(222)	265	636	(705)	(855)	(75)
Gain (loss) on revaluation of warrant liabilities and embedded derivatives	(540)	(540)	(540)	(540)	192	900	(19,197)	(4,034)
Loss before income taxes	(70,980)	(56,641)	(86,668)	(108,544)	(119,032)	(84,435)	(60,382)	(25,890)
Income tax provision (benefit)	31	136	258	208	1,079	(3)	128	333
Net loss	(71,011)	(56,777)	(86,926)	(108,752)	(120,111)	(84,432)	(60,510)	(26,223)
Less: net loss attributable to noncontrolling interests and redeemable noncontrolling interests	(5,178)	(5,027)	(5,015)	(3,832)	(4,662)	(3,930)	(4,512)	(4,632)
Net loss attributable to Class A and Class B common stockholders	(65,833)	(51,750)	(81,911)	(104,920)	(115,449)	(80,502)	(55,998)	(21,591)
Less: deemed dividend to noncontrolling interest	(2,454)	—	—	—	—	—	—	—
Net loss available to Class A and Class B common stockholders	$ (68,287)	$ (51,750)	$ (81,911)	$ (104,920)	$ (115,449)	$ (80,502)	$ (55,998)	$ (21,591)
Net loss per share attributable to Class A and Class B common stockholders, basic and diluted	$ (0.58)	$ (0.44)	$ (0.72)	$ (0.94)	$ (1.06)	$ (0.99)	$ (5.31)	$ (2.08)
Weighted average shares used to compute net loss per share attributable to Class A and Class B common stockholders, basic and diluted	118,588	116,330	113,624	111,842	109,416	81,321	10,536	10,404

Restatement and Recasting and Revision of Previously Issued Unaudited Financial Data

Following are the restatement and recasting of previously reported condensed consolidated balance sheets for the quarters ended March 31, 2019, June 30, 2019, and September 30, 2019, restatement of previously reported condensed consolidated balance sheets for the quarters ended June 30, 2018 and September 30, 2018, and revision of previously reported condensed consolidated balance sheet for the quarter ended March 31, 2018.

	March 31, 2019					
	As Previously Reported	Restatement Impacts		As Restated	ASC 606 Adoption Impacts	As Restated & Recast
Assets						
Current assets:						
Cash and cash equivalents	$ 320,414	$ —		$ 320,414	$ —	$ 320,414
Restricted cash	18,419	—		18,419	—	18,419
Accounts receivable	84,070	3,995	1	88,065	(2,418)	85,647
Inventories	116,544	3,327	2	119,871	—	119,871
Deferred cost of revenue	66,316	(13,405)	3	52,911	—	52,911
Customer financing receivable	5,717	—		5,717	—	5,717
Prepaid expenses and other current assets	28,362	1,582	4	29,944	129	30,073
Total current assets	639,842	(4,501)		635,341	(2,289)	633,052
Property, plant and equipment, net	475,385	236,246	5	711,631	—	711,631
Customer financing receivable, non-current	65,620	—		65,620	—	65,620
Restricted cash (noncurrent)	31,101	—		31,101	—	31,101
Deferred cost of revenue, non-current	72,516	(70,583)	3	1,933	—	1,933
Other long-term assets	34,386	8,486	6	42,872	2,575	45,447
Total assets	$ 1,318,850	$ 169,648		$ 1,488,498	$ 286	$ 1,488,784
Liabilities, Redeemable Noncontrolling Interest, Stockholders' Deficit and Noncontrolling Interest						
Current liabilities:						
Accounts payable	$ 64,425	$ —		$ 64,425	$ —	$ 64,425
Accrued warranty	16,736	(1,219)	7	15,517	(1,280)	14,237
Accrued expenses and other current liabilities	67,966	(3,893)	8	64,073	—	64,073
Financing obligations	—	8,819	10	8,819	—	8,819
Deferred revenue and customer deposits	89,557	(16,153)	11	73,404	1,665	75,069
Current portion of recourse debt	15,683	—		15,683	—	15,683
Current portion of non-recourse debt	19,486	—		19,486	—	19,486
Current portion of non-recourse debt from related parties	2,341	—		2,341	—	2,341
Total current liabilities	276,194	(12,446)		263,748	385	264,133
Derivative liabilities	11,166	4,556		15,722	—	15,722
Deferred revenue and customer deposits, net of current portion	201,863	(115,432)	11	86,431	17,320	103,751
Financing obligations, non-current	—	394,037	10	394,037	—	394,037
Long-term portion of recourse debt	357,876	—		357,876	—	357,876
Long-term portion of non-recourse debt	284,541	—		284,541	—	284,541
Long-term portion of recourse debt from related parties	27,734	—		27,734	—	27,734
Long-term portion of non-recourse debt from related parties	33,417	—		33,417	—	33,417

	March 31, 2019					
	As Previously Reported	Restatement Impacts		As Restated	ASC 606 Adoption Impacts	As Restated & Recast
Other long-term liabilities	58,032	(29,062)	8	28,970	—	28,970
Total liabilities	1,250,823	241,653		1,492,476	17,705	1,510,181
Redeemable noncontrolling interest	58,802	—		58,802	—	58,802
Stockholders' deficit:						
Common stock	11	—		11	—	11
Additional paid-in capital	2,551,256	755	12	2,552,011	—	2,552,011
Accumulated other comprehensive income	5	—		5	—	5
Accumulated deficit	(2,656,711)	(72,760)		(2,729,471)	(17,419)	(2,746,890)
Total stockholders' deficit	(105,439)	(72,005)		(177,444)	(17,419)	(194,863)
Noncontrolling interest	114,664	—		114,664	—	114,664
Total liabilities, redeemable noncontrolling interest, stockholders' deficit and noncontrolling interest	$ 1,318,850	$ 169,648		$ 1,488,498	$ 286	$ 1,488,784

[1] Accounts receivable — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements, for which the amount recorded to accounts receivable represents amounts invoiced for capacity billings to end customers which have not yet been collected by the financing entity as of the period end.

[2] Inventories — The correction of these misstatements resulted from the change of accounting for inventory, including net capitalization of stock-based compensation cost of $3.8 million and reclassification of inventories of $0.5 million held for shipments to customers under the Managed Services Program and similar arrangements to construction in progress within property, plant and equipment, net.

[3] Deferred cost of revenue, current and non-current — The correction of these misstatements resulted from reclassifying deferred cost of revenue to property, plant and equipment, net for the leased Energy Servers under the Managed Services Agreements and similar sale-leaseback arrangements of $13.9 million (short-term) and $70.6 million (long-term), net capitalization of stock-based compensation costs of $2.1 million into current deferred cost of revenue, and the correction of certain other immaterial misstatements identified to relieve installation deferred cost of revenue of $1.7 million.

[4] Prepaid expenses and other current assets — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements prepaid property tax and insurance payments are now classified within prepaid expenses, rather than offset against deferred revenue.

[5] Property, plant and equipment, net — The correction of these misstatements resulted from the change of accounting for Managed Services transactions and similar arrangements, whereby product and install costs of goods sold are now recorded as property, plant and equipment, net in the cases where the risks of ownership have not completely transferred to the financing party of $232.6 million. This includes a net capitalization of stock-based compensation cost for these assets of $3.6 million.

[6] Other long-term assets — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements whereby the timing difference of capacity billings to end customers and the payments received from the financing entity is recorded within long term receivables and prepaid property tax and insurance payments are now classified within other long-term assets, rather than offset against long-term deferred revenue.

[7] Accrued warranty — The correction of these misstatements resulted from the change of accounting for accrued warranty which is now recorded on an as-incurred basis for our Managed Services Agreements and similar arrangements, reducing accrued warranty by $0.4 million and the change of accounting for the grid pricing escalation guarantees we provided in some of our sales arrangements, which are now recorded as derivative liabilities, reducing accrued warranty by $0.8 million.

[8] Accrued expense and other current liabilities and other long-term liabilities — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements, for which historical accrued liabilities recorded at inception of the agreements, as well as subsequent reductions of those liabilities, were reversed.

[9] Financing obligations, current and non-current — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements, whereby instead of recognizing the upfront proceeds received from the bank as revenue, the proceeds received are classified as financing obligations.

[10] Deferred revenue and customer deposits, current and non-current — The correction of these misstatements resulted from the change of accounting for the recognition of product and installation revenue from upfront or ratable recognition to recognition of the capacity payments received from the end customer as power is generated by the Energy Servers as electricity revenue.

[11] Derivative liabilities — The correction of these misstatements resulted from the change of accounting for embedded derivatives related to grid pricing escalation guarantees we provided in some of our sales arrangements. These are now recorded as derivative liabilities and were previously treated as an accrued liability.

[12] Additional paid-in capital — Relates to the correction of an unadjusted misstatement in the valuation of our 6% Notes derivative, resulting in a credit to additional paid-in capital and additional expense of $0.8 million recorded within other expense, net.

	June 30, 2019					
	As Previously Reported	Restatement Impacts		As Restated	ASC 606 Adoption Impacts	As Restated & Recast
Assets						
Current assets:						
Cash and cash equivalents	$ 308,009	$ —		$ 308,009	$ —	$ 308,009
Restricted cash	23,706	—		23,706	—	23,706
Accounts receivable	38,296	4,172	1	42,468	(2,430)	40,038
Inventories	104,934	1,955	2	106,889	—	106,889
Deferred cost of revenue	86,434	(6,127)	3	80,307	—	80,307
Customer financing receivable	5,817	—		5,817	—	5,817
Prepaid expenses and other current assets	25,088	1,252	4	26,340	143	26,483
Total current assets	592,284	1,252		593,536	(2,287)	591,249
Property, plant and equipment, net	406,610	234,649	5	641,259	—	641,259
Customer financing receivable, non-current	64,146	—		64,146	—	64,146
Restricted cash (noncurrent)	39,351	—		39,351	—	39,351
Deferred cost of revenue, non-current	59,213	(55,367)	3	3,846	—	3,846
Other long-term assets	60,975	9,118	6	70,093	2,743	72,836
Total assets	$ 1,222,579	$ 189,652		$ 1,412,231	$ 456	$ 1,412,687
Liabilities, Redeemable Noncontrolling Interest, Stockholders' Deficit and Noncontrolling Interest						
Current liabilities:						
Accounts payable	61,427	—		61,427	—	61,427
Accrued warranty	12,393	(1,154)	7	11,239	(999)	10,240
Accrued expenses and other current liabilities	109,722	(4,329)	8	105,393	—	105,393
Financing obligations	—	10,027	10	10,027	—	10,027
Deferred revenue and customer deposits	129,321	(13,847)	11	115,474	3,264	118,738
Current portion of recourse debt	15,681	—		15,681	—	15,681
Current portion of non-recourse debt	7,654	—		7,654	—	7,654
Current portion of non-recourse debt from related parties	2,889	—		2,889	—	2,889
Total current liabilities	339,087	(9,303)		329,784	2,265	332,049
Derivative liabilities	13,079	5,096		18,175	—	18,175
Deferred revenue and customer deposits, net of current portion	181,221	(95,840)	11	85,381	25,369	110,750
Financing obligations, non-current	—	400,078	10	400,078	—	400,078
Long-term portion of recourse debt	362,424	—		362,424	—	362,424
Long-term portion of non-recourse debt	219,182	—		219,182	—	219,182
Long-term portion of recourse debt from related parties	27,734	—		27,734	—	27,734
Long-term portion of non-recourse debt from related parties	32,643	—		32,643	—	32,643
Other long-term liabilities	58,417	(28,438)	8	29,979	—	29,979
Total liabilities	1,233,787	271,593		1,505,380	27,634	1,533,014
Redeemable noncontrolling interest	505	—		505	—	505
Stockholders' deficit:						

	June 30, 2019					
	As Previously Reported	Restatement Impacts		As Restated	ASC 606 Adoption Impacts	As Restated & Recast
Common stock	11	—		11	—	11
Additional paid-in capital	2,603,279	755	12	2,604,034	—	2,604,034
Accumulated other comprehensive loss	(148)	—		(148)	—	(148)
Accumulated deficit	(2,718,927)	(82,696)		(2,801,623)	(27,178)	(2,828,801)
Total stockholders' deficit	(115,785)	(81,941)		(197,726)	(27,178)	(224,904)
Noncontrolling interest	104,072	—		104,072	—	104,072
Total liabilities, redeemable noncontrolling interest, stockholders' deficit and noncontrolling interest	$ 1,222,579	$ 189,652		$ 1,412,231	$ 456	$ 1,412,687

1 Accounts receivable — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements, for which the amount recorded to accounts receivable represents amounts invoiced for capacity billings to end customers which have not yet been collected by the financing entity as of the period end.

2 Inventories — The correction of these misstatements resulted from the change of accounting for inventory, including net capitalization of stock-based compensation costs of $2.0 million.

3 Deferred cost of revenue, current and non-current — The correction of these misstatements resulted from reclassifying deferred cost of revenue to property, plant and equipment, net for the leased Energy Servers under the Managed Services Agreements and similar sale-leaseback arrangements of $7.4 million (short-term) and $55.4 million (long-term), and net capitalization of stock-based compensation costs of $3.7 million into current deferred cost of revenue, and the correction of certain other immaterial misstatements identified to relieve installation deferred cost of revenue of $2.5 million.

4 Prepaid expenses and other current assets — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements whereby prepaid property tax and insurance payments are now classified within prepaid expenses, rather than offset against deferred revenue.

5 Property, plant and equipment, net — The correction of these misstatements resulted from the change of accounting for Managed Services transactions and similar arrangements, whereby product and install cost of revenue are now recorded as property, plant and equipment, net in the cases where the risks of ownership have not completely transferred to the financing party of $230.9 million. This includes a net capitalization of stock-based compensation costs for these assets of $3.7 million.

6 Other long-term assets — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements whereby the timing difference of capacity billings to end customers and the payments received from the financing entity is recorded within long term receivables and prepaid property tax and insurance payments are now classified within other long-term assets, rather than offset against long-term deferred revenue.

7 Accrued warranty — The correction of these misstatements resulted from the change of accounting for accrued warranty which is now recorded on an as-incurred basis for our Managed Services Agreements and similar arrangements, reducing accrued warranty by $0.2 million and the change of accounting for the grid pricing escalation guarantees we provided in some of our sales arrangements, which are now recorded as derivative liabilities, reducing accrued warranty by $0.9 million.

8 Accrued expenses and other current liabilities and other long-term liabilities — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements, for which historical accrued liabilities recorded at inception of the agreements, as well as subsequent reductions of those liabilities, were reversed.

9 Financing obligations, current and non-current — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements, whereby instead of recognizing the upfront proceeds received from the bank as revenue, the proceeds received are classified as financing obligations.

10 Deferred revenue and customer deposits, current and non-current — The correction of these misstatements resulted from the change of accounting for the recognition of product and installation revenue from upfront or ratable recognition to recognition of the capacity payments received from the end customer as power is generated by the Energy Servers as electricity revenue.

11 Derivative liabilities — The correction of these misstatements resulted from the change of accounting for embedded derivatives related to grid pricing escalation guarantees we provided in some of our sales arrangements. These are now recorded as derivative liabilities and were previously treated as an accrued liability.

12 Additional paid-in capital — Relates to the correction of an unadjusted misstatement in the valuation of our 6% Notes derivative, resulting in a credit to additional paid-in capital and additional expense of $0.8 million recorded within other expense, net.

	September 30, 2019					
	As Previously Reported	Restatement Impacts		As Restated	ASC 606 Adoption Impacts	As Restated & Recast
Assets						
Current assets:						
Cash and cash equivalents	$ 226,499	$ —		$ 226,499	$ —	$ 226,499
Restricted cash	14,486	—		14,486	—	14,486
Accounts receivable	26,737	4,216	1	30,953	(4,600)	26,353
Inventories	140,372	(7,765)	2	132,607	—	132,607
Deferred cost of revenue	50,707	(9,665)	3	41,042	—	41,042
Customer financing receivable	5,919	—		5,919	—	5,919
Prepaid expenses and other current assets	25,639	2,830	4	28,469	173	28,642
Total current assets	490,359	(10,384)		479,975	(4,427)	475,548
Property, plant and equipment, net	384,377	243,008	5	627,385	—	627,385
Customer financing receivable, non-current	62,615	—		62,615	—	62,615
Restricted cash (noncurrent)	116,890	—		116,890	—	116,890
Deferred cost of revenue, non-current	57,286	(53,562)	3	3,724	—	3,724
Other long-term assets	58,400	9,319	6	67,719	3,232	70,951
Total assets	$ 1,169,927	$ 188,381		$ 1,358,308	$ (1,195)	$ 1,357,113
Liabilities, Redeemable Noncontrolling Interest, Stockholders' Deficit and Noncontrolling Interest						
Current liabilities:						
Accounts payable	$ 81,060	$ —		$ 81,060	$ —	$ 81,060
Accrued warranty	15,295	(1,159)	7	14,136	(1,274)	12,862
Accrued expense and other current liabilities	82,150	(2,534)	8	79,616	—	79,616
Financing obligations	—	10,420	10	10,420	—	10,420
Deferred revenue and customer deposits	88,060	(13,856)	11	74,204	3,347	77,551
Current portion of recourse debt	15,678	—		15,678	—	15,678
Current portion of non-recourse debt	7,983	—		7,983	—	7,983
Current portion of non-recourse debt from related parties	3,500	—		3,500	—	3,500
Total current liabilities	293,726	(7,129)		286,597	2,073	288,670
Derivative liabilities	14,648	5,636		20,284	—	20,284
Deferred revenue and customer deposits, net of current portion	179,712	(92,390)	11	87,322	34,954	122,276
Financing obligations, non-current	—	397,272	10	397,272	—	397,272
Long-term portion of recourse debt	359,959	—		359,959	—	359,959
Long-term portion of non-recourse debt	217,334	—		217,334	—	217,334
Long-term portion of recourse debt from related parties	27,734	—		27,734	—	27,734
Long-term portion of non-recourse debt from related parties	31,781	—		31,781	—	31,781
Other long-term liabilities	56,117	(27,264)	8	28,853	(1)	28,852
Total liabilities	1,181,011	276,125		1,457,136	37,026	1,494,162
Redeemable noncontrolling interest	557	—		557	—	557

	September 30, 2019					
	As Previously Reported	Restatement Impacts		As Restated	ASC 606 Adoption Impacts	As Restated & Recast
Stockholders' deficit:						
Common stock	12	—		12	—	12
Additional paid-in capital	2,647,118	756	12	2,647,874	—	2,647,874
Accumulated other comprehensive loss	(147)	—		(147)	—	(147)
Accumulated deficit	(2,753,830)	(88,500)		(2,842,330)	(38,221)	(2,880,551)
Total stockholders' deficit	(106,847)	(87,744)		(194,591)	(38,221)	(232,812)
Noncontrolling interest	95,206	—		95,206	—	95,206
Total liabilities, redeemable noncontrolling interest, stockholders' deficit and noncontrolling interest	$ 1,169,927	$ 188,381		$ 1,358,308	$ (1,195)	$ 1,357,113

[1] Accounts receivable — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements, for which the amount recorded to accounts receivable represents amounts invoiced for capacity billings to end customers which have not yet been collected by the financing entity as of the period end.

[2] Inventories — The correction of these misstatements resulted from the change of accounting for inventory, including net capitalization of stock-based compensation costs of $3.7 million, and reclassification of inventories of $11.5 million on held for shipments to customers under the Managed Services Program and similar arrangements to construction in progress within property, plant and equipment, net.

[3] Deferred cost of revenue, current and non-current — The correction of these misstatements resulted from reclassifying deferred cost of revenue to property, plant and equipment, net for the leased Energy Servers under the Managed Services Agreements and similar sale-leaseback arrangements of $7.4 million (short-term) and $53.6 million (long-term), and net capitalization of stock-based compensation costs of $0.8 million into current deferred cost of revenue, and the correction of certain other immaterial misstatements identified to relieve installation deferred cost of revenue of $3.1 million.

[4] Prepaid expenses and other current assets — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements where prepaid property tax and insurance payments are now classified within prepaid expenses, rather than offset against deferred revenue.

[5] Property, plant and equipment, net — The correction of these misstatements resulted from the change of accounting for Managed Services transactions and similar arrangements, whereby product and install costs of goods sold are now recorded as property, plant and equipment, net in the cases where the risks of ownership have not completely transferred to the financing party of $239.3 million. This includes a net capitalization of stock-based compensation costs for these assets of $3.7 million.

[6] Other long-term assets — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements whereby the timing difference of capacity billings to end customers and the payments received from the financing entity is recorded within long term receivables and prepaid property tax and insurance payments are now classified within other long-term assets, rather than offset against long-term deferred revenue.

[7] Accrued warranty — The correction of these misstatements resulted from the change of accounting for accrued warranty which is now recorded on an as-incurred basis for our Managed Services Agreements and similar arrangements, reducing accrued warranty by $0.1 million and the change of accounting for the grid pricing escalation guarantees we provided in some of our sales arrangements, which are now recorded as derivative liabilities, reducing accrued warranty by $1.1 million.

[8] Accrued expense and other current liabilities and other long-term liabilities — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements, for which historical accrued liabilities recorded at inception of the agreements, as well as subsequent reductions of those liabilities, were reversed.

[9] Financing obligations, current and non-current — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements, whereby instead of recognizing the upfront proceeds received from the bank as revenue, the proceeds received are classified as financing obligations.

[10] Deferred revenue and customer deposits, current and non-current — The correction of these misstatements resulted from the change of accounting for the recognition of product and installation revenue from upfront or ratable recognition to recognition of the capacity payments received from the end customer as power is generated by the Energy Servers as electricity revenue.

[11] Derivative liabilities — The correction of these misstatements resulted from the change of accounting for embedded derivatives related to grid pricing escalation guarantees we provided in some of our sales arrangements. These are now recorded as derivative liabilities and were previously treated as an accrued liability.

[12] Additional paid-in capital — Relates to the correction of an unadjusted misstatement in the valuation of our 6% Notes derivative, resulting in a credit to additional paid-in capital and additional expense of $0.8 million recorded within other expense, net.

	March 31, 2018			
	As Previously Reported	Revision Impacts		As Revised
Assets				
Current assets:				
Cash and cash equivalents	$ 88,227	$ —		$ 88,227
Restricted cash	22,998	—		22,998
Short-term investments	20,138	—		20,138
Accounts receivable	58,520	3,476	1	61,996
Inventories	97,079	(3,047)	2	94,032
Deferred cost of revenue	81,229	(37,814)	3	43,415
Customer financing receivable	5,303	—		5,303
Prepaid expenses and other current assets	27,836	1,108	4	28,944
Total current assets	401,330	(36,277)		365,053
Property, plant and equipment, net	487,169	215,059	5	702,228
Customer financing receivable, non-current	71,337	—		71,337
Restricted cash (noncurrent)	32,367	—		32,367
Deferred cost of revenue, non-current	155,658	(155,605)	3	53
Other long-term assets	36,773	6,406	6	43,179
Total assets	$ 1,184,634	$ 29,583		$ 1,214,217
Liabilities, Convertible Redeemable Preferred Stock, Redeemable Noncontrolling Interest, Stockholders' Deficit and Noncontrolling Interest				
Current liabilities:				
Accounts payable	$ 47,755	$ —		$ 47,755
Accrued warranty	16,723	(329)	7	16,394
Accrued expenses and other current liabilities	57,683	(4,029)	8	53,654
Financing obligations	—	6,556	10	6,556
Deferred revenue and customer deposits	99,449	(27,963)	11	71,486
Current portion of recourse debt	6,017	—		6,017
Current portion of non-recourse debt	17,583	—		17,583
Current portion of non-recourse debt from related parties	1,525	—		1,525
Total current liabilities	246,735	(25,765)		220,970
Preferred stock warrant liabilities	6,554	—		6,554
Derivative liabilities	163,854	4,217		168,071
Deferred revenue and customer deposits, net of current portion	306,153	(216,652)	11	89,501
Financing obligations, non-current	—	321,682	10	321,682
Long-term portion of recourse debt	517,483	—		517,483
Long-term portion of non-recourse debt	302,345	—		302,345
Long-term portion of recourse debt from related parties	70,202	—		70,202
Long-term portion of non-recourse debt from related parties	35,312	—		35,312
Other long-term liabilities	51,860	(30,107)	8	21,753
Total liabilities	1,700,498	53,375		1,753,873

	March 31, 2018		
	As Previously Reported	Revision Impacts	As Revised
Redeemable noncontrolling interest	58,176	—	58,176
Convertible redeemable preferred stock	1,465,841	—	1,465,841
Stockholders' deficit:			
Common stock	1	—	1
Additional paid-in capital	158,605	—	158,605
Accumulated other comprehensive income	117	—	117
Accumulated deficit	(2,348,363)	(23,792)	(2,372,155)
Total stockholders' deficit	(2,189,640)	(23,792)	(2,213,432)
Noncontrolling interest	149,759	—	149,759
Total liabilities, redeemable noncontrolling interest, convertible redeemable preferred stock, stockholders' deficit and noncontrolling interest	$ 1,184,634	$ 29,583	$ 1,214,217

[1] Accounts receivable — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements, for which the amount recorded to accounts receivable represents amounts invoiced for capacity billings to end customers which have not yet been collected by the financing entity as of the period end.

[2] Inventories — The correction of these misstatements resulted from the change of accounting for inventory, including net capitalization of stock-based compensation costs of $0.3 million, and reclassification of inventories of $3.4 million held for shipments to customers under the Managed Services Program and similar arrangements to construction in progress within property, plant and equipment, net.

[3] Deferred cost of revenue, current and non-current — The correction of these misstatements resulted from reclassifying deferred cost of revenue to property, plant and equipment, net for the leased Energy Servers under the Managed Services Agreements and similar sale-leaseback arrangements of $38.2 million (short-term) and $155.6 million (long-term), and net capitalization of stock-based compensation costs of $0.3 million into current deferred cost of revenue.

[4] Prepaid expenses and other current assets — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements where prepaid property tax and insurance payments are now classified within prepaid expenses, rather than offset against deferred revenue.

[5] Property, plant and equipment, net — The correction of these misstatements resulted from the change of accounting for Managed Services transactions and similar arrangements, whereby product and install costs of goods sold are now recorded as property, plant and equipment, net in the cases where the risks of ownership have not completely transferred to the financing party of $214.1 million. This includes a net capitalization of stock-based compensation costs for these assets of $0.9 million.

[6] Other long-term assets — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements whereby the timing difference of capacity billings to end customers and the payments received from the financing entity is recorded within long term receivables and prepaid property tax and insurance payments are now classified within other long-term assets, rather than offset against long-term deferred revenue.

[7] Accrued warranty — The correction of these misstatements resulted from the change of accounting for the grid pricing escalation guarantees we provided in some of our sales arrangements, which are now recorded as derivative liabilities of $0.3 million.

[8] Accrued expense and other current liabilities and other long-term liabilities — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements, for which historical accrued liabilities recorded at inception of the agreements, as well as subsequent reductions of those liabilities, were reversed.

[9] Financing obligations, current and non-current — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements, whereby instead of recognizing the upfront proceeds received from the bank as revenue, the proceeds received are classified as financing obligations.

[10] Deferred revenue and customer deposits, current and non-current — The correction of these misstatements resulted from the change of accounting for the recognition of product and installation revenue from upfront or ratable recognition to recognition of the capacity payments received from the end customer as power is generated by the Energy Servers as electricity revenue.

[11] Derivative liabilities — The correction of these misstatements resulted from the change of accounting for embedded derivatives related to grid pricing escalation guarantees we provided in some of our sales arrangements. These are now recorded as derivative liabilities and were previously treated as an accrued liability.

	June 30, 2018			
	As Previously Reported	Restatement Impacts		As Restated
Assets				
Current assets:				
Cash and cash equivalents	$ 91,596	$ —		$ 91,596
Restricted cash	25,860	—		25,860
Short-term investments	15,703	—		15,703
Accounts receivable	36,804	3,638	1	40,442
Inventories	136,433	(7,149)	2	129,284
Deferred cost of revenue	55,476	(19,822)	3	35,654
Customer financing receivable	5,398	—		5,398
Prepaid expenses and other current assets	23,003	1,817	4	24,820
Total current assets	390,273	(21,516)		368,757
Property, plant and equipment, net	477,765	219,579	5	697,344
Customer financing receivable, non-current	69,963	—		69,963
Restricted cash (noncurrent)	32,416	—		32,416
Deferred cost of revenue, non-current	148,934	(148,874)	3	60
Other long-term assets	38,386	6,855	6	45,241
Total assets	$ 1,157,737	$ 56,044		$ 1,213,781
Liabilities, Redeemable Noncontrolling Interest, convertible redeemable preferred stock, Stockholders' Deficit and Noncontrolling Interest				
Current liabilities:				
Accounts payable	$ 53,798	$ —		$ 53,798
Accrued warranty	14,928	(641)	7	14,287
Accrued expenses and other current liabilities	54,832	(4,900)	8	49,932
Financing obligations	—	6,792	10	6,792
Deferred revenue and customer deposits	94,582	(28,528)	11	66,054
Current portion of recourse debt	10,351	—		10,351
Current portion of non-recourse debt	18,025	—		18,025
Current portion of non-recourse debt from related parties	1,630	—		1,630
Total current liabilities	248,146	(27,277)		220,869
Preferred stock warrant liabilities	2,369	—		2,369
Derivative liabilities	188,199	4,217		192,416
Deferred revenue and customer deposits, net of current portion	301,550	(212,920)	11	88,630
Financing obligations, non-current	—	356,727	10	356,727
Long-term portion of recourse debt	524,934	—		524,934
Long-term portion of non-recourse debt	298,048	—		298,048
Long-term portion of recourse debt from related parties	72,087	—		72,087
Long-term portion of non-recourse debt from related parties	35,054	—		35,054
Other long-term liabilities	52,153	(30,589)	8	21,564
Total liabilities	1,722,540	90,158		1,812,698

	June 30, 2018		
	As Previously Reported	Restatement Impacts	As Restated
Redeemable noncontrolling interest	54,940	—	54,940
Convertible redeemable preferred stock	1,465,841	—	1,465,841
Stockholders' deficit:			
Common stock	1	—	1
Additional paid-in capital	166,805	—	166,805
Accumulated other comprehensive income	217	—	217
Accumulated deficit	(2,394,040)	(34,114)	(2,428,154)
Total stockholders' deficit	(2,227,017)	(34,114)	(2,261,131)
Noncontrolling interest	141,433	—	141,433
Total liabilities, redeemable noncontrolling interest, convertible redeemable preferred stock, stockholders' deficit and noncontrolling interest	$ 1,157,737	$ 56,044	$ 1,213,781

[1] Accounts receivable — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements, for which the amount recorded to accounts receivable represents amounts invoiced for capacity billings to end customers which have not yet been collected by the financing entity as of the period end.

[2] Inventories — The correction of these misstatements resulted from the change of accounting for inventory, including net capitalization of stock-based compensation expenses of $0.9 million, and reclassification of inventories of $8.0 million held for shipments planned to customers under the Managed Services Program and similar arrangements now accounted for as construction in progress within property, plant and equipment, net.

[3] Deferred cost of revenue, current and non-current — The correction of these misstatements resulted from the cumulative net change of accounting moving deferred cost of revenue to property, plant and equipment, net, a decrease for the leased Energy Servers under the Managed Services Agreements and similar sale-leaseback arrangements of $20.1 million (short-term) and $148.9 million (long-term), and the cumulative net absorption in current deferred cost of revenue for overhead in related to stock-based compensation expenses of $0.3 million.

[4] Prepaid expenses and other current assets — The correction of these misstatements resulted from the cumulative net change of accounting for Managed Services Agreements and similar arrangements where prepaid property tax and insurance payments are now classified within prepaid expenses.

[5] Property, plant and equipment, net — The correction of these misstatements resulted from the change of accounting for Managed Services transactions and similar arrangements, whereby product and install costs of goods sold are now recorded as property, plant and equipment, net in the cases where the risks of ownership have not completely transferred to the financing party of $218.6 million. This includes a net capitalization of stock-based compensation costs for these assets of $1.0 million.

[6] Other long-term assets — The correction of these misstatements resulted from the cumulative net change of accounting for Managed Services Agreements and similar arrangements whereby the timing difference of capacity billings to end customers and the payments received from the financing entity is recorded within long term receivables and prepaid property tax and insurance payments are now classified within long term prepaid expenses, rather than offset against long-term deferred revenue.

[7] Accrued warranty — The correction of these misstatements resulted from the change of accounting for accrued warranty which is now recorded on an as-incurred basis on our Managed Services Agreements and similar arrangements of $0.4 million and also includes the cumulative net change of accounting for the change of accounting for the grid pricing escalation guarantees we provided in some of our sales arrangements of $0.3 million.

[8] Accrued expense and other current liabilities and other long-term liabilities — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements, for which historical accrued liabilities recorded at inception of the agreements, as well as subsequent reductions of those liabilities, were reversed.

[9] Financing obligations, current and non-current — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements, whereby instead of recognizing the upfront proceeds received from the bank as revenue, the proceeds received are classified as financing obligations.

[10] Deferred revenue and customer deposits, current and non-current — The correction of these misstatements resulted from the cumulative change of accounting for the recognition of product and installation revenue from upfront or ratable recognition to recognition of the capacity payments received from the end customer as power is generated by the Energy Servers as electricity revenue.

[11] Derivative liabilities — The correction of these misstatements resulted from the cumulative net change of accounting for embedded derivatives related to grid pricing escalation guarantees we provided in some of our sales arrangements. These commitments were previously treated as an accrued liability.

	September 30, 2018			
	As Previously Reported	Restatement Impacts		As Restated
Assets				
Current assets:				
Cash and cash equivalents	$ 395,516	$ —		$ 395,516
Restricted cash	17,931	—		17,931
Short-term investments	4,494	—		4,494
Accounts receivable	41,485	3,776	1	45,261
Inventories	134,725	3,053	2	137,778
Deferred cost of revenue	66,009	(20,826)	3	45,183
Customer financing receivable	5,496	—		5,496
Prepaid expenses and other current assets	32,876	3,623	4	36,499
Total current assets	698,532	(10,374)		688,158
Property, plant and equipment, net	471,074	227,049	5	698,123
Customer financing receivable, non-current	68,535	—		68,535
Restricted cash (noncurrent)	30,779	—		30,779
Deferred cost of revenue, non-current	139,217	(139,172)	3	45
Other long-term assets	37,008	7,389	6	44,397
Total assets	$ 1,445,145	$ 84,892		$ 1,530,037
Liabilities, Redeemable Noncontrolling Interest, Stockholders' Deficit and Noncontrolling Interest				
Current liabilities:				
Accounts payable	$ 59,818	$ —		$ 59,818
Accrued warranty	17,975	(663)	7	17,312
Accrued expenses and other current liabilities	66,873	(2,887)	8	63,986
Financing obligations	—	7,780	10	7,780
Deferred revenue and customer deposits	105,265	(32,527)	11	72,738
Current portion of recourse debt	1,686	—		1,686
Current portion of non-recourse debt	18,499	—		18,499
Current portion of non-recourse debt from related parties	1,737	—		1,737
Total current liabilities	271,853	(28,297)		243,556
Derivative liabilities	9,441	4,217		13,658
Deferred revenue and customer deposits, net of current portion	290,481	(201,277)	11	89,204
Financing obligations, non-current	—	375,254	10	375,254
Long-term portion of recourse debt	358,363	—		358,363
Long-term portion of non-recourse debt	293,593	—		293,593
Long-term portion of recourse debt from related parties	32,168	—		32,168
Long-term portion of non-recourse debt from related parties	34,765	—		34,765
Other long-term liabilities	48,161	(29,724)	8	18,437
Total liabilities	1,338,825	120,173		1,458,998

	September 30, 2018			
	As Previously Reported	Restatement Impacts		As Restated
Redeemable noncontrolling interest	56,446	—		56,446
Stockholders' deficit:				
Common stock	11	—		11
Additional paid-in capital	2,387,361	755	12	2,388,116
Accumulated other comprehensive income	272	—		272
Accumulated deficit	(2,472,619)	(36,036)		(2,508,655)
Total stockholders' deficit	(84,975)	(35,281)		(120,256)
Noncontrolling interest	134,849	—		134,849
Total liabilities, redeemable noncontrolling interest, stockholders' deficit and noncontrolling interest	$ 1,445,145	$ 84,892		$ 1,530,037

[1] Accounts receivable — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements, for which the amount recorded to accounts receivable represents amounts invoiced for capacity billings to end customers which have not yet been collected by the financing entity as of the period end.

[2] Inventories — The correction of these misstatements resulted from the change of accounting for inventory, including net capitalization of stock-based compensation costs of $7.2 million, and reclassification of inventories of $4.1 million held for shipments to customers under the Managed Services Program and similar arrangements to construction in progress within property, plant and equipment, net.

[3] Deferred cost of revenue, current and non-current — The correction of these misstatements resulted from reclassifying deferred cost of revenue to property, plant and equipment, net for the leased Energy Servers under the Managed Services Agreements and similar sale-leaseback arrangements of $23.8 million (short-term) and $139.2 million (long-term), and net capitalization of stock-based compensation costs of $3.0 million into current deferred cost of revenue.

[4] Prepaid expenses and other current assets — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements whereby prepaid property tax and insurance payments are now classified within prepaid expenses, rather than offset against deferred revenue.

[5] Property, plant and equipment, net — The correction of these misstatements resulted from the change of accounting for Managed Services transactions and similar arrangements, whereby product and install costs of goods sold are now recorded as property, plant and equipment, net in the cases where the risks of ownership have not completely transferred to the financing party of $224.6 million. This includes a net capitalization of stock-based compensation costs for these assets of $2.4 million.

[6] Other long-term assets — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements where the timing difference of capacity billings to end customers and the payments received from the financing entity is recorded within long term receivables and where prepaid property tax and insurance payments are now classified within other long-term assets, rather than offset against long-term deferred revenue.

[7] Accrued warranty — The correction of these misstatements resulted from the change of accounting for accrued warranty which is now recorded on an as-incurred basis for our Managed Services Agreements and similar arrangements, reducing accrued warranty by $0.4 million and the change of accounting for the grid pricing escalation guarantees we provided in some of our sales arrangements, which are now recorded as derivative liabilities of $0.3 million.

[8] Accrued expense and other current liabilities and other long-term liabilities — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements, for which historical accrued liabilities recorded at inception of the agreements, as well as subsequent reductions of those liabilities, were reversed.

[9] Financing obligations, current and non-current — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements, whereby instead of recognizing the upfront proceeds received from the bank as revenue, the proceeds received are classified as financing obligations.

[10] Deferred revenue and customer deposits, current and non-current — The correction of these misstatements resulted from the change of accounting for the recognition of product and installation revenue from upfront or ratable recognition to recognition of the capacity payments received from the end customer as power is generated by the Energy Servers as electricity revenue.

[11] Derivative liabilities — The correction of these misstatements resulted from the change of accounting for embedded derivatives related to grid pricing escalation guarantees we provided in some of our sales arrangements. These are now recorded as derivative liabilities and were previously treated as an accrued liability.

[12] Additional paid-in capital — Relates to the correction of an unadjusted misstatement in the valuation of our 6% Notes derivative, resulting in a credit to additional paid-in capital and additional expense of $0.8 million recorded within other expense, net.

The following tables contain the restatement and recasting of previously reported unaudited condensed consolidated statements of operations for the three-month period ended March 31, 2019, the three- and six-month periods ended June 30, 2019 and the three- and nine-month periods ended September 30, 2019, the restatement of previously reported unaudited condensed consolidated statements of operations for the three- and six-month periods ended June 30, 2018 and the three- and nine-month periods ended September 30, 2018 and the revision of the previously reported unaudited condensed consolidated statement of operations for the three-month period ended March 31, 2018. Reconciliation to the previously reported unaudited condensed consolidated statements of comprehensive loss is not provided, as there is no change to those statements for any period, with the exception of the change to net loss, described in the tables below. Reconciliation to the previously reported unaudited condensed consolidated statements of convertible redeemable preferred stock, redeemable noncontrolling interest, stockholders' deficit and noncontrolling is not provided, as there is no change to those statements for any period, with the exception of the correction of an uncorrected misstatement within additional paid-in capital for $0.8 million in the three months ended September 30, 2018.

	Three Months Ended March 31, 2019					
	As Previously Reported	Restatement Impacts		As Restated	ASC 606 Adoption Impacts	As Restated & Recast
Revenue:						
Product	$ 141,734	$ (48,171)	a	$ 93,563	$ (2,637)	$ 90,926
Installation	22,258	(11,195)	a	11,063	1,156	12,219
Service	23,290	(574)	a	22,716	751	23,467
Electricity	13,425	6,964	a	20,389	—	20,389
Total revenue	200,707	(52,976)		147,731	(730)	147,001
Cost of revenue:						
Product	124,000	(34,980)	c, d	89,020	(248)	88,772
Installation	24,166	(8,406)	c	15,760	—	15,760
Service	27,557	1,331	b, d	28,888	(967)	27,921
Electricity	9,229	3,755	c	12,984	—	12,984
Total cost of revenue	184,952	(38,300)		146,652	(1,215)	145,437
Gross profit	15,755	(14,676)		1,079	485	1,564
Operating expenses:						
Research and development	28,859	—		28,859	—	28,859
Sales and marketing	20,463	2	e	20,465	(92)	20,373
General and administrative	39,074	—		39,074	—	39,074
Total operating expenses	88,396	2		88,398	(92)	88,306
Income (loss) from operations	(72,641)	(14,678)		(87,319)	577	(86,742)
Interest income	1,885	—		1,885	—	1,885
Interest expense	(15,962)	(5,838)	f	(21,800)	—	(21,800)
Interest expense to related parties	(1,612)	—		(1,612)	—	(1,612)
Other income (expense), net	265	—		265	—	265
Loss on revaluation of warrant liabilities and embedded derivatives	—	(540)	g	(540)	—	(540)
Loss before income taxes	(88,065)	(21,056)		(109,121)	577	(108,544)
Income tax provision	208	—		208	—	208
Net loss	(88,273)	(21,056)		(109,329)	577	(108,752)
Net loss attributable to noncontrolling interests and redeemable noncontrolling interests	(3,832)	—		(3,832)	—	(3,832)
Net loss attributable to Class A and Class B common stockholders	$ (84,441)	$ (21,056)		$ (105,497)	$ 577	$ (104,920)

[a] Revenue impacted by Managed Services restatements — The correction of these misstatements resulted from the change from upfront recognition of product and installation revenue to recognition of the capacity payments received from the end customer as power is generated by the Energy Servers as electricity revenue over the term of our Managed Services Agreements and similar sale-leaseback arrangements, which also impacted our service revenue allocation.

[b] Service cost of revenue impacted by grid pricing escalation guarantees — The correction of these misstatements resulted in a change in the accounting for our grid escalation guarantees that resulted in a decrease in service cost of revenue of $0.1 million.

c Cost of revenue impacted by Managed Services restatements — The correction of these misstatements resulted from the change from upfront recognition of product and installation cost of revenue to recognition of the depreciation expense on the capitalized Energy Servers over their useful life of 21 years for our Managed Services Agreements and similar sale-leaseback transactions, resulting in a decrease in product cost of revenue of $37.5 million and installation cost of revenue of $9.2 million, offset by an increase in electricity cost of revenue of $3.7 million, together with the correction of certain other immaterial misstatements identified to record installation cost of revenue of $0.8 million.

[d] Cost of revenue impacted by stock-based compensation allocation — The correction of these misstatements resulted from the capitalization of stock-based compensation costs, with a net increase to product cost of revenue of $2.5 million and an increase in service cost of revenue of $1.4 million due to the expensing of stock-based compensation related to field replacement units.

[e] Sales and marketing and general and administrative expenses — The correction of these misstatements primarily resulted from the change of accounting for sales commission expense on an as earned basis, to accounting for the expense over the term of our Managed Services Agreements and similar sale-leaseback arrangements.

[f] Interest expense — The correction of these misstatements resulted from the change of accounting for sales that should have been accounted for as financing transactions, in which the upfront consideration received from the financing party is accounted for as a financing obligation and interest expense is recognized over the term of the Managed Services Agreement using the effective interest method.

[g] Gain (loss) on revaluation of warrant liabilities and embedded derivatives — The correction of these misstatements resulted from the change of accounting for the grid pricing escalation guarantees we provided in some of our sales arrangements which is now recorded as a derivative liability that needs to be fair valued each period end. The fair value increased resulting in a loss of $0.5 million.

	Three Months Ended June 30, 2019					
	As Previously Reported	Restatement Impacts		As Restated	ASC 606 Adoption Impacts	As Restated & Recast
Revenue:						
Product	$ 179,899	$ (22,757)	a	$ 157,142	$ (13,061)	$ 144,081
Installation	17,285	(5,900)	a	11,385	1,691	13,076
Service	23,659	(586)	a	23,073	(47)	23,026
Electricity	12,939	7,204	a	20,143	—	20,143
Total revenue	233,782	(22,039)		211,743	(11,417)	200,326
Cost of revenue:						
Product	131,952	(19,005)	c, d	112,947	281	113,228
Installation	22,116	(4,431)	c	17,685	—	17,685
Service	19,599	920	b, d	20,519	(1,756)	18,763
Electricity	18,442	3,858	c	22,300	—	22,300
Total cost of revenue	192,109	(18,658)		173,451	(1,475)	171,976
Gross profit	41,673	(3,381)		38,292	(9,942)	28,350
Operating expenses:						
Research and development	29,772	—		29,772	—	29,772
Sales and marketing	18,359	17	e	18,376	(182)	18,194
General and administrative	43,662	—		43,662	—	43,662
Total operating expenses	91,793	17		91,810	(182)	91,628
Loss from operations	(50,120)	(3,398)		(53,518)	(9,760)	(63,278)
Interest income	1,700	—		1,700	—	1,700
Interest expense	(16,725)	(5,997)	f	(22,722)	—	(22,722)
Interest expense to related parties	(1,606)	—		(1,606)	—	(1,606)
Other income (expense), net	(222)	—		(222)	—	(222)
Loss on revaluation of warrant liabilities and embedded derivatives	—	(540)	g	(540)	—	(540)
Loss before income taxes	(66,973)	(9,935)		(76,908)	(9,760)	(86,668)
Income tax provision	258	—		258	—	258
Net loss	(67,231)	(9,935)		(77,166)	(9,760)	(86,926)
Net loss attributable to noncontrolling interests and redeemable noncontrolling interests	(5,015)	—		(5,015)	—	(5,015)
Net loss attributable to Class A and Class B common stockholders	$ (62,216)	$ (9,935)		$ (72,151)	$ (9,760)	$ (81,911)

[a] Revenue impacted by Managed Services restatements — The correction of these misstatements resulted from the change from upfront recognition of product and installation revenue to recognition of the capacity payments received from the end customer as power is generated by the Energy Servers as electricity revenue over the term of our Managed Services Agreements and similar sale-leaseback arrangements, which also impacted our service revenue allocation.

[b] Service cost of revenue impacted by grid pricing escalation guarantees — The correction of these misstatements resulted in a change in accounting for our grid escalation guarantees that resulted in a decrease in service cost of revenue of $0.1 million.

c Cost of revenue impacted by Managed Services restatements — The correction of these misstatements resulted from the change from upfront recognition of product and installation cost of revenue to recognition of the depreciation expense on the capitalized Energy Servers over their useful life of 21 years for our Managed Services Agreements and similar sale-leaseback transactions, resulting in a decrease in product cost of revenue of $18.1 million and installation cost of revenue of $5.2 million, offset by an increase in electricity cost of revenue of $3.8 million, together with the correction of certain other immaterial misstatements identified to record installation cost of revenue of $0.8 million.

[d] Cost of revenue impacted by stock-based compensation allocation — The correction of these misstatements resulted from the capitalization of stock-based compensation costs, with a net benefit to product cost of revenue of $0.9 million and an increase in service cost of revenue of $1.0 million due to the expensing of stock-based compensation related to field replacement units.

[e] Sales and marketing and general and administrative expenses — The correction of these misstatements primarily resulted from the change of accounting for sales commission expense on an as earned basis, to accounting for the expense over the term of our Managed Services Agreements and similar sale-leaseback arrangements.

[f] Interest expense — The correction of these misstatements resulted from the change of accounting for sales that should have been accounted for as financing transactions, in which the upfront consideration received from the financing party is accounted for as a financing obligation and interest expense is recognized over the term of the Managed Services Agreement using the effective interest method.

[g] Gain (loss) on revaluation of warrant liabilities and embedded derivatives — The correction of these misstatements resulted from the change of accounting for the grid pricing escalation guarantees we provided in some of our sales arrangements which is now recorded as a derivative liability that needs to be fair valued each period end. The fair value increased resulting in a loss of $0.5 million.

	Three Months Ended September 30, 2019					
	As Previously Reported	Restatement Impacts		As Restated	ASC 606 Adoption Impacts	As Restated & Recast
Revenue:						
Product	$ 182,616	$ (1,292)	a	$ 181,324	$ (17,422)	$ 163,902
Installation	19,010	(460)	a	18,550	2,552	21,102
Service	23,597	(779)	a	22,818	847	23,665
Electricity	8,248	7,390	a	15,638	—	15,638
Total revenue	233,471	4,859		238,330	(14,023)	224,307
Cost of revenue:						
Product	94,056	(2,085)	c, d	91,971	(274)	91,697
Installation	26,162	(21)	c	26,141	—	26,141
Service	36,539	2,073	b, d	38,612	(2,185)	36,427
Electricity	23,249	4,068	c	27,317	—	27,317
Total cost of revenue	180,006	4,035		184,041	(2,459)	181,582
Gross profit	53,465	824		54,289	(11,564)	42,725
Operating expenses:						
Research and development	23,389	—		23,389	—	23,389
Sales and marketing	18,125	43	e	18,168	(519)	17,649
General and administrative	36,599	—		36,599	—	36,599
Total operating expenses	78,113	43		78,156	(519)	77,637
Income (loss) from operations	(24,648)	781		(23,867)	(11,045)	(34,912)
Interest income	1,214	—		1,214	—	1,214
Interest expense	(15,280)	(6,043)	f	(21,323)	—	(21,323)
Interest expense to related parties	(1,605)	—		(1,605)	—	(1,605)
Other income, net	525	—		525	—	525
Loss on revaluation of warrant liabilities and embedded derivatives	—	(540)	g	(540)	—	(540)
Loss before income taxes	(39,794)	(5,802)		(45,596)	(11,045)	(56,641)
Income tax provision	136	—		136	—	136
Net loss	(39,930)	(5,802)		(45,732)	(11,045)	(56,777)
Net loss attributable to noncontrolling interests and redeemable noncontrolling interests	(5,027)	—		(5,027)	—	(5,027)
Net loss attributable to Class A and Class B common stockholders	$ (34,903)	$ (5,802)		$ (40,705)	$ (11,045)	$ (51,750)

[a] Revenue impacted by Managed Services restatements — The correction of these misstatements resulted from the change from upfront recognition of product and installation revenue to recognition of the capacity payments received from the end customer as power is generated by the Energy Servers as electricity revenue over the term of our Managed Services Agreements and similar sale-leaseback arrangements, which also impacted our service revenue allocation.

[b] Service cost of revenue impacted by grid pricing escalation guarantees — The correction of these misstatements resulted in a change in accounting for our grid escalation guarantees that resulted in a decrease in service cost of revenue of $0.1 million.

c Cost of revenue impacted by Managed Services restatements — The correction of these misstatements resulted from the change from upfront recognition of product and installation cost of revenue to recognition of the depreciation expense on the capitalized Energy Servers over their useful life of 21 years for our Managed Services Agreements and similar sale-leaseback transactions, resulting in a decrease in product cost of revenue of $1.1 million, a decrease of installation cost of revenue of $0.6 million, offset by an increase in electricity cost of revenue of $4.0 million together with the correction of certain other immaterial misstatements identified to record installation cost of revenue of $0.6 million.

[d] Cost of revenue impacted by stock-based compensation allocation — The correction of these misstatements resulted from the capitalization of stock-based compensation costs, with a net benefit to product cost of revenue of $1.0 million and an increase in service cost of revenue of $2.2 million due to the expensing of stock-based compensation related to field replacement units.

[e] Sales and marketing and general and administrative expenses — The correction of these misstatements primarily resulted from the change of accounting for sales commission expense on an as earned basis, to accounting for the expense over the term of our Managed Services Agreements and similar sale-leaseback arrangements.

[f] Interest expense — The correction of these misstatements resulted from the change of accounting for sales that should have been accounted for as financing transactions, in which the upfront consideration received from the financing party is accounted for as a financing obligation and interest expense is recognized over the term of the Managed Services Agreement using the effective interest method.

[g] Gain (loss) on revaluation of warrant liabilities and embedded derivatives — The correction of these misstatements resulted from the change of accounting for the grid pricing escalation guarantees we provided in some of our sales arrangements which is now recorded as a derivative liability that needs to be fair valued each period end. The fair value increased resulting in a loss of $0.5 million.

	Six Months Ended June 30, 2019					
	As Previously Reported	Restatement Impacts		As Restated	ASC 606 Adoption Impacts	As Restated & Recast
Revenue:						
Product	$ 321,633	$ (70,928)	a	$ 250,705	$ (15,698)	$ 235,007
Installation	39,543	(17,095)	a	22,448	2,847	25,295
Service	46,949	(1,160)	a	45,789	704	46,493
Electricity	26,364	14,168	a	40,532	—	40,532
Total revenue	434,489	(75,015)		359,474	(12,147)	347,327
Cost of revenue:						
Product	255,952	(53,985)	c, d	201,967	33	202,000
Installation	46,282	(12,837)	c	33,445	—	33,445
Service	47,156	2,251	b, d	49,407	(2,723)	46,684
Electricity	27,671	7,613	c	35,284	—	35,284
Total cost of revenue	377,061	(56,958)		320,103	(2,690)	317,413
Gross profit	57,428	(18,057)		39,371	(9,457)	29,914
Operating expenses:						
Research and development	58,631	—		58,631	—	58,631
Sales and marketing	38,822	19	e	38,841	(274)	38,567
General and administrative	82,736	—		82,736	—	82,736
Total operating expenses	180,189	19		180,208	(274)	179,934
Loss from operations	(122,761)	(18,076)		(140,837)	(9,183)	(150,020)
Interest income	3,585	—		3,585	—	3,585
Interest expense	(32,687)	(11,835)	f	(44,522)	—	(44,522)
Interest expense to related parties	(3,218)	—		(3,218)	—	(3,218)
Other income, net	43	—		43	—	43
Loss on revaluation of warrant liabilities and embedded derivatives	—	(1,080)	g	(1,080)	—	(1,080)
Loss before income taxes	(155,038)	(30,991)		(186,029)	(9,183)	(195,212)
Income tax provision	466	—		466	—	466
Net loss	(155,504)	(30,991)		(186,495)	(9,183)	(195,678)
Net loss attributable to noncontrolling interests and redeemable noncontrolling interests	(8,847)	—		(8,847)	—	(8,847)
Net loss attributable to Class A and Class B common stockholders	$ (146,657)	$ (30,991)		$ (177,648)	$ (9,183)	$ (186,831)

[a] Revenue impacted by Managed Services restatements — The correction of these misstatements resulted from the change from upfront recognition of product and installation revenue to recognition of the capacity payments received from the end customer as power is generated by the Energy Servers as electricity revenue over the term of our Managed Services Agreements and similar sale-leaseback arrangements, which also impacted our service revenue allocation.

[b] Service cost of revenue impacted by grid pricing escalation guarantees — The correction of these misstatements resulted in a change in accounting for our grid escalation guarantees that resulted in a decrease in service cost of revenue of $0.2 million.

c Cost of revenue impacted by Managed Services restatements — The correction of these misstatements resulted from the change from upfront recognition of product and installation cost of revenue to recognition of the depreciation expense on the capitalized Energy Servers over their useful life of 21 years for our Managed Services Agreements and similar sale-leaseback transactions, resulting in a decrease in product cost of revenue of $55.6 million and installation cost of revenue of $14.4 million, offset by an increase in electricity cost of revenue of $7.5 million, together with the correction of certain other immaterial misstatements identified to record installation cost of revenue of $1.6 million.

[d] Cost of revenue impacted by stock-based compensation allocation — The correction of these misstatements resulted from the capitalization of stock-based compensation costs, with a net increase to product cost of revenue of $1.6 million, and an increase in service cost of revenue of $2.4 million due to the expensing of stock-based compensation related to field replacement units.

[e] Sales and marketing and general and administrative expenses — The correction of these misstatements primarily resulted from the change of accounting for sales commission expense on an as earned basis, to accounting for the expense over the term of our Managed Services Agreements and similar sale-leaseback arrangements.

[f] Interest expense — The correction of these misstatements resulted from the change of accounting for sales that should have been accounted for as financing transactions, in which the upfront consideration received from the financing party is accounted for as a financing obligation and interest expense is recognized over the term of the Managed Services Agreement using the effective interest method.

[g] Gain (loss) on revaluation of warrant liabilities and embedded derivatives — The correction of these misstatements resulted from the change of accounting for the grid pricing escalation guarantees we provided in some of our sales arrangements which is now recorded as a derivative liability that needs to be fair valued each period end. The fair value increased resulting in a loss of $1.1 million.

	Nine Months Ended September 30, 2019					
	As Previously Reported	Restatement Impacts		As Restated	ASC 606 Adoption Impacts	As Restated & Recast
Revenue:						
Product	$ 504,249	$ (72,220)	a	$ 432,029	$ (33,120)	$ 398,909
Installation	58,553	(17,555)	a	40,998	5,399	46,397
Service	70,546	(1,939)	a	68,607	1,551	70,158
Electricity	34,612	21,558	a	56,170	—	56,170
Total revenue	667,960	(70,156)		597,804	(26,170)	571,634
Cost of revenue:						
Product	350,008	(56,070)	c, d	293,938	(241)	293,697
Installation	72,444	(12,858)	c	59,586	—	59,586
Service	83,695	4,324	b, d	88,019	(4,908)	83,111
Electricity	50,920	11,681	c	62,601	—	62,601
Total cost of revenue	557,067	(52,923)		504,144	(5,149)	498,995
Gross profit	110,893	(17,233)		93,660	(21,021)	72,639
Operating expenses:						
Research and development	82,020	—		82,020	—	82,020
Sales and marketing	56,947	62	e	57,009	(793)	56,216
General and administrative	119,335	—		119,335	—	119,335
Total operating expenses	258,302	62		258,364	(793)	257,571
Loss from operations	(147,409)	(17,295)		(164,704)	(20,228)	(184,932)
Interest income	4,799	—		4,799	—	4,799
Interest expense	(47,967)	(17,878)	f	(65,845)	—	(65,845)
Interest expense to related parties	(4,823)	—		(4,823)	—	(4,823)
Other income, net	568	—		568	—	568
Loss on revaluation of warrant liabilities and embedded derivatives	—	(1,620)	g	(1,620)	—	(1,620)
Loss before income taxes	(194,832)	(36,793)		(231,625)	(20,228)	(251,853)
Income tax provision	602	—		602	—	602
Net loss	(195,434)	(36,793)		(232,227)	(20,228)	(252,455)
Net loss attributable to noncontrolling interests and redeemable noncontrolling interests	(13,874)	—		(13,874)	—	(13,874)
Net loss attributable to Class A and Class B common stockholders	$ (181,560)	$ (36,793)		$ (218,353)	$ (20,228)	$ (238,581)

[a] Revenue impacted by Managed Services restatements — The correction of these misstatements resulted from the change from upfront recognition of product and installation revenue to recognition of the capacity payments received from the end customer as power is generated by the Energy Servers as electricity revenue over the term of our Managed Services Agreements and similar sale-leaseback arrangements, which also impacted our service revenue allocation.

[b] Service cost of revenue impacted by grid pricing escalation guarantees — The correction of these misstatements resulted in a change in accounting for our grid escalation guarantees that resulted in a decrease in service cost of revenue of $0.3 million.

c Cost of revenue impacted by Managed Services restatements — The correction of these misstatements resulted from the change from upfront recognition of product and installation cost of revenue to recognition of the depreciation expense on the capitalized Energy Servers over their useful life of 21 years for our Managed Services Agreements and similar sale-leaseback transactions, resulting in a decrease in product cost of revenue of $56.7 million and installation cost of revenue of $15.0 million, offset by an increase in electricity cost of revenue of $11.6 million, together with the correction of certain other immaterial misstatements identified to record installation cost of revenue of $2.1 million

[d] Cost of revenue impacted by stock-based compensation allocation — The correction of these misstatements resulted from the capitalization of stock-based compensation costs, with a net increase to product cost of revenue of $0.6 million and an increase in service cost of revenue of $4.6 million due to the expensing of stock-based compensation related to field replacement units.

[e] Sales and marketing and general and administrative expenses — The correction of these misstatements primarily resulted from the change of accounting for sales commission expense on an as earned basis, to accounting for the expense over the term of our Managed Services Agreements and similar sale-leaseback arrangements.

[f] Interest expense — The correction of these misstatements resulted from the change of accounting for sales that should have been accounted for as financing transactions, in which the upfront consideration received from the financing party is accounted for as a financing obligation and interest expense is recognized over the term of the Managed Services Agreement using the effective interest method.

[g] Gain (loss) on revaluation of warrant liabilities and embedded derivatives — The correction of these misstatements resulted from the change of accounting for the grid pricing escalation guarantees we provided in some of our sales arrangements which is now recorded as a derivative liability that needs to be fair valued each period end. The fair value increased resulting in a loss of $1.6 million.

	Three Months Ended March 31, 2018			
	As Previously Reported	Revision Impacts		As Revised
Revenue:				
Product	$ 121,307	$ (5,536)	a	$ 115,771
Installation	14,118	(1,323)	a	12,795
Service	19,907	227	a	20,134
Electricity	14,029	5,853	a	19,882
Total revenue	169,361	(779)		168,582
Cost of revenue:				
Product	80,355	(3,890)	c, d	76,465
Installation	10,438	(1,240)	c	9,198
Service	24,253	446	d	24,699
Electricity	10,649	3,136	c	13,785
Total cost of revenue	125,695	(1,548)		124,147
Gross profit	43,666	769		44,435
Operating expenses:				
Research and development	14,731	—		14,731
Sales and marketing	8,262	31	e	8,293
General and administrative	14,988	—		14,988
Total operating expenses	37,981	31		38,012
Income from operations	5,685	738		6,423
Interest income	415	—		415
Interest expense	(21,379)	(4,613)	f	(25,992)
Interest expense to related parties	(2,627)	—		(2,627)
Other expense, net	(75)	—		(75)
Loss on revaluation of warrant liabilities and embedded derivatives	(4,034)	—		(4,034)
Loss before income taxes	(22,015)	(3,875)		(25,890)
Income tax provision	333	—		333
Net loss	(22,348)	(3,875)		(26,223)
Net loss attributable to noncontrolling interests and redeemable noncontrolling interests	(4,632)	—		(4,632)
Net loss attributable to Class A and Class B common stockholders	$ (17,716)	$ (3,875)		$ (21,591)

[a] Revenue impacted by Managed Services restatements — The correction of these misstatements resulted from the change from upfront recognition of product and installation revenue to recognition of the capacity payments received from the end customer as power is generated by the Energy Servers as electricity revenue over the term of our Managed Services Agreements and similar sale-leaseback arrangements, which also impacted our service revenue allocation.

b Not used.

c Cost of revenue impacted by Managed Services restatements — The correction of these misstatements resulted from the change from upfront recognition of product and installation cost of revenue to recognition of the depreciation expense on the capitalized Energy Servers over their useful life of 21 years for our Managed Services Agreements and similar sale-leaseback transactions, resulting in a decrease in product cost of revenue of $3.6 million and installation cost of revenue of $1.2 million, offset by an increase in electricity cost of revenue of $3.1 million.

[d] Cost of revenue impacted by stock-based compensation allocation — The correction of these misstatements resulted from the capitalization of stock-based compensation costs, with a net benefit to product cost of revenue of $0.3 million and an increase in service cost of revenue of $0.4 million due to the expensing of stock-based compensation related to field replacement units.

[e] Sales and marketing and general and administrative expenses — The correction of these misstatements primarily resulted from the change of accounting for sales commission expense on an as earned basis, to accounting for the expense over the term of our Managed Services Agreements and similar sale-leaseback arrangements.

[f] Interest expense — The correction of these misstatements resulted from the change of accounting for sales that should have been accounted for as financing transactions, in which the upfront consideration received from the financing party is accounted for as a financing obligation and interest expense is recognized over the term of the Managed Services Agreement using the effective interest method.

	Three Months Ended June 30, 2018			
	As Previously Reported	Restatement Impacts		As Restated
Revenue:				
Product	$ 108,654	$ (30,157)	a	$ 78,497
Installation	26,245	(6,602)	a	19,643
Service	19,975	324	a	20,299
Electricity	14,007	5,856	a	19,863
Total revenue	168,881	(30,579)		138,302
Cost of revenue:				
Product	70,802	(21,199)	c, d	49,603
Installation	37,099	(7,148)	c	29,951
Service	19,260	442	d	19,702
Electricity	8,949	3,113	c	12,062
Total cost of revenue	136,110	(24,792)		111,318
Gross profit	32,771	(5,787)		26,984
Operating expenses:				
Research and development	14,413	—		14,413
Sales and marketing	8,254	(87)	e	8,167
General and administrative	15,359	—		15,359
Total operating expenses	38,026	(87)		37,939
Loss from operations	(5,255)	(5,700)		(10,955)
Interest income	444	—		444
Interest expense	(22,525)	(4,622)	f	(27,147)
Interest expense to related parties	(2,672)	—		(2,672)
Other expense, net	(855)	—		(855)
Loss on revaluation of warrant liabilities and embedded derivatives	(19,197)	—		(19,197)
Loss before income taxes	(50,060)	(10,322)		(60,382)
Income tax provision	128	—		128
Net loss	(50,188)	(10,322)		(60,510)
Net loss attributable to noncontrolling interests and redeemable noncontrolling interests	(4,512)	—		(4,512)
Net loss attributable to Class A and Class B common stockholders	$ (45,676)	$ (10,322)		$ (55,998)

[a] Revenue impacted by Managed Services restatements — The correction of these misstatements resulted from the change from upfront recognition of product and installation revenue to recognition of the capacity payments received from the end customer as power is generated by the Energy Servers as electricity revenue over the term of our Managed Services Agreements and similar sale-leaseback arrangements, which impacted our service revenue allocation.

b Not used.

c Cost of revenue impacted by Managed Services restatements — The correction of these misstatements resulted from the change from upfront recognition of product and installation costs of revenue to recognition of the depreciation expense on the capitalized Energy Servers over their useful life of 21 years for our Managed Services Agreements and similar sale-leaseback transactions, resulting in a decrease in product cost of revenue of $20.3 million and installation cost of revenue of $7.1 million, offset by an increase in electricity cost of revenue of $3.1 million.

[d] Cost of revenue impacted by stock-based compensation allocation — The correction of these misstatements resulted from the capitalization of stock-based compensation costs, with a net benefit to product cost of revenue of $0.9 million and an increase in service cost of revenue of $0.4 million due to the expensing of stock-based compensation related to field replacement units.

[e] Sales and marketing and general and administrative expenses — The correction of these misstatements primarily resulted from the change of accounting for sales commission expense on an as earned basis, to accounting for the expense over the term of our Managed Services Agreements and similar sale-leaseback arrangements.

[f] Interest expense — The correction of these misstatements resulted from the change of accounting for sales that should have been accounted for as financing transactions, in which the upfront consideration received from the financing party is accounted for as a financing obligation and interest expense is recognized over the term of the Managed Services Agreement using the effective interest method.

	Three Months Ended September 30, 2018			
	As Previously Reported	Restatement Impacts		As Restated
Revenue:				
Product	$ 125,690	$ (23,257)	a	$ 102,433
Installation	29,690	(4,999)	a	24,691
Service	20,751	305	a	21,056
Electricity	14,059	6,380	a	20,439
Total revenue	190,190	(21,571)		168,619
Cost of revenue:				
Product	95,357	(26,304)	c, d	69,053
Installation	40,118	(4,612)	c	35,506
Service	22,651	1,819	d	24,470
Electricity	8,679	3,501	c	12,180
Total cost of revenue	166,805	(25,596)		141,209
Gross profit	23,385	4,025		27,410
Operating expenses:				
Research and development	27,021	—		27,021
Sales and marketing	21,476	(80)	e	21,396
General and administrative	40,999	—		40,999
Total operating expenses	89,496	(80)		89,416
Loss from operations	(66,111)	4,105		(62,006)
Interest income	1,467	—		1,467
Interest expense	(16,853)	(5,272)	f	(22,125)
Interest expense to related parties	(1,966)	—		(1,966)
Other expense, net	(705)	—		(705)
Loss on revaluation of warrant liabilities and embedded derivatives	1,655	(755)	g	900
Loss before income taxes	(82,513)	(1,922)		(84,435)
Income tax provision	(3)	—		(3)
Net loss	(82,510)	(1,922)		(84,432)
Net loss attributable to noncontrolling interests and redeemable noncontrolling interests	(3,930)	—		(3,930)
Net loss attributable to Class A and Class B common stockholders	$ (78,580)	$ (1,922)		$ (80,502)

[a] Revenue impacted by Managed Services restatements — The correction of these misstatements resulted from the change from upfront recognition of product and installation revenue to recognition of the capacity payments received from the end customer as power is generated by the Energy Servers as electricity revenue over the term of our Managed Services Agreements and similar sale-leaseback arrangements, which also impacted our service revenue allocation.

b Not used.

c Cost of revenue impacted by Managed Services restatements — The correction of these misstatements resulted from the change from upfront recognition of product and installation cost of revenue to recognition of the depreciation expense on the capitalized Energy Servers over their useful life of 21 years for our Managed Services Agreements and similar sale-leaseback transactions, resulting in a decrease in product cost of revenue of $14.0 million and installation cost of revenue of $4.6 million, offset by an increase in electricity cost of revenue of $3.5 million.

[d] Cost of revenue impacted by stock-based compensation allocation — The correction of these misstatements resulted from the capitalization of stock-based compensation costs, with a net benefit to product cost of revenue of $12.3 million and an increase in service cost revenue of $1.8 million due to the expensing of stock-based compensation related to field replacement units.

[e] Sales and marketing and general and administrative expenses — The correction of these misstatements primarily resulted from the change of accounting for sales commission expense on an as earned basis, to accounting for the expense over the term of our Managed Services Agreements and similar sale-leaseback arrangements.

[f] Interest expense — The correction of these misstatements resulted from the change of accounting for sales that should have been accounted for as financing transactions, in which the upfront consideration received from the financing party is accounted for as a financing obligation and interest expense is recognized over the term of the Managed Services Agreement using the effective interest method.

g Gain (loss) on revaluation of warrant liabilities and embedded derivatives — The correction of these misstatements resulted from the correction of a misstatement in the valuation of our 6% Notes derivative, resulting in $0.8 million of additional loss in the period.

	Three Months Ended December 31, 2018			
	As Previously Reported	Restatement Impacts		As Restated
Revenue:				
Product	$ 156,671	$ (52,734)	a	$ 103,937
Installation	21,363	(10,297)	a	11,066
Service	21,752	26	a	21,778
Electricity	13,820	6,544	a	20,364
Total revenue	213,606	(56,461)		157,145
Cost of revenue:				
Product	128,076	(41,922)	c, d	86,154
Installation	31,819	(11,168)	c	20,651
Service	28,475	3,343	b, d	31,818
Electricity	7,988	3,613	c	11,601
Total cost of revenue	196,358	(46,134)		150,224
Gross profit	17,248	(10,327)		6,921
Operating expenses:				
Research and development	32,970	—		32,970
Sales and marketing	24,983	(32)	e	24,951
General and administrative	47,471	—	e	47,471
Total operating expenses	105,424	(32)		105,392
Loss from operations	(88,176)	(10,295)		(98,471)
Interest income	1,996	—		1,996
Interest expense	(16,178)	(5,579)	f	(21,757)
Interest expense to related parties	(1,628)	—		(1,628)
Other expense, net	636	—		636
Gain (loss) on revaluation of warrant liabilities and embedded derivatives	(14)	206	g	192
Loss before income taxes	(103,364)	(15,668)		(119,032)
Income tax provision	1,079	—		1,079
Net loss	(104,443)	(15,668)		(120,111)
Net loss attributable to noncontrolling interests and redeemable noncontrolling interests	(4,662)	—		(4,662)
Net loss attributable to Class A and Class B common stockholders	$ (99,781)	$ (15,668)		$ (115,449)

[a] Revenue impacted by Managed Services restatements — The correction of these misstatements resulted from the change from upfront recognition of product and installation revenue to recognition of the capacity payments received from the end customer as power is generated by the Energy Servers as electricity revenue over the term of our Managed Services Agreements and similar sale-leaseback arrangements, which also impacted our service revenue allocation.

b Service cost of revenue impacted by grid pricing escalation guarantees — The correction of these misstatements resulted in a change in accounting for our grid escalation guarantees that resulted in a decrease of service cost of revenue of $0.5 million.

c Cost of revenue impacted by Managed Services restatements — The correction of these misstatements resulted from the change from upfront recognition of product and installation cost of revenue to recognition of the depreciation expense on the capitalized Energy Servers over their useful life of 21 years for our Managed Services Agreements and similar sale-leaseback transactions, resulting in a decrease in product cost of revenue of $37.1 million and installation cost of revenue of $12.1 million, offset by an increase in electricity cost of revenue $3.6 million, together with the correction of certain other immaterial misstatements identified to record installation cost of revenue of $0.9 million.

[d] Cost of revenue impacted by stock-based compensation allocation — The correction of these misstatements resulted from the capitalization of stock-based compensation costs, with a net benefit to product cost of revenue of $4.8 million and an increase in service cost of $3.8 million due to the expensing of stock-based compensation related to field replacement units.

[e] Sales and marketing and general and administrative expenses — The correction of these misstatements primarily resulted from the change of accounting for sales commission expense on an as earned basis, to accounting for the expense over the term of our Managed Services Agreements and similar sale-leaseback arrangements.

[f] Interest expense — The correction of these misstatements resulted from the change of accounting for sales that should have been accounted for as financing transactions, in which the upfront consideration received from the financing party is accounted for as a financing obligation and interest expense is recognized over the term of the Managed Services Agreement using the effective interest method.

[g] Gain (loss) on revaluation of warrant liabilities and embedded derivatives —The correction of these misstatements resulted from the change of accounting for the grid pricing escalation guarantees we provided in some of our sales arrangements which is now recorded as a derivative liability that needs to be fair valued each period end. The fair value of the liability decreased resulting in a gain of $0.2 million.

	Six Months Ended June 30, 2018			
	As Previously Reported	Restatement Impacts		As Restated
Revenue:				
Product	$ 229,961	$ (35,693)	a	$ 194,268
Installation	40,363	(7,925)	a	32,438
Service	39,882	551	a	40,433
Electricity	28,036	11,709	a	39,745
Total revenue	338,242	(31,358)		306,884
Cost of revenue:				
Product	151,157	(25,089)	c, d	126,068
Installation	47,537	(8,388)	c	39,149
Service	43,513	888	d	44,401
Electricity	19,598	6,249	c	25,847
Total cost of revenue	261,805	(26,340)		235,465
Gross profit	76,437	(5,018)		71,419
Operating expenses:				
Research and development	29,144	—		29,144
Sales and marketing	16,516	(56)	e	16,460
General and administrative	30,347	—		30,347
Total operating expenses	76,007	(56)		75,951
Loss from operations	430	(4,962)		(4,532)
Interest income	859	—		859
Interest expense	(43,904)	(9,235)	f	(53,139)
Interest expense to related parties	(5,299)	—		(5,299)
Other expense, net	(930)	—		(930)
Loss on revaluation of warrant liabilities and embedded derivatives	(23,231)	—		(23,231)
Loss before income taxes	(72,075)	(14,197)		(86,272)
Income tax provision	461	—		461
Net loss	(72,536)	(14,197)		(86,733)
Net loss attributable to noncontrolling interests and redeemable noncontrolling interests	(9,144)	—		(9,144)
Net loss attributable to Class A and Class B common stockholders	$ (63,392)	$ (14,197)		$ (77,589)

[a] Revenue impacted by Managed Services restatements — The correction of these misstatements resulted from the change from upfront recognition of product and installation revenue to recognition of the capacity payments received from the end customer as power is generated by the Energy Servers as electricity revenue over the term of our Managed Services Agreements and similar sale-leaseback arrangements, which impacted our service revenue allocation.

b .Not used.

c Cost of revenue impacted by Managed Services restatements — The correction of these misstatements resulted from the change from upfront recognition of product and installation cost of revenue to recognition of the depreciation expense on the capitalized Energy Servers over their useful life of 21 years for our Managed Services Agreements and similar sale-leaseback transactions, resulting in decreases in product cost of revenue of $23.9 million and installation cost of revenue of $8.4 million, offset by an increase in electricity cost of revenue of $6.2 million.

[d] Cost of revenue impacted by stock-based compensation allocation — The correction of these misstatements resulted from the capitalization of stock-based compensation costs, with a net benefit to product cost of revenue of $1.2 million and an increase in service cost of revenue of $0.9 million due to the expensing of stock-based compensation related to field replacement units.

[e] Sales and marketing and general and administrative expenses — The correction of these misstatements primarily resulted from the change of accounting for sales commission expense on an as earned basis, to accounting for the expense over the term of our Managed Services Agreements and similar sale-leaseback arrangements.

[f] Interest expense — The correction of these misstatements resulted from the change of accounting for sales that should have been accounted for as financing transactions, in which the upfront consideration received from the financing party is accounted for as a financing obligation and interest expense is recognized over the term of the Managed Services Agreement using the effective interest method.

	Nine Months Ended September 30, 2018			
	As Previously Reported	Restatement Impacts		As Restated
Revenue:				
Product	$ 355,651	$ (58,950)	a	$ 296,701
Installation	70,053	(12,924)	a	57,129
Service	60,633	856	a	61,489
Electricity	42,095	18,089	a	60,184
Total revenue	528,432	(52,929)		475,503
Cost of revenue:				
Product	246,514	(51,393)	c, d	195,121
Installation	87,655	(13,000)	c	74,655
Service	66,164	2,707	d	68,871
Electricity	28,277	9,750	c	38,027
Total cost of revenue	428,610	(51,936)		376,674
Gross profit	99,822	(993)		98,829
Operating expenses:				
Research and development	56,165	—		56,165
Sales and marketing	37,992	(136)	e	37,856
General and administrative	71,346	—	e	71,346
Total operating expenses	165,503	(136)		165,367
Loss from operations	(65,681)	(857)		(66,538)
Interest income	2,326	—		2,326
Interest expense	(60,757)	(14,507)	f	(75,264)
Interest expense to related parties	(7,265)	—		(7,265)
Other expense, net	(1,635)	—		(1,635)
Loss on revaluation of warrant liabilities and embedded derivatives	(21,576)	(755)	g	(22,331)
Loss before income taxes	(154,588)	(16,119)		(170,707)
Income tax provision	458	—		458
Net loss	(155,046)	(16,119)		(171,165)
Net loss attributable to noncontrolling interests and redeemable noncontrolling interests	(13,074)	—		(13,074)
Net loss attributable to Class A and Class B common stockholders	$ (141,972)	$ (16,119)		$ (158,091)

[a] Revenue impacted by Managed Services restatements — The correction of these misstatements resulted from the change from upfront recognition of product and installation revenue to recognition of the capacity payments received from the end customer as power is generated by the Energy Servers as electricity revenue over the term of our Managed Services Agreements and similar sale-leaseback arrangements, which also impacted our service revenue allocation.

b Not used.

c Cost of revenue impacted by Managed Services restatements — The correction of these misstatements resulted from the change from upfront recognition of product and installation cost of revenue to recognition of the depreciation expense on the capitalized Energy Servers over their useful life of 21 years for our Managed Services Agreements and similar sale-leaseback transactions, resulting in a decrease in product cost of revenue of $37.9 million and installation cost of revenue of $13.0 million, offset by an increase in electricity cost of revenue of $9.7 million.

[d] Cost of revenue impacted by stock-based compensation allocation — The correction of these misstatements resulted from the capitalization of stock-based compensation costs, with a net benefit to product cost of revenue of $13.5 million and an increase in service cost of revenue of $2.7 million due to the expensing of stock-based compensation related to field replacement units.

[e] Sales and marketing and general and administrative expenses — The correction of these misstatements primarily resulted from the change of accounting for sales commission expense on an as earned basis, to accounting for the expense over the term of our Managed Services Agreements and similar sale-leaseback arrangements.

[f] Interest expense — The correction of these misstatements resulted from the change of accounting for sales that should have been accounted for as financing transactions, in which the upfront consideration received from the financing party is accounted for as a financing obligation and interest expense is recognized over the term of the Managed Services Agreement using the effective interest method.

g Gain (loss) on revaluation of warrant liabilities and embedded derivatives — The correction of these misstatements resulted from the correction of a misstatement in the valuation of our 6% Notes derivative, resulting in $0.8 million of additional expense in the period.

The following tables contain the restatement and recasting of previously reported unaudited condensed consolidated statements of cash flows for the three-month period ended March 31, 2019, the six-month periods ended June 30, 2019 and the nine-month period ended September 30, 2019, the restatement of previously reported unaudited condensed consolidated statements of cash flows for the six-month period ended June 30, 2018 and the nine-month period ended September 30, 2018 and the revision of the previously reported unaudited condensed consolidated statement of cash flows for the three-month period ended March 31, 2018.

	Three Months Ended March 31, 2019					
	As Previously Reported	Restatement Impacts		As Restated	ASC 606 Adoption Impacts	As Restated & Recast
Cash flows from operating activities:						
Net loss	$ (88,273)	$ (21,056)		$ (109,329)	$ 577	$ (108,752)
Adjustments to reconcile net loss to net cash used in operating activities:						
Depreciation and amortization	11,271	2,954	A	14,225	—	14,225
Write-off of property, plant and equipment, net	1	—		1	—	1
Revaluation of derivative contracts	(453)	540	B	87	—	87
Stock-based compensation	63,882	3,940	C	67,822	—	67,822
Loss on long-term REC purchase contract	59	—		59	—	59
Amortization of debt issuance cost	5,152	—		5,152	—	5,152
Changes in operating assets and liabilities:						
Accounts receivable	816	(98)	D	718	3,413	4,131
Inventories	15,932	(4,845)	E	11,087	—	11,087
Deferred cost of revenue	26,014	(37,098)	F	(11,084)	—	(11,084)
Customer financing receivable and other	1,339	—		1,339	—	1,339
Prepaid expenses and other current assets	5,194	1,423	G	6,617	11	6,628
Other long-term assets	83	(396)	H	(313)	(103)	(416)
Accounts payable	(2,464)	—		(2,464)	—	(2,464)
Accrued warranty	(2,500)	50	I	(2,450)	(247)	(2,697)
Accrued expenses and other current liabilities	823	(1,196)	J	(373)	—	(373)
Deferred revenue and customer deposits	(44,533)	49,428	K	4,895	(3,651)	1,244
Other long-term liabilities	3,487	679	L	4,166	—	4,166
Net cash used in operating activities	(4,170)	(5,675)		(9,845)	—	(9,845)
Cash flows from investing activities:						
Purchase of property, plant and equipment	(8,543)	(3,403)	M	(11,946)	—	(11,946)
Payments for acquisition of intangible assets	(848)	—		(848)	—	(848)
Proceeds from maturity of marketable securities	104,500	—		104,500	—	104,500
Net cash provided by investing activities	95,109	(3,403)		91,706	—	91,706
Cash flows from financing activities:						
Repayment of debt	(5,016)	—		(5,016)	—	(5,016)
Repayment of debt to related parties	(778)	—		(778)	—	(778)
Proceeds from financing obligations	—	10,961	N	10,961	—	10,961
Repayment of financing obligations	—	(1,883)	N	(1,883)	—	(1,883)
Distributions to noncontrolling and redeemable noncontrolling interests	(3,189)	—		(3,189)	—	(3,189)
Proceeds from issuance of common stock	7,493	—		7,493	—	7,493

	Three Months Ended March 31, 2019				
	As Previously Reported	Restatement Impacts	As Restated	ASC 606 Adoption Impacts	As Restated & Recast
Net cash provided by (used in) financing activities	(1,490)	9,078	7,588	—	7,588
Net increase in cash, cash equivalents, and restricted cash	89,449	—	89,449	—	89,449
Cash, cash equivalents, and restricted cash:					
Beginning of period	280,485	—	280,485	—	280,485
End of period	$ 369,934	$ —	$ 369,934	$ —	$ 369,934
Supplemental disclosure of cash flow information:					
Cash paid during the period for interest	$ 14,545	$ 5,838 [N]	$ 20,383	$ —	$ 20,383
Cash paid during the period for taxes	222	—	222	—	222

[A] Depreciation and amortization — The correction of these misstatements resulted from the change of accounting for Energy Servers under the Managed Services Program and similar arrangements that would have been product and install cost of revenue, but are now recorded as property, plant and equipment, net and depreciated over their useful lives of 21 years.

[B] Revaluation of derivative contracts — The correction of these misstatements resulted from the change of accounting for the grid pricing escalation guarantees we provided in some of our sales arrangements. These commitments were previously treated as a contingent liability that was considered remote. We now consider the commitments a derivative liability, with the initial value of recorded as a reduction in product revenue and then any changes in the value adjusted through other expense, net each period thereafter.

[C] Stock-based compensation — The correction of these misstatements resulted from the change of accounting for stock-based compensation, including net capitalization of stock-based compensation cost into inventory of $4.4 million. The correction of this misstatement also resulted in the capitalization of $0.5 million of stock-based compensation costs related to assets under the Managed Services Programs now recorded as construction in progress within property, plant and equipment, net.

[D] Accounts receivable — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements, for which the amount recorded to accounts receivable represents amounts invoiced for capacity billings to end customers which have not yet been collected by the financing entity as of the period end.

[E] Inventories — The correction of these misstatements resulted from the change of accounting for inventories held for shipments planned to customers under the Managed Services Program and similar arrangements now accounted for as construction in progress within property, plant and equipment, net.

[F] Deferred cost of revenue, current and non-current — The correction of these misstatements resulted from the cumulative net change of accounting moving deferred cost of revenue to property, plant and equipment, net for the leased Energy Servers under the Managed Services Agreements and similar sale-leaseback arrangements of $37.2 million, and the net capitalization of stock-based compensation expenses of $0.1 million.

[G] Prepaid expenses and other current assets — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements where prepaid property tax and insurance payments are now classified within prepaid expenses.

[H] Other long-term assets — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements where the timing difference of capacity billings to end customers and the payments received from the financing entity is recorded within long term receivables and whereby prepaid property tax and insurance payments are now classified within other long-term assets, rather than offset against long-term deferred revenue.

[I] Accrued warranty — The correction of these misstatements resulted from the change of accounting for accrued warranty which is now recorded on an as-incurred basis on our Managed Services Agreements and similar arrangements. The correction of these misstatements resulted from the change of accounting for the grid pricing escalation guarantees we provided in some of our sales arrangements. These commitments were previously treated as a contingent liability that was considered remote and therefore, no accrual was made. We now have a $0.1 million accrual, with the initial value of treated as a reduction in product revenue and then any changes in the value adjusted through other expense, net each period thereafter.

[J] Accrued expense and other current liabilities and other long-term liabilities — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements whereby instead of recognizing the bank financing as revenue, the bank financing loan proceeds received and due are classified as a lease loan liability.

[K] Deferred revenue and customer deposits, current and non-current — The correction of these misstatements resulted from the change of accounting for the recognition of product and installation revenue from upfront or ratable recognition to the recognition of the capacity payments received from the end customer as power is generated by the Energy Servers as electricity revenue.

[L] Other long-term liabilities — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements whereby instead of recognizing the bank financing as revenue, the bank financing loan proceeds received and due beyond the next twelve months are classified as a lease loan liability.

[M] Purchase of property, plant and equipment — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements, whereby costs previously recognized as product and installation cost of revenue are now recorded as property, plant and equipment, net in the cases where the risks of ownership have not completely transferred to the financing party.

[N] Proceeds and repayments from financing obligations — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements where instead of recognizing the upfront proceeds received from the bank as revenue, the proceeds received and due are classified as proceeds from financing obligations and the capacity payments received from the end customer are classified as repayment of financing obligations and interest paid.

	Six Months Ended June 30, 2019					
	As Previously Reported	Restatement Impacts		As Restated	ASC 606 Adoption Impacts	As Restated & Recast
Cash flows from operating activities:						
Net loss	$ (155,504)	$ (30,991)		$ (186,495)	$ (9,183)	$ (195,678)
Adjustments to reconcile net loss to net cash used in operating activities:						
Depreciation and amortization	31,023	6,011	A	37,034	—	37,034
Write-off of property, plant and equipment, net	2,704	—		2,704	—	2,704
Write-off of PPA II and PPA IIIb decommissioned assets	25,613	—		25,613	—	25,613
Debt make-whole expense	5,934	—		5,934	—	5,934
Revaluation of derivative contracts	555	1,081	B	1,636	—	1,636
Stock-based compensation	115,100	4,086	C	119,186	—	119,186
Loss on long-term REC purchase contract	60	—		60	—	60
Amortization of debt issuance cost	11,255	—		11,255	—	11,255
Changes in operating assets and liabilities:						
Accounts receivable	46,591	(274)	D	46,317	3,424	49,741
Inventories	27,542	(5,345)	E	22,197	—	22,197
Deferred cost of revenue	19,198	(57,991)	F	(38,793)	—	(38,793)
Customer financing receivable and other	2,713	—		2,713	—	2,713
Prepaid expenses and other current assets	8,477	1,752	G	10,229	(2)	10,227
Other long-term assets	1,028	(1,029)	H	(1)	(271)	(272)
Accounts payable	(5,461)	—		(5,461)	—	(5,461)
Accrued warranty	(6,843)	114	I	(6,729)	33	(6,696)
Accrued expenses and other current liabilities	7,213	(1,632)	J	5,581	—	5,581
Deferred revenue and customer deposits	(25,411)	71,325	K	45,914	5,999	51,913
Other long-term liabilities	3,419	1,303	L	4,722	—	4,722
Net cash provided by operating activities	115,206	(11,590)		103,616	—	103,616
Cash flows from investing activities:						
Purchase of property, plant and equipment	(18,882)	(4,737)	M	(23,619)	—	(23,619)
Payments for acquisition of intangible assets	(970)	—		(970)	—	(970)
Proceeds from maturity of marketable securities	104,500	—		104,500	—	104,500
Net cash provided by investing activities	84,648	(4,737)		79,911	—	79,911
Cash flows from financing activities:						
Repayment of debt	(83,997)	—		(83,997)	—	(83,997)
Repayment of debt to related parties	(1,220)	—		(1,220)	—	(1,220)
Debt make-whole payment	(5,934)	—		(5,934)	—	(5,934)
Proceeds from financing obligations	—	20,333	N	20,333	—	20,333
Repayment of financing obligations	—	(4,006)	N	(4,006)	—	(4,006)
Payments to noncontrolling and redeemable noncontrolling interests	(18,690)	—		(18,690)	—	(18,690)
Distributions to noncontrolling and redeemable noncontrolling interests	(7,753)	—		(7,753)	—	(7,753)
Proceeds from issuance of common stock	8,321	—		8,321	—	8,321
Net cash used in financing activities	(109,273)	16,327		(92,946)	—	(92,946)
Net increase in cash, cash equivalents, and restricted cash	90,581	—		90,581	—	90,581

	Six Months Ended June 30, 2019					
	As Previously Reported	Restatement Impacts		As Restated	ASC 606 Adoption Impacts	As Restated & Recast
Cash, cash equivalents, and restricted cash:						
Beginning of period	280,485	—		280,485	—	280,485
End of period	$ 371,066	$ —		$ 371,066	$ —	$ 371,066
Supplemental disclosure of cash flow information:						
Cash paid during the period for interest	$ 23,867	$ 11,835	N	$ 35,702	$ —	$ 35,702
Cash paid during the period for taxes	497	—		497	—	497

[A] Depreciation and amortization — The correction of these misstatements resulted from the change of accounting for Energy Servers under the Managed Services Program and similar arrangements that would have been product and install cost of revenue, but are now recorded as property, plant and equipment, net and depreciated over their useful lives of 21 years.

[B] Revaluation of derivative contracts — The correction of these misstatements resulted from the change of accounting for the grid pricing escalation guarantees we provided in some of our sales arrangements. These commitments were previously treated as a contingent liability that was considered remote. We now consider the commitments a derivative liability, with the initial value recorded as a reduction in product revenue and then any changes in the value adjusted through other expense, net each period thereafter.

[C] Stock-based compensation — The correction of these misstatements resulted from the change of accounting for stock-based compensation, including net capitalization of stock-based compensation costs into inventory of $4.7 million. The correction of this misstatement resulted in the capitalization of $0.6 million of stock-based compensation costs related to assets under the Managed Services Programs now recorded as construction in progress within property, plant and equipment, net.

[D] Accounts receivable — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements, for which the amount recorded to accounts receivable represents amounts invoiced for capacity billings to end customers which have not yet been collected by the financing entity as of the period end.

[E] Inventories — The correction of these misstatements resulted from the change of accounting for inventories held for shipments planned to customers under the Managed Services Program and similar arrangements now accounted for as construction in progress within property, plant and equipment, net.

[F] Deferred cost of revenue, current and non-current — The correction of these misstatements resulted from the cumulative net change of accounting moving deferred cost of revenue to property, plant and equipment, net for the leased Energy Servers under the Managed Services Agreements and similar sale-leaseback arrangements of $56.5 million, and the net capitalization of stock-based compensation costs of $1.5 million.

[G] Prepaid expenses and other current assets — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements whereby prepaid property tax and insurance payments are now classified within prepaid expenses, rather than offset against deferred revenue.

[H] Other long-term assets — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements, including the timing difference of capacity billings to end customers and the payments received from the financing entity, is recorded within long term receivables and whereby prepaid property tax and insurance payments are now classified within other long-term assets, rather than offset against long-term deferred revenue.

[I] Accrued warranty — The correction of these misstatements resulted from the change of accounting for accrued warranty which is now recorded on an as-incurred basis for our Managed Services Agreements and similar arrangements. The correction of these misstatements resulted from the change of accounting for the grid pricing escalation guarantees we've provided in some of our sales arrangements. These commitments were previously treated as a contingent liability that was considered remote. We now maintain a $0.3 million accrual, with the initial value of treated as a reduction in product revenue and then any changes in the value adjusted through other expense, net each period thereafter.

[J] Accrued expense and other current liabilities and other long-term liabilities — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements whereby instead of recognizing the bank financing as revenue, the bank financing loan proceeds received and due are classified as a lease loan liability.

[K] Deferred revenue and customer deposits, current and non-current — The correction of these misstatements resulted from the change of accounting for the recognition of product and installation revenue from upfront or ratable recognition to the recognition of the capacity payments received from the end customer as power is generated by the Energy Servers as electricity revenue.

[L] Other long-term liabilities — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements whereby instead of recognizing the bank financing as revenue, the bank financing loan proceeds received and due beyond the next twelve months are classified as a lease loan liability.

[M] Purchase of property, plant and equipment — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements, whereby costs previously recognized as product and installation cost of revenue are now recorded as property, plant and equipment, net in the cases where the risks of ownership have not completely transferred to the financing party.

[N] Proceeds and repayments from financing obligations — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements, whereby instead of recognizing the upfront proceeds received from the bank as revenue, the bank proceeds received are classified as proceeds from financing obligations and the capacity payments received from the end customer are classified as repayment of financing obligations and interest paid.

	Nine Months Ended September 30, 2019				
	As Previously Reported	Restatement Impacts	As Restated	ASC 606 Adoption Impacts	As Restated & Recast
Cash flows from operating activities:					
Net loss	$ (195,434)	$ (36,793)	$ (232,227)	$ (20,228)	$ (252,455)
Adjustments to reconcile net loss to net cash used in operating activities:					
Depreciation and amortization	55,816	9,132 A	64,948	—	64,948
Write-off of property, plant and equipment, net	2,987	—	2,987	—	2,987
Write-off of PPA II and PPA IIIb decommissioned assets	25,613	—	25,613	—	25,613
Debt make-whole expense	5,934	—	5,934	—	5,934
PPA I decommissioning, net	—	—	—	—	—
Revaluation of derivative contracts	1,335	1,620 B	2,955	—	2,955
Stock-based compensation	154,955	5,278 C	160,233	—	160,233
Loss on long-term REC purchase contract	61	—	61	—	61
Amortization of debt issuance cost	16,295	—	16,295	—	16,295
Changes in operating assets and liabilities:					
Accounts receivable	58,150	(318) D	57,832	5,594	63,426
Inventories	(7,896)	6,121 E	(1,775)	—	(1,775)
Deferred cost of revenue	56,854	(59,198) F	(2,344)	—	(2,344)
Customer financing receivable and other	4,142	—	4,142	—	4,142
Prepaid expenses and other current assets	7,928	176 G	8,104	(33)	8,071
Other long-term assets	3,281	(1,229) H	2,052	(758)	1,294
Accounts payable	14,171	—	14,171	—	14,171
Accrued warranty	(3,941)	109 I	(3,832)	(242)	(4,074)
Accrued expenses and other current liabilities	5,029	162 J	5,191	—	5,191
Deferred managed services revenue	—	—	—	—	—
Deferred revenue and customer deposits	(68,180)	74,765 K	6,585	15,667	22,252
Other long-term liabilities	2,083	2,477 L	4,560	—	4,560
Net cash provided by operating activities	139,183	2,302	141,485	—	141,485
Cash flows from investing activities:					
Purchase of property, plant and equipment	(23,474)	(16,216) M	(39,690)	—	(39,690)
Payments for acquisition of intangible assets	(1,478)	—	(1,478)	—	(1,478)
Proceeds from maturity of marketable securities	104,500	—	104,500	—	104,500
Net cash provided by investing activities	79,548	(16,216)	63,332	—	63,332
Cash flows from financing activities:					
Repayment of debt	(93,263)	—	(93,263)	—	(93,263)
Repayment of debt to related parties	(1,691)	—	(1,691)	—	(1,691)
Debt make-whole payment	(5,934)	—	(5,934)	—	(5,934)
Proceeds from financing obligations	—	20,333 N	20,333	—	20,333
Repayment of financing obligations	—	(6,419) N	(6,419)	—	(6,419)
Payments to noncontrolling and redeemable noncontrolling interests	(43,713)	—	(43,713)	—	(43,713)
Distributions to noncontrolling and redeemable noncontrolling interests	(9,363)	—	(9,363)	—	(9,363)
Proceeds from issuance of common stock	12,623	—	12,623	—	12,623

	Nine Months Ended September 30, 2019						
	As Previously Reported	Restatement Impacts		As Restated	ASC 606 Adoption Impacts	As Restated & Recast
Net cash used in financing activities	(141,341)	13,914		(127,427)	—	(127,427)
Net increase in cash, cash equivalents, and restricted cash	77,390	—		77,390	—	77,390
Cash, cash equivalents, and restricted cash:						
Beginning of period	280,485	—		280,485	—	280,485
End of period	$ 357,875	$ —		$ 357,875	$ —	$ 357,875
Supplemental disclosure of cash flow information:						
Cash paid during the period for interest	$ 35,894	$ 17,878	N	$ 53,772	$ —	$ 53,772
Cash paid during the period for taxes	715	—		715	—	715

A Depreciation and amortization — The correction of these misstatements resulted from the change of accounting for Energy Servers under the Managed Services Program and similar arrangements that would have been product and install cost of revenue, but are now recorded as property, plant and equipment, net and depreciated over their useful lives of 21 years.

B Revaluation of derivative contracts — The correction of these misstatements resulted from the change of accounting for the grid pricing escalation guarantees we provided in some of our sales arrangements. These commitments were previously treated as a contingent liability that was considered remote. We now consider the commitments a derivative liability, with the initial value of recorded as a reduction in product revenue and then any changes in the value adjusted through other expense, net each period thereafter.

C Stock-based compensation — The correction of these misstatements resulted from the change of accounting for stock-based compensation, including net capitalization of stock-based compensation costs into inventory of $5.9 million. The correction of this misstatement also resulted in the capitalization of $0.6 million of stock-based compensation costs related to assets under the Managed Services Programs now recorded as construction in progress within property, plant and equipment, net.

D Accounts receivable — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements, for which the amount recorded to accounts receivable represents amounts invoiced for capacity billings to end customers which have not yet been collected by the financing entity as of the period end.

E Inventories — The correction of these misstatements resulted from the change of accounting for inventories held for shipments planned to customers under the Managed Services Program and similar arrangements now accounted for as construction in progress within property, plant and equipment, net.

F Deferred cost of revenue, current and non-current — The correction of these misstatements resulted from the cumulative net change of accounting moving deferred cost of revenue to property, plant and equipment, net for the leased Energy Servers under the Managed Services Agreements and similar sale-leaseback arrangements of $60.6 million and the net capitalization of stock-based compensation expenses of $1.4 million.

G Prepaid expenses and other current assets — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements whereby prepaid property tax and insurance payments are now classified within prepaid expenses, rather than offset against deferred revenue.

H Other long-term assets — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements, whereby the timing difference of capacity billings to end customers and the payments received from the financing entity is recorded within long term receivables and whereby prepaid property tax and insurance payments are now classified within other long-term assets, rather than offset against long-term deferred revenue.

I Accrued warranty — The correction of these misstatements resulted from the change of accounting for accrued warranty which is now recorded on an as-incurred basis for our Managed Services Agreements and similar arrangements. The correction of these misstatements resulted from the change of accounting for the grid pricing escalation guarantees we provided in some of our sales arrangements. These commitments were previously treated as a contingent liability that was considered remote. We now maintain a $0.4 million accrual, with the initial value treated as a reduction in product revenue and then any changes in the value adjusted through other expense, net each period thereafter.

J Accrued expense and other current liabilities and other long-term liabilities — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements whereby instead of recognizing the bank financing as revenue, the bank financing loan proceeds received and due are classified as a lease loan liability.

K Deferred revenue and customer deposits, current and non-current — The correction of these misstatements resulted from the change of accounting for the recognition of product and installation revenue from upfront or ratable recognition to recognition of the capacity payments received from the end customer as power is generated by the Energy Servers as electricity revenue.

L Other long-term liabilities — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements whereby instead of recognizing the bank financing as revenue, the bank financing loan proceeds received and due beyond the next twelve months are classified as a lease loan liability.

M Purchase of property, plant and equipment — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements, whereby costs previously recognized as product and installation cost of revenue are now recorded as property, plant and equipment, net in the cases where the risks of ownership have not completely transferred to the financing party.

[N] Proceeds and repayments from financing obligations — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements, whereby instead of recognizing the upfront proceeds received from the bank as revenue, the bank proceeds received are classified as proceeds from financing obligations and the capacity payments received from the end customer are classified as repayment of financing obligations and interest paid.

	Three Months Ended March 31, 2018			
	As Previously Reported	Revision Impacts		As Revised
Cash flows from operating activities:				
Net loss	$ (22,348)	$ (3,875)		$ (26,223)
Adjustments to reconcile net loss to net cash used in operating activities:				
Depreciation and amortization	10,847	2,457	A	13,304
Revaluation of derivative contracts	7,157	—		7,157
Stock-based compensation	7,956	191	B	8,147
Loss on long-term REC purchase contract	12	—		12
Revaluation of preferred stock warrants	(3,271)	—		(3,271)
Common stock warrant valuation	(100)	—		(100)
Amortization of debt issuance cost	7,168	—		7,168
Changes in operating assets and liabilities:				
Accounts receivable	(28,203)	(32)	C	(28,235)
Inventories	(6,818)	3,291	D	(3,527)
Deferred cost of revenue	16,282	(3,541)	E	12,741
Customer financing receivable and other	1,306	—		1,306
Prepaid expenses and other current assets	(446)	929	F	483
Other long-term assets	1,266	(418)	G	848
Accounts payable	(827)	—		(827)
Accrued warranty	(87)	10	H	(77)
Accrued expenses and other current liabilities	(10,083)	(515)	I	(10,598)
Deferred revenue and customer deposits	(22,347)	6,620	J	(15,727)
Other long-term liabilities	8,049	981	K	9,030
Net cash used in operating activities	(34,487)	6,098		(28,389)
Cash flows from investing activities:				
Purchase of property, plant and equipment	(223)	(4,635)	L	(4,858)
Purchase of marketable securities	(8,991)	—		(8,991)
Proceeds from maturity of marketable securities	15,750	—		15,750
Net cash provided by investing activities	6,536	(4,635)		1,901
Cash flows from financing activities:				
Repayment of debt	(4,489)	—		(4,489)
Repayment of debt to related parties	(290)	—		(290)
Repayment of financing obligations	—	(1,463)	M	(1,463)
Distributions to noncontrolling and redeemable noncontrolling interests	(3,832)	—		(3,832)
Proceeds from issuance of common stock	120	—		120
Payments of initial public offering issuance costs	(578)	—		(578)
Net cash used in financing activities	(9,069)	(1,463)		(10,532)
Net decrease in cash, cash equivalents, and restricted cash	(37,020)	—		(37,020)
Cash, cash equivalents, and restricted cash:				
Beginning of period	180,612	—		180,612

	Three Months Ended March 31, 2018			
	As Previously Reported	Revision Impacts		As Revised
End of period	$ 143,592	$ —		$ 143,592
Supplemental disclosure of cash flow information:				
Cash paid during the period for interest	11,216	4,613	M	15,829
Cash paid during the period for taxes	401	—		401

[A] Depreciation and amortization — The correction of these misstatements resulted from the change of accounting for Energy Servers under the Managed Services Program and similar arrangements that would have been product and install cost of revenue, but are now recorded as property, plant and equipment, net and depreciated over their useful lives of 21 years.

[B] Stock-based compensation — The correction of these misstatements resulted from the change of accounting for stock-based compensation, including net capitalization of stock-based compensation costs into inventory of $0.6 million. The correction of this misstatement also resulted in the capitalization of costs of $0.8 million related to assets under the Managed Services Program now recorded as construction in progress within property, plant and equipment, net.

[C] Accounts receivable — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements, for which the amount recorded to accounts receivable represents amounts invoiced for capacity billings to end customers which have not yet been collected by the financing entity as of the period end.

[D] Inventories — The correction of these misstatements resulted from the change of accounting for inventories held for shipments planned to customers under the Managed Services Program and similar arrangements now accounted for as construction in progress within property, plant and equipment, net.

[E] Deferred cost of revenue, current and non-current — The correction of these misstatements resulted from the cumulative net change of accounting moving deferred cost of revenue to property, plant and equipment, net for the leased Energy Servers under the Managed Services Agreements and similar sale-leaseback arrangements of $3.2 million and the net capitalization of stock-based compensation expenses of $0.3 million.

[F] Prepaid expenses and other current assets — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements whereby prepaid property tax and insurance payments are now classified within prepaid expenses, rather than offset against deferred revenue.

[G] Other long-term assets —The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements, including the timing difference of capacity billings to end customers and the payments received from the financing entity is recorded within long term receivables and whereby prepaid property tax and insurance payments are now classified within other long-term assets, rather than offset against long-term deferred revenue.

[H] Accrued warranty — The correction of these misstatements resulted from the change of accounting for accrued warranty which is now recorded on an as-incurred basis on our Managed Services Agreements and similar arrangements.

[I] Accrued expense and other current liabilities and other long-term liabilities — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements whereby instead of recognizing the bank financing as revenue, the bank financing loan proceeds received and due are classified as a lease loan liability.

[J] Deferred revenue and customer deposits, current and non-current — The correction of these misstatements resulted from the change of accounting for the recognition of product and installation revenue from upfront or ratable recognition to the recognition of the capacity payments received from the end customer as power is generated by the Energy Servers as electricity revenue.

[K] Other long-term liabilities — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements whereby instead of recognizing the bank financing as revenue, the bank financing loan proceeds received and due beyond the next twelve months are classified as a lease loan liability.

[L] Purchase of property, plant and equipment — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements, whereby costs previously recognized as product and installation cost of revenue are now recorded as property, plant and equipment, net in the cases where the risks of ownership have not completely transferred to the financing party.

[M] Proceeds and repayments from financing obligations — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements whereby instead of recognizing the upfront proceeds received from the bank as revenue, the proceeds received and due are classified as proceeds from financing obligations and the capacity payments received from the end customer are classified as repayment of financing obligations and interest paid.

	Six Months Ended June 30, 2018			
	As Previously Reported	Restatement Impacts		As Restated
Cash flows from operating activities:				
Net loss	$ (72,536)	$ (14,197)		$ (86,733)
Adjustments to reconcile net loss to net cash used in operating activities:				
Depreciation and amortization	21,554	4,912	A	26,466
Write-off of property, plant and equipment, net	661	—		661
Revaluation of derivative contracts	28,611	—		28,611
Stock-based compensation	15,773	(292)	B	15,481
Loss on long-term REC purchase contract	100	—		100
Revaluation of stock warrants	(7,456)	—		(7,456)
Revaluation of preferred stock warrants	(166)	—		(166)
Amortization of debt issuance cost	14,420	—		14,420
Changes in operating assets and liabilities:				
Accounts receivable	(6,486)	(195)	C	(6,681)
Inventories	(46,172)	7,915	D	(38,257)
Deferred cost of revenue	48,760	(28,362)	E	20,398
Customer financing receivable and other	2,439	—		2,439
Prepaid expenses and other current assets	4,544	220	F	4,764
Other long-term assets	15	(866)	G	(851)
Accounts payable	5,217	—		5,217
Accrued warranty	(1,883)	(300)	H	(2,183)
Accrued expenses and other current liabilities	(12,815)	(1,386)	I	(14,201)
Deferred revenue and customer deposits	(31,817)	9,787	J	(22,030)
Other long-term liabilities	18,652	497	K	19,149
Net cash used in operating activities	(18,585)	(22,267)		(40,852)
Cash flows from investing activities:				
Purchase of property, plant and equipment	(1,595)	(11,550)	L	(13,145)
Purchase of marketable securities	(15,732)	—		(15,732)
Proceeds from maturity of marketable securities	27,000	—		27,000
Net cash provided by (used in) investing activities	9,673	(11,550)		(1,877)
Cash flows from financing activities:				
Repayment of debt	(9,201)	—		(9,201)
Repayment of debt to related parties	(627)	—		(627)
Proceeds from financing obligations	—	36,799	M	36,799
Repayment of financing obligations	—	(2,982)	M	(2,982)
Distributions to noncontrolling and redeemable noncontrolling interests	(11,582)	—		(11,582)
Proceeds from issuance of common stock	742	—		742
Payments of initial public offering issuance costs	(1,160)	—		(1,160)
Net cash provided by (used in) financing activities	(21,828)	33,817		11,989
Net decrease in cash, cash equivalents, and restricted cash	(30,740)	—		(30,740)
Cash, cash equivalents, and restricted cash:				

	Six Months Ended June 30, 2018			
	As Previously Reported	Restatement Impacts		As Restated
Beginning of period	180,612	—		180,612
End of period	$ 149,872	$ —		$ 149,872
Supplemental disclosure of cash flow information:				
Cash paid during the period for interest	$ 16,540	$ 9,233	M	$ 25,773
Cash paid during the period for taxes	625	—		625

[A] Depreciation and amortization — The correction of these misstatements resulted from the change of accounting for Energy Servers under the Managed Services Program and similar arrangements that would have been product and install cost of revenue, but are now recorded as property, plant and equipment, net and depreciated over their useful lives of 21 years.

[B] Stock-based compensation — The correction of these misstatements resulted from the change of accounting for stock-based compensation, including net capitalization of stock-based compensation costs into inventory of $1.0 million. The correction of this misstatement also resulted in the capitalization of $0.7 million of stock-based compensation costs related to assets under the Managed Services Programs now recorded as construction in progress within property, plant and equipment, net.

[C] Accounts receivable — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements for which the amount recorded to accounts receivable represents amounts invoiced for capacity billings to end customers which have not yet been collected by the financing entity as of the period end.

[D] Inventories — The correction of these misstatements resulted from the change of accounting for inventories held for shipments planned to customers under the Managed Services Program and similar arrangements now accounted for as construction in progress within property, plant and equipment, net.

[E] Deferred cost of revenue, current and non-current — The correction of these misstatements resulted from the cumulative net change of accounting moving deferred cost of revenue to property, plant and equipment, net for the leased Energy Servers under the Managed Services Agreements and similar sale-leaseback arrangements of $28.1 million and the net capitalization of stock-based compensation costs of $0.3 million.

[F] Prepaid expenses and other current assets — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements whereby prepaid property tax and insurance payments are now classified within prepaid expenses, rather than offset against deferred revenue.

[G] Other long-term assets — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements, including the timing difference of capacity billings to end customers and the payments received from the financing entity is recorded within long term receivables and whereby prepaid property tax and insurance payments are now classified within other long-term assets, rather than offset against long-term deferred revenue.

[H] Accrued warranty — The correction of these misstatements resulted from the change of accounting for accrued warranty which is now recorded on an as-incurred basis for our Managed Services Agreements and similar arrangements.

[I] Accrued expense and other current liabilities and other long-term liabilities — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements whereby instead of recognizing the bank financing as revenue, the bank financing loan proceeds received and due are classified as a lease loan liability.

[J] Deferred revenue and customer deposits, current and non-current — The correction of these misstatements resulted from the change of accounting for the recognition of product and installation revenue from upfront or ratable recognition to the recognition of the capacity payments received from the end customer as power is generated by the Energy Servers as electricity revenue.

[K] Other long-term liabilities — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements where instead of recognizing the bank financing as revenue, the bank financing loan proceeds received and due beyond the next twelve months are classified as a lease loan liability.

[L] Purchase of property, plant and equipment — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements, whereby costs previously recognized as product and installation cost of revenue are now recorded as property, plant and equipment, net in the cases where the risks of ownership have not completely transferred to the financing party.

[M] Proceeds and repayments from financing obligations — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements whereby instead of recognizing the upfront proceeds received from the bank as revenue, the proceeds received and due are classified as proceeds from financing obligations and the capacity payments received from the end customer are classified as repayment of financing obligations and interest paid.

	Nine Months Ended September 30, 2018			
	As Previously Reported	Restatement Impacts		As Restated
Cash flows from operating activities:				
Net loss	$ (155,046)	$ (16,119)		$ (171,165)
Adjustments to reconcile net loss to net cash used in operating activities:				
Depreciation and amortization	32,141	7,616	A	39,757
Write-off of property, plant and equipment, net	901	—		901
Revaluation of derivative contracts	26,761	755	B	27,516
Stock-based compensation	87,451	(10,777)	C	76,674
Loss on long-term REC purchase contract	150	—		150
Revaluation of stock warrants	(9,109)	—		(9,109)
Amortization of debt issuance cost	20,279	—		20,279
Changes in operating assets and liabilities:				
Accounts receivable	(11,168)	(332)	D	(11,500)
Inventories	(44,465)	4,037	E	(40,428)
Deferred cost of revenue	47,945	(34,343)	F	13,602
Customer financing receivable and other	3,736	—		3,736
Prepaid expenses and other current assets	(6,514)	(1,585)	G	(8,099)
Other long-term assets	1,052	(1,398)	H	(346)
Accounts payable	11,236	—		11,236
Accrued warranty	1,164	(324)	I	840
Accrued expenses and other current liabilities	1,885	626	J	2,511
Deferred revenue and customer deposits	(32,203)	17,431	K	(14,772)
Other long-term liabilities	10,156	1,362	L	11,518
Net cash used in operating activities	(13,648)	(33,051)		(46,699)
Cash flows from investing activities:				
Purchase of property, plant and equipment	(4,333)	(20,283)	M	(24,616)
Payments for acquisition of intangible assets	(2,762)	—		(2,762)
Purchase of marketable securities	(15,732)	—		(15,732)
Proceeds from maturity of marketable securities	38,250	—		38,250
Net cash provided by (used in) investing activities	15,423	(20,283)		(4,860)
Cash flows from financing activities:				
Repayment of debt	(14,036)	—		(14,036)
Repayment of debt to related parties	(990)	—		(990)
Proceeds from financing obligations	—	57,897	N	57,897
Repayment of financing obligations	—	(4,563)	N	(4,563)
Distributions to noncontrolling and redeemable noncontrolling interests	(14,192)	—		(14,192)
Proceeds from issuance of common stock	1,456	—		1,456
Proceeds from public offerings, net of underwriting discounts and commissions	292,529	—		292,529
Payments of initial public offering issuance costs	(2,928)	—		(2,928)
Net cash provided by financing activities	261,839	53,334		315,173
Net increase in cash, cash equivalents, and restricted cash	263,614	—		263,614

	Nine Months Ended September 30, 2018			
	As Previously Reported	Restatement Impacts		As Restated
Cash, cash equivalents, and restricted cash:				
Beginning of period	180,612	—		180,612
End of period	$ 444,226	$ —		$ 444,226
Supplemental disclosure of cash flow information:				
Cash paid during the period for interest	$ 30,601	$ 14,505	N	$ 45,106
Cash paid during the period for taxes	1,052	—		1,052

[A] Depreciation and amortization — The correction of these misstatements resulted from the change of accounting for Energy Servers under the Managed Services Program and similar arrangements that would have been product and install cost of revenue, but are now recorded as property, plant and equipment, net and depreciated over their useful lives of 21 years.

[B] Revaluation of derivative contracts — The correction of this misstatement resulted from the cumulative net change in the valuation of our embedded derivatives in our 6% Notes. The change in the valuation was recorded in loss on revaluation of embedded derivatives.

[C] Stock-based compensation — The correction of these misstatements resulted from the change of accounting for stock-based compensation, including net capitalization of stock-based compensation cost into inventory of $10.1 million. The correction of this misstatement also resulted in the capitalization of $0.7 million of stock-based compensation costs related to assets under the Managed Services Programs now recorded as construction in progress within property, plant and equipment, net.

[D] Accounts receivable — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements, for which the amount recorded to accounts receivable represents amounts invoiced for capacity billings to end customers which have not yet been collected by the financing entity as of the period end.

[E] Inventories — The correction of these misstatements resulted from the change of accounting for inventories held for shipments planned to customers under the Managed Services Program and similar arrangements now accounted for as construction in progress within property, plant and equipment, net.

[F] Deferred cost of revenue, current and non-current — The correction of these misstatements resulted from the cumulative net change of accounting moving deferred cost of revenue to property, plant and equipment, net for the leased Energy Servers under the Managed Services Agreements and similar sale-leaseback arrangements of $31.4 million and the net capitalization of stock-based compensation expenses of $3.0 million.

[G] Prepaid expenses and other current assets — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements whereby prepaid property tax and insurance payments are now classified within prepaid expenses.

[H] Other long-term assets — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements whereby the timing difference of capacity billings to end customers and payments received from the financing entity is recorded within long term receivables and commission payments are now classified within long term prepaid commissions.

[I] Accrued warranty — The correction of these misstatements resulted from the change of accounting for accrued warranty which is now recorded on an as-incurred basis for our Managed Services Agreements and similar arrangements.

[J] Accrued expense and other current liabilities and other long-term liabilities — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements whereby instead of recognizing the bank financing as revenue, the bank financing loan proceeds received and due are classified as a lease loan liability.

[K] Deferred revenue and customer deposits, current and non-current — The correction of these misstatements resulted from the change of accounting for the recognition of product and installation revenue from upfront or ratable recognition to recognition of the capacity payments received from the end customer as power is generated by the Energy Servers as electricity revenue.

[L] Other long-term liabilities — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements whereby the timing difference of capacity billings to end customers and the payments received from the financing entity is recorded within long term receivables and whereby prepaid property tax and insurance payments are now classified within other long-term assets, rather than offset against long-term deferred revenue.

[M] Purchase of property, plant and equipment — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements, whereby costs previously recognized as product and installation cost of revenue are now recorded as property, plant and equipment, net in the cases where the risks of ownership have not completely transferred to the financing party.

[N] Proceeds and repayments from financing obligations — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements whereby instead of recognizing the upfront proceeds received from the bank as revenue, the proceeds received and due are classified as proceeds from financing obligations and the capacity payments received from the end customer are classified as repayment of financing obligations and interest paid.

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 Securities Exchange Act of 1934, as amended (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, 2019. Based on such evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that as of December 31, 2019, our disclosure controls and procedures were not effective because of the material weakness described below.

Management's Report on Internal Control over Financial Reporting

Our management 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). Our internal control over financial reporting includes policies and procedures designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external reporting purposes in accordance with generally accepted accounting principles.

Under the supervision and with the participation of our Chief Executive Officer and Chief Financial Officer, our management conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2019, based on the criteria established in Internal Control -- Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on such evaluation, our management has concluded that, as of December 31, 2019, our internal control over financial reporting was not effective because of the material weakness described below.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis. We identified a material weakness, whereby we did not design and maintain an effective control environment with a sufficient complement of resources with an appropriate level of accounting knowledge, expertise and training to evaluate the accounting implications of complex or non-routine transactions commensurate with our financial reporting requirements. This material weakness resulted in errors in the accounting for certain transactions, which resulted in a restatement of our consolidated financial statements as of and for the year ended December 31, 2018, as of and for the three month period ended March 31, 2019, as of and for the three and six month periods ended June 30, 2019 and 2018 and as of and for the three and nine month periods ended September 30, 2019 and 2018, and revisions to our consolidated financial statements as of and for the year ended December 31, 2017 and as of and for the three month period ended March 31, 2018. Additionally, this material weakness could result in a misstatement of substantially all account balances or disclosures that would result in a material misstatement to the annual or interim consolidated financial statements that would not be prevented or detected.

Remediation Activities

We are currently in the process of remediating the material weakness and have taken and continue to take steps that we believe will address the underlying causes of the material weakness which resulted from an insufficient complement of resources with an appropriate level of accounting knowledge, expertise and training to evaluate the accounting implications of complex or non-routine transactions commensurate with our financial reporting requirements. Steps we are taking include increasing the use of qualified internal or third-party technical resources with accounting expertise on complex or non-routine transactions who will provide accounting interpretation guidance to assist us in identifying and addressing any issues that affect our consolidated financial statements.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting during the quarter ended December 31, 2019 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B - OTHER INFORMATION

None.

Part III

ITEM 10 - DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this Item 10 of Annual Report on Form 10-K is incorporated by reference herein to our Proxy Statement for the 2020 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission within 120 days of the year ended December 31, 2019.

ITEM 11 - EXECUTIVE COMPENSATION

The information required by this Item 11 of Annual Report on Form 10-K is incorporated by reference herein to our Proxy Statement for the 2020 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission within 120 days of the year ended December 31, 2019.

ITEM 12 - SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by Item 403 of Regulation S-K is incorporated by reference herein to the information set forth under the caption "Security Ownership of Certain Beneficial Owners and Management" in our 2020 Proxy Statement to be filed with the Securities and Exchange Commission within 120 days of the year ended December 31, 2019.

Securities Authorized for Issuance under Equity Compensation Plans

Plan Category	Number of Securities to Be Issued Upon Exercise of Outstanding Options, Warrants and Rights	Weighted Average Exercise Price of Outstanding Options, Warrants and Rights [1]	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans [2]
Equity compensation plans approved by stockholders [3]	28,443,704	20.96	20,263,551 [4]
Equity compensation plans not approved by stockholders	—	—	—
Totals	28,443,704		20,263,551

[1] The weighted average exercise price does not take into account outstanding restricted stock units (RSUs) since those units vest without any cash consideration or other payment required for such shares.
[2] Included in this amount are 3,030,407 shares available for future issuance under the 2018 Employee Stock Purchase Plan ("2018 ESPP").
[3] Includes our 2002 Plan, 2012 Plan, 2018 EIP and our 2018 ESPP.
[4] The number of shares of Class A common stock available for grant and issuance under the 2018 EIP shall be increased on January 1, of each of 2019 through 2028, by the lesser of (a) four percent (4%) of the number of the Company's Class A common stock, the Company's Class B common stock 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 Class A common shares determined by the Board. On each January 1 of each calendar year, the aggregate number of shares of Class A common stock reserved for issuance under the 2018 ESPP shall be increased automatically by the number of shares equal to one percent (1%) of the total number of outstanding shares of Class A common stock, Class B common stock of the Company, and common stock equivalents (including options, restricted stock units, warrants and preferred stock on an as converted basis) outstanding on the immediately preceding December 31 (rounded down to the nearest whole share); provided, that the Board or its Compensation Committee may in its sole discretion reduce the amount of the increase in any particular year.

ITEM 13 - CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

The information required by this Item 13 of Annual Report on Form 10-K is incorporated by reference herein to our Proxy Statement for the 2020 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission within 120 days of the year ended December 31, 2019.

ITEM 14 - PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this Item 14 of Annual Report on Form 10-K is incorporated by reference herein to our Proxy Statement for the 2020 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission within 120 days of the year ended December 31, 2019.

ITEM 15 - EXHIBITS AND FINANCIAL STATEMENTS 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.

			Incorporated by Reference			
Exhibit Number		**Description**	**Form**	**File No.**	**Exhibit**	**Filing Date**
3.1		Restated Certificate of Incorporation.	10-Q	001-38598	3.1	9/7/2018
3.2		Amended and Restated Bylaws, effective August 8, 2019	10-Q	001-38598	3.2	8/14/2019
4.1		Form of Common Stock Certificate of the Registrant	S-1/A	333-225571	4.1	7/9/2018
4.2		Indenture by and among the Registrant, certain guarantors party thereto and U.S. Bank National Association, as trustee, dated as of December 15, 2015	S-1	333-225571	4.4	6/12/2018
4.3		Form of 5% Convertible Senior Secured PIK Note due 2020 (included in Exhibit 4.2)	S-1	333-225571	4.4	6/12/2018
4.4		Security Agreement by and among the Registrant, certain guarantors party thereto and U.S. Bank National Association, as collateral agent, dated as of December 15, 2015	S-1	333-225571	4.6	6/12/2018
4.5		Plain English Warrant Agreement by and between Triplepoint Capital LLC, a Delaware limited liability company, and the Registrant, dated December 31, 2010	S-1	333-225571	4.9	6/12/2018
4.6		Amended and Restated Plain English Warrant Agreement by and between Triplepoint Capital LLC, a Delaware limited liability company, and the Registrant, dated December 15, 2011	S-1	333-225571	4.10	6/12/2018
4.7		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
4.8		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

4.9		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
4.10		Agreement and Warrant to Purchase Series G Preferred Stock by and between Keith Daubenspeck and the Registrant, dated June 27, 2014	S-1	333-225571	4.15	6/12/2018
4.11		Agreement and Warrant to Purchase Series G Preferred Stock by and between Dwight Badger and the Registrant, dated June 27, 2014	S-1	333-225571	4.16	6/12/2018
4.12		First Supplemental Indenture by and among Registrant, certain guarantor party thereto and U.S. Bank National Association, as trustee, dated as of September 20, 2016	S-1	333-225571	4.19	6/12/2018
4.13		Indenture by and among the Registrant, certain guarantors party thereto and U.S. Bank National Association, as trustee, dated as of June 29, 2017	S-1	333-225571	4.20	6/12/2018
4.14		Form of 10% Senior Secured Note due 2024 (included in Exhibit 4.15)	S-1	333-225571	4.20	6/12/2018
4.15		Security Agreement by and among the Registrant, U.S. Bank National Association, as trustee and U.S. Bank National Association, as collateral agent, dated as of June 29, 2017	S-1	333-225571	4.22	6/12/2018
4.16		Second Supplemental Indenture, Omnibus Amendment to Notes and Limited Waiver by and among the Registrant, certain guarantors party thereto and U.S. Bank National Association, as trustee, dated as of June 29, 2017	S-1	333-225571	4.24	6/12/2018
4.17		Third Supplemental Indenture and Omnibus Amendment to Notes by and among the Registrant, certain guarantors party thereto and U.S. Bank National Association, as trustee, dated as of January 18, 2018	S-1	333-225571	4.25	6/12/2018
4.18		Form of Holder Voting Agreement, between KR Sridhar and certain parties thereto	S-1/A	333-225571	4.26	7/9/2018
4.19		Amended and Restated Subordinated Secured Convertible Promissory Note by and between the Registrant and Constellation NewEnergy, Inc., dated as of January 18, 2018	S-1	333-225571	4.28	6/12/2018
4.20		Description of Company's securities registered pursuant to Section 12 of the Securities Exchange Act of 1934, as amended				Filed herewith
10.1	^	2002 Equity Incentive Plan and form of agreements used thereunder	S-1	333-225571	10.2	6/12/2018
10.2	^	2012 Equity Incentive Plan and form of agreements used thereunder	S-1	333-225571	10.3	6/12/2018
10.3	^	2018 Equity Incentive Plan and form of agreements used thereunder	S-1	333-225571	10.4	7/9/2018
10.4	^	2018 Employee Stock Purchase Plan and form of agreements used thereunder	S-1/A	333-225571	10.5	7/9/2018
10.5		Standard Industrial Lease dated April 5, 2005 by and between the Registrant and The Realty Associates Fund III, L.P., as amended as of April 22, 2005, January 12, 2010, April 30, 2015 and December 7, 2015	S-1	333-225571	10.7	6/12/2018
10.6		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
10.7	^	Offer Letter by and between the Registrant and Randy Furr, dated April 9, 2015	S-1	333-225571	10.10	6/12/2018

10.8	†	Guaranty by the Registrant, dated as of March 16, 2012 (PPA II)	S-1	333-225571	10.13	6/12/2018
10.9		Equity Contribution Agreement by and among the Registrant, Diamond State Generation Partners, LLC, and Deutsche Bank Trust Company Americas, dated as of March 20, 2013 (PPA II)	S-1	333-225571	10.15	6/12/2018
10.10	†	Master Energy Server Purchase Agreement between the Registrant and Diamond State Generation Partners, LLC, dated as of April 13, 2012 (PPA II)	S-1	333-225571	10.17	6/12/2018
10.11		Omnibus First Amendment to MESPA, MOMA and ASA by and among the Registrant, Diamond State Generation Partners, LLC and Diamond State Generation Holdings, LLC, dated as of March 20, 2013 (PPA II)	S-1	333-225571	10.18	6/12/2018
10.12		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
10.13	^	Consulting Agreement between the Registrant and Colin L. Powell, dated as of January 29, 2009	S-1	333-225571	10.31	6/12/2018
10.14	^	Amendment to Consulting Agreement between the Registrant and Colin L. Powell, dated as of July 31, 2019				Filed herewith
10.15		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
10.16	^	Form of Indemnification Agreement	10-Q	001-38598	10.1	9/7/2018
10.17	^	Form of Offer Letter	10-K	001-38598	10.27	3/22/2019
10.18	†	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
10.19	†	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
10.20		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
10.21		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
10.22	x	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
10.23	x	Third Amended and Restated Limited Liability Company Agreement of Diamond State Generation Partners LLC dated June 14, 2019	10-Q	001-38598	10.2	8/14/2019
10.24	x	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
10.25	x	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
10.26	x	Repurchase Agreement between the Company and Diamond State Generation Partners LLC, dated June 14, 2019	10-Q	001-38598	10.5	8/14/2019

10.27	x	Third Amended and Restated Limited Liability Company Agreement of Diamond State Generation Holdings, LLC dated June 14, 2019	10-Q	001-38598	10.6	8/14/2019
10.28	x	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
10.29	x	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
10.30	x	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
10.31	^	Bloom Energy Corporation 2020 Non-Employee Director Deferred Compensation Plan				Filed herewith
10.32	x	Fourth Amended and Restated Limited Liability Company Agreement of Diamond State Generation Partners, LLC dated as of December 23, 2019				Filed herewith
10.33	x	Fuel Cell System Supply and Installation Agreement between Bloom Energy Corporation and Diamond State Generation Partners, LLC dated as of December 23, 2019				Filed herewith
10.34	x	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				Filed herewith
10.35	x	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				Filed herewith
10.36	x	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				Filed herewith
10.37		First Amendment to Repurchase Agreement between the Company and Diamond State Generation Partners LLC, dated June 14, 2019				Filed herewith
10.38	^	Offer Letter between the Company and Chris White, dated April 16, 2019				Filed herewith
10.39	^	Change of Control and Severance Agreement between the Company and Chris White dated April 16, 2019				Filed herewith
10.40	^	Offer Letter between the Company and Hari Pillai dated December 3, 2018.				Filed herewith
10.41	^	Change of Control and Severance Agreement between the Company and Hari Pillai dated December 3, 2018.				Filed herewith
21.1		List of Subsidiaries				Filed herewith
23.1		Consent of Independent Registered Public Accounting Firm, PricewaterhouseCoopers LLP				Filed herewith
31.1		Certification of 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

31.2		Certification of 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
32.1	**	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				Filed herewith
101.INS		XBRL Instance Document				Filed herewith
101.SCH		XBRL Taxonomy Extension Schema Document				Filed herewith
101.CAL		XBRL Taxonomy Extension Calculation Linkbase Document				Filed herewith
101.DEF		XBRL Taxonomy Extension Definition Linkbase Document				Filed herewith
101.LAB		XBRL Taxonomy Extension Label Linkbase Document				Filed herewith
101.PRE		XBRL Taxonomy Extension Presentation Linkbase Document				Filed herewith

^ Management contracts or compensation plans or arrangements in which directors or executive officers are eligible to participate.

** 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.

† Confidential treatment requested with respect to portions of this exhibit.

x Portions of this exhibit are redacted as permitted under Regulation S-K, Rule 601.

ITEM 16 - FORM 10-K SUMMARY

Not applicable.

SIGNATURES

Pursuant to the requirements 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:	March 31, 2020	By:	/s/ KR Sridhar
			KR Sridhar Founder, President, Chief Executive Officer and Director (Principal Executive Officer)
Date:	March 31, 2020	By:	/s/ Randy Furr
			Randy Furr Executive Vice 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 Randy Furr, 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:	March 31, 2020	/s/ KR Sridhar KR Sridhar Founder, President, Chief Executive Officer and Director (Principal Executive Officer)
Date:	March 31, 2020	/s/ Randy Furr Randy Furr Executive Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)
Date:	March 31, 2020	/s/ Michael Boskin Michael Boskin Director
Date:	March 31, 2020	/s/ Mary K. Bush Mary K. Bush Director
Date:	March 31, 2020	/s/ John T. Chambers John T. Chambers Director
Date:	March 31, 2020	/s/ L. John Doerr L. John Doerr Director
Date:	March 31, 2020	/s/ Jeffrey Immelt Jeffrey Immelt Director
Date:	March 31, 2020	/s/ Colin L. Powell Colin L. Powell Director
Date:	March 31, 2020	/s/ Scott Sandell Scott Sandell Director
Date:	March 31, 2020	/s/ Peter Teti Peter Teti Director
Date:	March 31, 2020	/s/ Eddy Zervigon Eddy Zervigon Director

Exhibit 4.20

DESCRIPTION OF REGISTRANT'S SECURITIES REGISTERED UNDER SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED

The following brief description of the capital stock of Bloom Energy Corporation ("us", "our", "we", or the "Company") is a summary. This summary is not complete and is subject to and qualified in its entirety by reference to the complete text of our Restated Certificate of Incorporation ("Certificate of Incorporation") and our Amended and Restated By-Laws ("By-Laws"). We encourage you to read the Certificate of Incorporation and By-Laws carefully.

General

Our authorized capital stock consists of 600,000,000 shares of Class A common stock, $0.0001 par value per share, 600,000,000 shares of Class B common stock, $0.0001 par value per share, and 10,000,000 shares of undesignated preferred stock, $0.0001 par value per share.

Class A Common Stock and Class B Common Stock

Dividend Rights

Subject to preferences that may apply to any shares of preferred stock outstanding at the time, the holders of our common stock are entitled to receive dividends out of funds legally available if our board of directors, in its discretion, determines to issue dividends and then only at the times and in the amounts that our board of directors may determine.

Voting Rights

Holders of our Class A common stock are entitled to one vote for each share of Class A common stock held on all matters submitted to a vote of stockholders and holders of our Class B common stock are entitled to ten votes for each share of Class B common stock held on all matters submitted to a vote of stockholders. Holders of shares of our Class A common stock and Class B common stock vote together as a single class on all matters (including the election of directors) submitted to a vote of stockholders, unless otherwise required by Delaware law or our Certificate of Incorporation. Delaware law could require either holders of our Class A common stock or Class B common stock to vote separately as a single class in the following circumstances:

- if we were to seek to amend our Certificate of Incorporation to increase or decrease the par value of a class of our capital stock, then that class would be required to vote separately to approve the proposed amendment; and

- if we were to seek to amend our Certificate of Incorporation in a manner that alters or changes the powers, preferences, or special rights of a class of our capital stock in a manner that affected its holders adversely, then that class would be required to vote separately to approve the proposed amendment.

Our Certificate of Incorporation does not provide for cumulative voting for the election of directors. As a result, the holders of a majority of our voting shares can elect all of the directors then standing for election. Our Certificate of Incorporation establishes a classified board of directors, which is divided into three classes with staggered three-year terms. Only one class of directors will be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms.

KR Sridhar, our Chief Executive Officer and Chairman, has entered into voting agreements with certain of our stockholders who hold Class B common stock. Under the voting agreement (a form of which is filed as an exhibit to our Annual Report on Form 10-K for the year ended December 31, 2019), stockholders agreed to vote all of their shares as directed by, and granted an irrevocable proxy to, Mr. Sridhar at his discretion on all matters to be voted upon by stockholders. Each of the voting agreements will automatically terminate:

Exhibit 4.20

(i) upon the liquidation, dissolution or winding up of our business operations;

(ii) upon the execution by us of a general assignment for the benefit of creditors or the appointment of a receiver or trustee to take possession of our property and assets;

(iii) following our initial public offering, as to (a) any shares of Class B common stock that are converted to Class A common stock pursuant to our restated Certificate of Incorporation and (b) the Class A common stock resulting from such conversion (but such voting agreement shall remain effective as to any Class B common stock not so converted);

(iv) from and after the third anniversary of our initial public offering, at any time upon such resolution by our board of directors;

(v) upon the fifth anniversary of our initial public offering;

(vi) upon the date that is 60 days following the date on which KR Sridhar, or his successor under the voting agreement, ceases to provide services to us as one of our officers;

(vii) upon such date as of which none of the parties, other than KR Sridhar or his successor, to the then-outstanding voting agreements, was one of the five largest holders of our capital stock (which entered into a voting agreement) as of the date of our initial public offering; or

(viii) at such time following the date of our initial public offering when there is no Class B common stock outstanding.

No Preemptive or Similar Rights

Our common stock is not entitled to preemptive rights, and is not subject to redemption or sinking fund provisions.

Right to Receive Liquidation Distributions

Upon our liquidation, dissolution or winding-up, the assets legally available for distribution to our stockholders would be distributable ratably among the holders of our common stock and any participating preferred stock outstanding at that time, subject to prior satisfaction of all outstanding debt and liabilities and the preferential rights of and the payment of liquidation preferences, if any, on any outstanding shares of preferred stock.

Change of Control Transactions

In the case of any distribution or payment in respect of the shares of our Class A common stock or Class B common stock upon a merger or consolidation with or into any other entity, or other substantially similar transaction, the holders of our Class A common stock and Class B common stock will be treated equally and identically with respect to shares of Class A common stock or Class B common stock owned by them, unless the only difference in the per share distribution to the holders of the Class A common stock and Class B common stock is that any securities distributed to the holder of a share of Class B common stock have ten times the voting power of any securities distributed to the holder of a share of Class A common stock, or, if there are other differences, then such merger, consolidation, or other transaction is approved by the affirmative vote of the holders of a majority of the outstanding shares of Class A common stock and 80% of the outstanding shares of Class B common stock, each voting as a separate class.

Subdivisions and Combinations

If we subdivide or combine in any manner outstanding shares of Class A common stock or Class B common stock, the outstanding shares of the other class will be subdivided or combined in the same manner, unless different treatment of the shares of each class is approved by the affirmative vote of the holders of a majority of the outstanding shares of Class A common stock and 80% of the outstanding shares of Class B common stock, each voting as a separate class.

Conversion

Each outstanding share of Class B common stock is convertible at any time at the option of the holder into one share of Class A common stock. In addition, each share of Class B common stock will convert automatically into one share of Class A common stock upon any transfer, whether or not for value, which occurs after the date of our initial public offering, except for certain permitted transfers described in our Certificate of Incorporation, including transfers to family members, trusts solely for the benefit of the stockholder or their family members, and partnerships, corporations, and other entities exclusively owned by the stockholder or their family members.

In addition, partnerships or limited liability companies that hold shares of Class B common stock as of the ate of our initial public offering may distribute their Class B common stock to their respective partners or members (who may further distribute the Class B common stock to their respective partners or members) without triggering a conversion to Class A common stock. Such distributions must be conducted in accordance with the ownership interests of such partners or members and the terms of any agreements binding the partnership or limited liability company.

All the outstanding shares of our Class B common stock will convert automatically into shares of our Class A common stock upon the date that is the earliest to occur of (i) immediately prior to the close of business on the fifth anniversary of our initial public offering, (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. Following such conversion, each share of Class A common stock will have one vote per share and the rights of the holders of all outstanding common stock will be identical. Once converted or transferred and converted into Class A common stock, the Class B common stock may not be reissued.

Preferred Stock

Our board of directors is authorized, subject to limitations prescribed by Delaware law, to issue preferred stock in one or more series, to establish from time to time the number of shares to be included in each series and to fix the designation, powers, preferences and rights of the shares of each series and any of its qualifications, limitations or restrictions, in each case without further vote or action by our stockholders. Our board of directors can also increase or decrease the number of shares of any series of preferred stock, but not below the number of shares of that series then outstanding, without any further vote or action by our stockholders. Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of our common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in control of our company and might adversely affect the market price of our common stock and the voting and other rights of the holders of our Class A common stock and Class B common stock. We currently have no shares of preferred stock issued and outstanding.

Exhibit 10.14

BLOOM ENERGY CORPORATION

AMENDMENT TO CONSULTING AGREEMENT

This Amendment to Consulting Agreement (the “Amendment”) between Bloom Energy Corporation (the “Company”) and The Honorable Colin L. Powell (the “Consultant”) is entered into this 31st day of July, 2019. The Company and the Consultant previously entered into a Consulting Agreement dated January 29, 2009 (the “Consulting Agreement”) pursuant to which the Consultant was retained by the Company as an independent contractor to perform consulting services for the Company on the terms set forth in the Consulting Agreement. The Company and the Consultant desire to amend the terms of the Consulting Agreement as follows:

1. Exhibit A, paragraph 3, of the Consulting Agreement is hereby amended in full to read as follows:
   “3. Compensation.

   A. As consideration for Services rendered, the Company shall pay the Consultant an annual retainer of $120,000 paid quarterly on April 30, July 31, October 30 and January 31, plus reimbursement for actual travel and other incurred costs.
   B. Expenses. The Company will reimburse Consultant for all reasonable expenses incurred by Consultant in performance the Services pursuant to the Agreement; provided that Consultant submits receipts for such expenses to the Company in accordance with Company Policy.
   C. Rates and Invoicing. Compensation will be due and payable based upon the pay rates described in Section 3(A). Once a quarter, Consultant shall submit to the Company a written invoice for Services and Expenses, and such statement shall be subject to approval of the Company’s Contact Person listed above, or other designated agent of the Company.”

2. All capitalized terms used in this Amendment shall be as defined in the Consulting Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Amendment as of the date first written above.

CONSULTANT

/s/ Colin L. Powell

____

BLOOM ENERGY CORPORATION

/s/ Shawn Soderberg

____

Shawn Soderberg, EVP General Counsel and Secretary

Exhibit 10.31

BLOOM ENERGY CORPORATION
2020 NON-EMPLOYEE DIRECTOR DEFERRED COMPENSATION PLAN

1. **Purpose**. The purpose of the Bloom Energy Corporation 2020 Non-Employee Director Deferred Compensation Plan is to provide non-employee members of the Board of Directors of Bloom Energy Corporation, a Delaware corporation (the "Company"), with the opportunity to elect to defer all or a portion of (i) the cash retainer fees otherwise payable to them by the Company into deferred stock units and (ii) the restricted stock units granted to them by the Company.

2. **Definitions**. For purposes of the Plan:

(a) **"Account"** shall mean the separate account maintained on the books of the Company for each Participant pursuant to Section 7, consisting of the Cash Retainer Sub-Account and the RSU Sub-Account.

(b) **"Board"** shall mean the Board of Directors of the Company.

(c) **"Committee"** shall mean the Compensation and Organization Development Committee of the Board, or a subcommittee thereof, or such other committee designated by the Board to administer the Plan.

(d) **"Common Stock"** shall mean the Class A common stock, par value $0.0001 per share, of the Company, and all rights appurtenant thereto.

(e) **"Deferred Stock Units"** shall mean deferred restricted stock units credited to a Participant's Account pursuant to elections by the Participant under Sections 5 and 6.

(f) **"Director"** shall mean any member of the Board who is not an employee of the Company or any of its subsidiaries or affiliates.

(g) **"Effective Date"** shall mean December 31, 2019.

(h) **"Fair Market Value"** means as of any date the closing price of the Common Stock as reported on the New York Stock Exchange for that date or, if no closing price is reported for that date, the closing price on the next preceding date for which a closing price is reported, unless otherwise determined by the Committee.

(i) **"Participant"** shall mean a Director who makes a deferral election under Section 5 or 6 of the Plan.

(j) **"Plan"** shall mean the Bloom Energy Corporation 2020 Non-Employee Director Deferred Compensation Plan, as set forth herein and as amended from time to time.

(k) **"Restricted Stock Units"** or **"RSUs"** shall mean restricted stock units granted to the Participant under the Stock Plan.

(l) **"Section 409A"** shall mean Section 409A of the Internal Revenue Code of 1986, as amended.

(m) **"Separation from Service"** shall mean a "separation from service" from the Company, within the meaning of Section 409A and the regulations promulgated thereunder.

(n) **"Stock Plan"** shall mean the Bloom Energy Corporation 2018 Equity Incentive Plan, as amended from time to time, or any successor equity plan adopted by the Company.

3. **Administration**. The Plan shall be administered by the Committee. The Committee shall, subject to the terms of this Plan, interpret this Plan and the application thereof and establish, amend and revoke rules and regulations as it deems necessary or desirable for the administration of the Plan. All such interpretations, rules,

regulations and conditions shall be final, binding and conclusive upon the Participants and all other persons having or claiming any right or interest in the Plan or the Deferred Stock Units.

A majority of the Committee shall constitute a quorum. The Committee shall take action either by (i) a majority of the members of the Committee present at any meeting at which a quorum is present or (ii) written approval by all of the members of the Committee without a meeting. The Committee may authorize any one or more of its members or any officer of the Company to execute and deliver documents on behalf of the Committee.

No member of the Board or Committee, and no officer of the Company to whom the Committee delegates any of its power and authority hereunder, shall be liable for any act, omission, interpretation, construction or determination made in connection with this Plan in good faith, and the members of the Board and the Committee and such officers shall be entitled to indemnification and reimbursement by the Company in respect of any claim, loss, damage or expense (including attorneys' fees) arising therefrom to the full extent permitted by law (except as otherwise may be provided in the Company's Certificate of Incorporation and/or By-laws) and under any directors' and officers' liability insurance that may be in effect from time to time.

4. **Eligibility**. Each Director shall be eligible to participate in the Plan and to make the elections provided under Sections 5 and 6.

5. **Deferral of Cash Retainer**.

(a) **Annual Elections**. Prior to the first day of each calendar year beginning on or after January 1, 2020, each Director may elect to defer payment of all or a portion of the Director's cash retainer fees to be earned in such calendar year that will be credited to the Cash Retainer Sub-Account of the Participant's Account. Any election made under this Section shall become irrevocable as of December 31 of the year prior to the year in which the services relating to the cash retainer fee are performed.

(b) **Initial Participant Elections**. An individual who becomes a Director for the first time after a calendar year has commenced may make a deferral election, not later than the 30th day following the date the individual becomes a Director, with respect to all or a portion of the Director's annual cash retainer that is earned after the date of such election that will credited to the Cash Retainer Sub-Account of the Participant's Account.

(c) **Effect of Elections**. Any election made pursuant to this Section shall remain in effect for future calendar years unless and until the Participant makes a new election in accordance with Section 5(a). In order to change the amount of a deferral for any subsequent calendar year (or to cease deferrals), a Participant must make a new election prior to the calendar year for which the new election is to be effective.

6. **Deferral of Restricted Stock Units**.

(a) **Annual Elections**. Prior to the first day of each calendar year beginning on or after January 1, 2020, each Director may elect, in accordance with rules and procedures established by the Committee, to defer payment of all or a portion of the Restricted Stock Units granted to the Director in such calendar year that will be credited to the RSU Sub-Account of the Participant's Account. Any election made under this Section shall become irrevocable as of December 31 of the year prior to the year in which the RSUs relating to the election are granted.

(b) **Initial Participant Elections**. An individual who becomes a Director for the first time after a calendar year has commenced may make a deferral election, not later than the earlier of (i) the 30th day following the date the individual becomes a Director and (ii) to the extent permitted by Section 409A, the day prior to the grant of Restricted Stock Units in such calendar year to the Director, with respect to all or a portion of the RSUs granted to the Director in such calendar year that will credited to the RSU Sub-Account of the Participant's Account.

(c) **Effect of Elections**. Any election made pursuant to this Section shall remain in effect for future calendar years unless and until the Participant makes a new election in accordance with Section 6(a). In order to change the number of Restricted Stock Units deferred for any subsequent calendar year (or to cease deferrals), a Participant must make a new election prior to the calendar year for which the new election is to be effective.

7. **Account**.

(a) Cash Retainers. The crediting of Deferred Stock Units to the Cash Retainer Sub-Account of the Participant's Account with respect to the deferral of cash retainer fees pursuant to Section 5 shall be made as of the dates the fees earned by the Participant during the applicable calendar year would otherwise have been payable to the Participant. The number of Deferred Stock Units to be credited shall be equal to the result of dividing the amount deferred as of each such date by the Fair Market Value of one share of Common Stock on such date.

(b) **Restricted Stock Units**. The crediting of Deferred Stock Units to the RSU Sub-Account of the Participant's Account with respect to the deferral of Restricted Stock Units pursuant to Section 6 shall be made as of the dates the RSUs granted to the Participant during the applicable calendar year become vested. The number of Deferred Stock Units to be credited shall be equal to the number of RSUs that are deferred by the Participant as of such date.

(c) **Cash Dividends**. Whenever any cash dividends are declared on the Common Stock, the Company will credit the Cash Retainer and RSU Sub-Accounts of the Account of each Participant on the date such dividend is paid with a number of additional Deferred Stock Units equal to the result of dividing (i) the product of (x) the total number of Deferred Stock Units credited to the Participant's Sub-Account on the record date for such dividend and (y) the per share amount of such dividend by (ii) the Fair Market Value of one share of Common Stock on the date such dividend is paid by the Company to the holders of Common Stock.

(d) **Capitalization Adjustments**. In the event of (i) any change in the Common Stock through a merger, consolidation, reorganization, recapitalization or otherwise, (ii) a stock dividend, or (iii) a stock split, combination or other changes the Common Stock, all as described in Section 2.6 of the Stock Plan, the Deferred Stock Units credited to the Cash Retainer and RSU Sub-Accounts of the Account of each Participant shall be increased or decreased proportionately in accordance with Section 2.6 of the Stock Plan.

8. **Payment of Account**. Payment of the Cash Retainer and RSU Sub-Accounts of the Participant's Account shall be paid to the Participant (or, in the event of the Participant's death, to the Participant's beneficiary, as provided in Section 10) in shares of Common Stock equal to the number of Deferred Stock Units credited to each Sub-Account (provided that any fractional Deferred Stock Units shall be paid in cash based on the Fair Market Value of one share of Common Stock on the payment date), as provided below. Deferred Stock Units issued and settled under this Plan shall be granted under the Stock Plan and shall be considered "Restricted Stock Units" granted pursuant to Section 9 of the Stock Plan.

(a) **Cash Retainer Sub-Account**. Amounts credited to the Cash Retainer Sub-Account with respect to a deferral year shall be paid, as elected by the Participant, as follows:

(i) in a single lump sum on the January 1st following the date the Director incurs a Separation from Service for any reason other than his or her death;

(ii) in up to three annual installments beginning on the January 1st following the date the Director incurs a Separation from Service for any reason other than his or her death, as irrevocably designated by the Director with respect to the applicable deferral year;

(iii) in a single lump sum on the January 1st following a specified payment date that is no more than five years following the deferral year, as irrevocably designated by the Director with respect to the applicable deferral year; or

(iv) in up to three annual installments beginning on the January 1st following a specified payment date that is no more than five years following the deferral year, as irrevocably designated by the Director with respect to the applicable deferral year.

In the absence of an effective election with respect to a deferral year, payment shall be made in accordance with sub-paragraph (i) above for such deferral year.

(b) **RSU Sub-Account**. RSUs credited to the RSU Sub-Account with respect to a deferral year shall be paid, as elected by the Participant, as follows:

(i) in a single lump sum on the January 1st following the date the Director incurs a Separation from Service for any reason other than his or her death;

(ii) in up to three annual installments beginning on the January 1st following the date the Director incurs a Separation from Service for any reason other than his or her death, as irrevocably designated by the Director with respect to the applicable deferral year;

(iii) in a single lump sum on the January 1st following a specified payment date that is no more than five years following the deferral year, as irrevocably designated by the Director with respect to the applicable deferral year; or

(iv) in up to three annual installments beginning on the January 1st following a specified payment date that is no more than five years following the deferral year, as irrevocably designated by the Director with respect to the applicable deferral year.

In the absence of an effective election with respect to a deferral year, payment shall be made in accordance with sub-paragraph (i) above for such deferral year.

(c) **Distribution upon Death.** If a Director incurs a Separation from Service due to death or his or her death occurs after Separation from Service but before payment to him or her of the entire balance of his or her Cash Retainer Sub-Account or RSU Sub-Account, all or the remaining balance of his or her Cash Retainer Sub-Account or RSU Sub-Account shall be paid to such Director's beneficiaries in a lump sum on the 10th business day following the date of death.

(d) **Redeferral Election.** A Director may modify a prior election regarding the time of distribution under this Section 8, provided that any such election (i) shall not be effective until twelve (12) months after the date on which the new election is made; (ii) must be made at least twelve (12) months in advance of the first scheduled payment date; and (iii) must provide for a new payment date that is at least five years after the first scheduled payment date.

9. **Corporate Transaction**. In the event of a Corporate Transaction (as defined in the Stock Plan as in effect at the time of the deferral election) that constitutes a change in the ownership or effective control of the Company or in the ownership of a substantial portion of the Company's assets under Section 409A, the Account of each Participant shall be settled in shares of the successor entity in accordance with the terms of the Stock Plan or, if elected by the Board, shall be paid to the Participant in a lump sum in cash within ten business days after the date of the Corporate Transaction, with such cash amount equal to the result of multiplying (i) the number of Deferred Stock Units credited to the Participant's Account on the Corporate Transaction date by (ii) the Fair Market Value of one share of Common Stock on the Corporate Transaction date.

10. **Beneficiary Designation**. Each Participant shall have the right, at any time, to designate any person or persons as his beneficiary or beneficiaries to whom payment under the Plan shall be paid in the event of his or her death prior to payment to the Participant of his or her Account. Any beneficiary designation may be made or changed by a Participant by a written instrument, in such form prescribed by the Committee, which is filed with the

Company prior to the Participant's death. If a Participant fails to designate a beneficiary, or if all designated beneficiaries predecease the Participant, the Account shall be paid to the Participant's estate.

11. **Amendment and Termination**. The Board may amend or terminate the Plan at any time in whole or in part; provided, however, that no amendment or termination shall reduce the Deferred Stock Units credited to a Participant's Account (except in the case of any adjustments in accordance with Section 2.6 of the Stock Plan) or adversely affect the rights of a Participant to such Deferred Stock Units, without the consent of the Participant (or the Participant's beneficiary in the event of the Participant's death). Notwithstanding the foregoing, the Plan may be amended at any time, without the consent of any Participant (or beneficiary) if necessary or desirable to comply with the requirements, or avoid the application, of Section 409A.

12. **General Provisions**.

(a) **Unfunded Plan**. The Company's obligation to make payment under the Plan shall be contractual only and all payments hereunder shall be made by the Company from its general assets at the time and in the manner provided for in the Plan. No funds, securities or other property of any nature shall be segregated or earmarked for any current or former Participant, beneficiary or other person, and his or her sole right is as a general creditor of the Company with an unsecured claim against its general assets.

(b) **Non-Alienation of Benefits**. Neither a Participant nor any other person shall have any rights to sell, assign, transfer, pledge, anticipate, or otherwise encumber the amounts, if any, payable under the Plan to the Participant or any other person. Any attempted sale, assignment, transfer or pledge shall be null and void and without any legal effect. No part of the amounts payable under the Plan shall be subject to seizure or sequestration for the payment of any debts, judgments, alimony or separate maintenance owed by a Participant or any other person, nor be transferable by operation of law in the event of a Participant's or any other person's bankruptcy or insolvency.

(c) **Section 409A**. Notwithstanding any provision of the Plan to the contrary, the Plan will be construed, administered or deemed amended as necessary to comply with the requirements of Section 409A to avoid taxation under Section 409A to the extent Section 409A applies to the Plan. Each payment and benefit hereunder shall constitute a "separately identified" amount within the meaning of Treasury Regulation §1.409-2(b)(2). The Committee, in its sole discretion shall determine the requirements of Section 409A that are applicable to the Plan and shall interpret the terms of the Plan in a manner consistent therewith. Under no circumstances, however, shall the Company or any affiliate or any of its or their employees, officers, directors, service providers or agents have any liability to any person for any taxes, penalties or interest due on amounts paid or payable under the Plan, including any taxes, penalties or interest imposed under Section 409A.

(d) **No Stockholder Rights**. Neither the Participant nor any other person shall have any rights as a stockholder of the Company with respect to the Deferred Stock Units credited to the Participant's Account until the shares of Common Stock are issued to the Participant (or the beneficiary of the Participant).

(e) **Severability**. If any provision of the Plan shall be held illegal or invalid for any reason, such illegality or invalidity shall not affect the remaining provisions of the Plan, and the Plan shall be enforced as if the invalid provisions had never been set forth therein.

(f) **Successors in Interest**. The obligation of the Company under the Plan shall be binding upon any successor or successors of the Company, whether by merger, consolidation, sale of assets or otherwise, and for this purpose reference herein to the Company shall be deemed to include any such successor or successors.

(g) **Governing Law; Interpretation**. The Plan shall be construed and enforced in accordance with, and governed by, the laws of the State of Delaware, without giving effect to principles of conflict of laws.

Redacted Exhibit: This Exhibit contains certain identified information that has been excluded because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed. Redacted information is identified by [*],

FOURTH AMENDED AND RESTATED

LIMITED LIABILITY COMPANY AGREEMENT

OF

DIAMOND STATE GENERATION PARTNERS, LLC

dated as of December 23, 2019

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Exhibit E	Major Decisions
Exhibit F	Form of Operations Report
Exhibit G	Form of Class B Draw Request
Exhibit H	Form of Class C Draw Request

FOURTH AMENDED AND RESTATED

LIMITED LIABILITY COMPANY AGREEMENT

OF

DIAMOND STATE GENERATION PARTNERS, LLC

THIS FOURTH AMENDED AND RESTATED LIMITED LIABILITY COMPANY AGREEMENT (this "Agreement") of DIAMOND STATE GENERATION PARTNERS, LLC, a Delaware limited liability company (the "Company"), is made and entered into as of December 23, 2019 by and among Diamond State Generation Holdings, LLC, a Delaware limited liability company (the "Class A Member"), SP Diamond State Class B Holdings, LLC, a Delaware limited liability company ("Southern" or the "Class B Member") and Assured Guaranty Municipal Corp., a New York insurance company ("Class C Member"), and acknowledged and agreed for purposes of Section 8.6(g), the Company. This Agreement amends and restates the Third Amended and Restated Limited Liability Company Agreement of the Company, dated as of June 14, 2019, including all amendments thereto (the "Third A&R LLCA"), in its entirety in accordance with the following terms and conditions.

Preliminary Statements

WHEREAS, the Company is organized under the provisions of the Delaware Limited Liability Company Act (as amended from time to time, the "Act"). The Certificate of Formation (as amended and restated from time to time, the "Certificate" or "Certificate of Formation") was filed on April 14, 2011 with the Secretary of State of the State of Delaware. Pursuant to that certain Certificate of Amendment of Certificate of Formation of Germinis 2011 Generation Partners, LLC, filed on May 26, 2011 with the Secretary of State of the State of Delaware by an authorized person under Section 18-202 of the Act, the Certificate was amended on May 27, 2011 to reflect a change in name from "Germinis 2011 Generation Partners, LLC" to "Diamond State Generation Partners, LLC";

WHEREAS, pursuant to the Equity Capital Contribution Agreement among Bloom, the Company, the Class A Member, the Class B Member and the Class C Member, dated as of the date hereof (the "ECCA"), the Class C Member has agreed to make capital contributions to the Company, including one on the date hereof, in return for the issuance of 100% of the Class C Membership Interests in the Company; and

WHEREAS, upon issuance of the Class C Membership Interests in the Company, the Members desire to amend and restate the Third A&R LLCA.

NOW, THEREFORE, in consideration of the mutual covenants and agreements contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree, effective as of the date hereof (the "Effective Date"), that:

A. There shall be three classes of Membership Interests, Class A Membership Interests, Class B Membership Interests and Class C Membership Interests, as set forth on Annex II;

B. The Class C Member is admitted to the Company, and the Class A Member, the Class B Member and the Class C Member are the sole Members of the Company on the date hereof; and

C. The Third Amended and Restated Limited Liability Company Agreement of the Company is hereby amended and restated in its entirety as set forth herein.

Article I

DEFINITIONS

1.1 Definitions. Capitalized terms used but not otherwise defined in this Agreement have the meanings given to such terms in Annex I.

ARTICLE II

FORMATION; OFFICES; TERM

2.1 Formation of the Company. The Company is organized under the provisions of the Act. The Certificate was filed on April 14, 2011 with the Secretary of State of the State of Delaware and amended as set forth above to reflect a change in name from "Germinis 2011 Generation Partners, LLC" to "Diamond State Generation Partners, LLC."

2.2 Name. The name of the Company is, and the business of the Company shall be conducted under the name of, "Diamond State Generation Partners, LLC." The name of the Company may be changed from time to time by amendment of the Certificate. The Company may transact business under an assumed name by filing an assumed name certificate in the manner prescribed by Applicable Law.

2.3 Term. The Company's existence shall be perpetual unless earlier terminated pursuant to the provisions of this Agreement.

2.4 Purpose. The Company has been formed for the object and purpose of: (i) installing, owning and operating a number of Systems having an aggregate nameplate capacity of up to 27.5 MW, and consisting of 17.7 MW of Phase 1 New Systems and 9.8 MW of Phase 2 New Systems, (ii) entering into the Southern ECCA, the ECCA, the Phase 1 CapEx Agreement, the Phase 2 CapEx Agreement, the MOMA, the Site Leases, and all other contracts necessary or useful in connection with the purchase, installation, ownership and operation of the Systems and Project, (iii) making tax filings, (iv) requesting Capital Contributions on each Subsequent Funding Date from the Class C Member through Funding Notices and as set forth herein, and (v) all such other actions reasonably related to carrying out the foregoing.

2.5 Powers. The Company shall have the power and authority to do any and all acts necessary or convenient to or for the furtherance of the purposes described herein, and shall have and may exercise all powers and authorities, statutory or otherwise, conferred upon limited liability companies under the laws of the State of Delaware.

2.6 Offices. The registered office of the Company required by the Act to be maintained in the State of Delaware shall be the office of the registered agent named in the Certificate or such other office (which need not be a place of business of the Company) as the Managing Member may designate in the manner provided by Applicable Law. The registered agent of the Company in the

State of Delaware shall be the registered agent named in the Certificate or such other Person or Persons as the Managing Member may designate in the manner provided by Applicable Law. The principal office of the Company shall be 30 Ivan Allen Jr. Blvd., NW, Atlanta, GA 30308, or at such other location as may be from time to time determined by the Managing Member. The Company may have such other offices as the Managing Member may designate.

2.7 Title to Company Assets. Title to Company assets, whether real, personal or mixed and whether tangible or intangible, shall be deemed to be owned by the Company as an entity, and no Member, Managing Member or officer of the Company, individually or collectively, shall have any ownership interest in such Company assets or any portion thereof. Title to any or all of the Company assets shall be held in the name of the Company. All Company assets shall be recorded as the property of the Company in its books and records, irrespective of the name in which record title to such Company assets is held.

2.8 No Partnership Intended. The Members intend that the Company not be a partnership, limited partnership, joint venture or other arrangement other than for tax purposes under the Code, the applicable Treasury Regulations and any state, municipal or other income tax law or regulation, and this Agreement shall not be construed to suggest otherwise.

ARTICLE III

RIGHTS AND OBLIGATIONS OF THE MEMBERS

3.1 Membership Interests.

(a) The Membership Interests comprise 5 Class A Membership Interests, all of which are issued and held by the Class A Member on the Effective Date, 100 Class B Membership Interests, all of which are issued and held by the Class B Member on the Effective Date, and 100 Class C Membership Interests, all of which are issued and held by the Class C Member on the Effective Date. For the avoidance of doubt, the Members intend that the number of Membership Interests of any class shall have no bearing on the aggregate voting, economic or other rights of holders of Membership Interests of that class relative to the aggregate voting, economic or other rights of holders of any other class of Membership Interests, and this Agreement shall be construed consistently with that intent.

(b) The Class A Membership Interests, the Class B Membership Interests and the Class C Membership Interests shall: (i) have the rights and obligations ascribed to such Membership Interests in this Agreement and the Act; (ii) with respect to the Class A Membership Interests, the Class B Membership Interests and the Class C Membership Interests, be evidenced solely by certificates in the forms annexed hereto as Exhibit A, Exhibit B, and Exhibit C respectively, or such other form as may be prescribed from time to time by any Legal Requirements; (iii) be recorded in a register of Membership Interests, which register the Managing Member shall maintain; (iv) be transferable only on recordation of such Transfer in the register of Membership Interest, which recordation the Managing Member shall make, upon compliance with the provisions of Article IX hereof and upon presentation of the certificates duly endorsed for Transfer, or accompanied by assignment documentation in accordance with Article IX; (v) be "securities" governed by Article 8 of the UCC in any jurisdiction (x) that has adopted revisions to Article 8 of the UCC substantially consistent with the 1994 revisions to Article 8 adopted by the American Law Institute and the National Conference of Commissioners on Uniform State Laws and (y) whose laws may be applicable, from time to time, to the issues of perfection, the effect of perfection or non-perfection, and the priority of a security interest in Membership Interests in the Company; and (vi) be personal property.

(c) The Company shall be entitled to treat the registered holder of a Membership Interest, as shown in the register of Membership Interests referred to in Section 3.1(b), as the Member owning such Membership Interest for all purposes of this Agreement, except that the Managing Member may record in the register of Membership Interest any security interest of a secured party pursuant to any security interest permitted by this Agreement.

(d) If a Member Transfers all of its Membership Interest to another Person pursuant to and in accordance with the terms in Article IX (other than a Transfer solely constituting a pledge, mortgage, encumbrance or hypothecation), the transferor shall automatically cease to be a Member.

(e) Notwithstanding anything to the contrary in this Agreement, in the event the Class C Membership Interests are Transferred pursuant to Section 7.1(f) of the ECCA:

(i) Any Phase 1 New Systems Income and Losses that otherwise would be allocated to the Class A Member (in its capacity as the Class A Member) with respect to any period or portion thereof beginning after the date of such Transfer shall instead be allocated to the Class B Member;

(ii) Any amounts that otherwise would be distributed to the Class A Member in its capacity as the Class A Member after the date of such Transfer shall instead be distributed to the Class B Member;

(iii) Any decision, action, approval or consent of the Members after such Transfer that would require the approval or consent of the Class C Member or of holders of any of the Class C Membership Interests but for the application of this Section 3.1(e) shall not require such approval or consent and shall only require the approval or consent of Members holding a majority of the outstanding Class B Membership Interests, if such decision, action, approval or consent relates to any contract or other agreement between the Company and Bloom or any Affiliate of Bloom, to any claims the Company may have against Bloom or any Affiliate of Bloom or to the selection or terms of engagement of a Successor Operator (including, for the avoidance of doubt, any decision, action, approval or consent with respect to any termination of any services under the Administrative Services Agreement, any removal or replacement of the Administrator, any removal or replacement of the Operator pursuant to the MOMA, any termination of the MOMA, any extension of the Warranty Period beyond the Tariff Date pursuant to the MOMA and any agreement to set off any amounts owed by or to the Company under any Transaction Documents, the Phase 1 CapEx Agreement or the Phase 2 CapEx Agreement); and

(iv) If so requested by the Class B Member, the Class B Member and the Class C Member shall work together in good faith to amend this Agreement to the extent necessary to cause the aggregate voting, consent and approval rights possessed by the Class A Member and the Class C Member to be substantially the same as the voting, consent and approval rights possessed by the Class A Member pursuant to the Third A&R LLCA as in effect prior to the amendment and restatement of the Third A&R LLCA by this Agreement.

3.2 Actions by the Members.

(a) Except as otherwise permitted by this Agreement (including Section 3.2(e) below), all actions of the Members shall be taken at meetings of the Members which may be requested by any Class B Member or Class C Member for any reason and shall be called by the Managing Member within 10 days following the written request of a Class B Member or a Class C Member. The Members may conduct any Company business at any such meeting that is permitted under the Act or this Agreement. Meetings shall be at a reasonable time and place. Accurate minutes of any meeting shall be taken and filed with the minute books of the Company. Following each meeting, the minutes of the meeting shall be sent promptly to each Member.

(b) Members may participate in any meeting of the Members by means of conference telephone or other communications equipment so that all persons participating in the meeting can hear each other or by any other means permitted by law. Such participation shall constitute presence in person at such meeting.

(c) The presence in person or by proxy of Members owning more than 50% of the aggregate Class B Membership Interests and more than 50% of the aggregate Class C Membership Interests shall constitute a quorum for purposes of transacting business at any meeting of the Members; provided that, in the event that a quorum is not present at or otherwise represented at a meeting of the Members duly called in accordance of this Section 3.2, the Managing Member may call a second meeting to occur no sooner than five (5) Business Days nor later than ten (10) Business Days after such notice from the Managing Member, and if a quorum is not present at such second meeting, the Members in attendance may, nonetheless, approve any actions reasonably necessary to protect the assets or ongoing revenue of the Company. For the avoidance of doubt, no decision or action of the Members (including any Major Decision) shall be agreed at any meeting, or otherwise taken, without a Class Majority Vote.

(d) Written notice stating the place, day and hour of the meeting of the Members, and the purpose or purposes for which the meeting is called, shall be delivered by or at the direction of the Managing Member or of the Member calling such meeting, to each Member of record entitled to vote at such meeting not less than 5 Business Days nor more than 30 days prior to the meeting. Notwithstanding the foregoing, meetings of the Members may be held without notice so long as all the Class B Members and Class C Members are present in person or by proxy.

(e) Any action may be taken by the Members without a meeting if such action is authorized or approved by the written consent of Members representing Members owning more than 50% of the outstanding Class B Membership Interests plus more than 50% of the outstanding Class C Membership Interests. The Members may conduct any Company business or take any action required of Members under this Agreement through written consent. Where action is authorized by written consent no prior notice is required and no meeting of Members needs to be called or noticed. A copy of any action taken by written consent must be sent promptly to all Members and all actions by written consent shall be filed with the minute books of the Company.

(f) (i) No Class A Membership Interest shall be entitled to vote, (ii) each Class B Membership Interest shall be entitled to one vote, and (iii) each Class C Membership Interest shall be entitled to one vote, in each case for purposes of any vote, consent or approval of Members required under this Agreement or the Act. With respect to those matters required or permitted to be voted upon by the Members, or for which a consent or approval of Members is required or permitted (including Major Decisions), the affirmative vote, consent or approval of Members owning more than 50% of the outstanding Class B Membership Interests plus more than 50% of the outstanding Class C Membership Interests shall be required to authorize or approve such matters (including Major Decisions) (a "Class Majority Vote").

3.3 Management Rights. No Member other than the Managing Member shall have any right, power or authority to take part in the management or control of the business of, or transact any business for, the Company, to sign for or on behalf of the Company or to bind the Company in any manner whatsoever. Except as otherwise provided herein, the Managing Member shall not hold out or represent to any third party that any other Member has any such power or right or that any other Member is anything other than a member in the Company. A Member, other than a Member who is the Managing Member, shall not be deemed to be participating in the control of the business of the Company by virtue of its possessing or exercising any rights set forth in this Agreement or the Act or any other agreement relating to the Company.

3.4 Other Activities. Notwithstanding any duty otherwise existing at law or in equity, any Member may engage in or possess an interest in other business ventures of every nature and description, independently or with others, even if such activities compete directly with the business of the Company, and neither the Company nor any of the Members shall have any rights by virtue of this Agreement in and to such independent ventures or any income, profits or property derived from them.

3.5 No Right to Withdraw. Except in the case of Transfers in accordance with Article IX, no Member shall have any right to resign voluntarily or otherwise withdraw from the Company without the prior written consent of each of the remaining Class B Members and Class C Members in their sole and absolute discretion.

3.6 Limitation of Liability of Members.

(a) Each Member and its officers, directors, shareholders, Affiliates, employees and agents (each, a "Member Party") shall (i) have liability limited as described in the Act and other applicable Legal Requirements and (ii) not be liable to the Company or any Member for and be defended, indemnified and held harmless by the Company from any and all judgments, awards, causes of action, lawsuits, suits, proceedings, governmental investigations or audits, losses (including amounts paid in settlement of claims), assessments, fines, penalties, administrative orders or injunctions (including any loss of profits, consequential, punitive, incidental or special damages recovered by any Person other than a Member or an Affiliate of a Member), including interest, penalties, reasonable attorney's fees, disbursements and costs of investigations, deficiencies, levies, duties and imposts ("Claims") arising out of the performance by such Member Party of its obligations under this Agreement so long as (A) the Member Party acted in good faith and in a manner reasonably believed by it to be in the best interest of or not opposed to the interest of the Company and (B) the Member Party's actions did not constitute willful misconduct, fraud or gross negligence or willful breach of any of its covenants under this Agreement. Except as otherwise required by the Act, the debts, obligations and liabilities of the Company, whether arising in contract, tort or otherwise, shall be the debts, obligations and liabilities solely of the Company, and the Members shall not be obligated personally for any of such debts, obligations or liabilities solely by reason of being a Member of the Company.

(b) Each of the Members shall be fully protected in relying in good faith upon the records of the Company and upon such information, opinions, reports or statements presented to the Company by any other Person who is a Member or any officer or employee of the Company, or by any other individual as to matters that such Member reasonably believes are within such other Person's professional or expert competence, including information, opinions, reports or statements as to the value and amount of the assets, liabilities, profits or losses of the Company or any other facts pertinent to the existence and amount of assets from which distributions to the Members might properly be paid. Without limiting the foregoing and notwithstanding anything to the contrary in this Agreement, (i) the Managing Member shall be fully protected in relying on the directions of any other Member (other than any Member holding the same class of Membership Interests as the Managing Member) in connection with any action taken or direction given in accordance with this Agreement and (ii) shall have no liability to the Company or any other Member with respect to any action, omission or decision with respect to the management or operations of the Company if the Managing Member notifies the holders of each class of Membership Interests (other than Class A Membership Interests and any class of Membership Interests held by the Managing Member) of such action, omission or decision as proposed by the Managing Member (such notice, a "Proposed Action Notice") and does not receive written notice of objection to such proposed action, omission or decision from holders of greater than fifty (50%) of each class of Membership Interests required to be so notified within ten (10) Business Days of delivery of such Proposed Action Notice.

(c) To the extent that, at law or in equity, a Member, in its capacity as a member or the Managing Member of the Company or otherwise, has duties (including fiduciary duties) and liabilities relating thereto to the Company or to any Member or other Person bound by this Agreement, such Member, acting under this Agreement, shall not be liable to the Company or to any Member or other Person bound by this Agreement for its good faith reliance on the provisions of this Agreement; provided that this Section 3.6(c) shall not be construed as limiting the obligations or liabilities of such Member in any capacity other than a member or the Managing Member, whether pursuant to this Agreement or otherwise. The provisions of this Agreement, to the extent that they restrict or eliminate the duties and liabilities of a Member, in its capacity as a member or the Managing Member of the Company, otherwise existing at law or in equity, are agreed by the Members to replace such other duties and liabilities of such Member.

(d) Except as otherwise provided in Section 9.10 hereof with respect to liability resulting from fraud or willful misconduct, with respect to its failure to pay any amount due to any Indemnified Parties under the Transaction Documents or with respect to Third Party claims, no Member, in its capacity as Managing Member or otherwise, shall have any liability of any kind to any other Member under this Agreement for monetary damages in an amount that would exceed its aggregate obligation to indemnify the Class A Indemnified Parties, the Class B Indemnified Parties or the Class C Indemnified Parties, as applicable, pursuant to Section 9.10.

(e) No Member, in its capacity as Managing Member, as long as such capacity shall exist, shall have any liability to the Company, a Member, or any other Person bound by this Agreement for damages resulting from any actions by the Operator (including any breach or breaches of any of the Operator's obligations, covenants or agreements under the MOMA or from any actions by any other Successor Operator engaged to operate and maintain the Project pursuant to Section 8.2(d)).

(f) Powers and Immunities of Managing Member under Section 8.6.

(i) Powers and Immunities. Managing Member shall not have any duties or responsibilities under Section 8.6 except those expressly set forth in Section 8.6. Managing Member shall take action under Section 8.6 only upon receipt of a completed Draw Request as set forth in Section 8.6. Whenever in the administration of Section 8.6 the Managing Member shall deem it necessary or desirable that a factual matter be proved or established in connection with Managing Member taking, suffering or omitting to take any action under Section 8.6, such matter may be deemed to be conclusively proved or established by a certificate of an authorized officer of the Class B Member in the case of any action relating to a Class B Draw Request or the Class C Member in the case of any action relating to a Class C Draw Request. Managing Member shall have the right at any time to seek instructions concerning the administration of Section 8.6 from a Class Majority Vote or any court of competent jurisdiction. Managing Member shall have no obligation to expend or risk its own funds or otherwise incur any financial liability in the performance of any of its duties under Section 8.6.

(ii) Reliance. Under Section 8.6, Managing Member shall be entitled to conclusively rely upon and shall not be bound to make any investigation into the facts or matters stated in any Draw Request believed by it to be genuine and to have been signed or sent by or on behalf of the proper Person or Persons and shall have no liability for its actions taken, suffered or omitted in good faith reliance thereon. Managing Member shall in all cases be fully protected in acting, or in refraining from acting, under Section 8.6 in accordance with a request of a Class Majority Vote, and such request and any action taken or failure to act pursuant thereto shall be binding upon all the Members and the Company. Managing Member shall be fully justified in failing or refusing to take any action under Section 8.6 if (a) such action would be contrary to Applicable Law, the requirements of the Issuing Bank, or the terms of Section 8.6, (b) such action is not specifically provided for in Section 8.6, or (c) the taking of any such action could expose it to potential liability.

(iii) Court Orders. Managing Member is hereby authorized to obey and comply with all writs, orders, judgments, subpoenas, summons or decrees issued by any court or administrative agency affecting any money, documents or things held by Managing Member pursuant to Section 8.6. Managing Member shall not be liable to any of the parties under Section 8.6, their successors, or personal representatives by reason of Managing Member's compliance with such writs, orders, judgments or decrees, notwithstanding that such writ, order, judgment or decree is later reversed, modified, set aside or vacated.

(iv) No Fiduciary Obligations. Managing Member shall not have any fiduciary obligations or trust obligations with respect to the Letter of Credit and nothing in this Agreement shall be deemed or construed to impose any liability, responsibility, or obligation on Managing Member for payment of any of the expenses in connection with the Letter of Credit.

(v) Indemnification. The Class B Members shall indemnify and hold harmless the Managing Member from any and all liabilities, losses, damages, costs, and expenses of any kind (including, without limitation, the reasonable fees and disbursements of counsel) which may be incurred by the Managing Member relating to or arising out of actions taken by the Managing Member pursuant to Section 8.6 in connection with a Class B Draw Request, except to the extent that any such liabilities, losses, damages, costs or expenses are caused by gross negligence, willful misconduct or bad faith of the Managing Member, as determined pursuant to a final, non-appealable judgment of a court of competent jurisdiction. The Class C Members shall indemnify and hold harmless the Managing Member from any and all liabilities, losses, damages, costs, and expenses of any kind (including, without limitation, the reasonable fees and disbursements of counsel) which may be incurred by the Managing Member relating to or arising out of actions taken by the Managing Member pursuant to Section 8.6 in connection with a Class C Draw Request, except to the extent that any such liabilities, losses, damages, costs or expenses are caused by gross negligence, willful misconduct or bad faith of the Managing Member, as determined pursuant to a final, non-appealable judgment of a court of competent jurisdiction. Each of the Members shall indemnify and hold harmless Managing Member from any and all liabilities, losses, damages, costs, and expenses of any kind (including, without limitation, the reasonable fees and disbursements of counsel) which may be incurred by Managing Member relating to or arising out of Section 8.6 and not described in either of the two preceding sentences, except to the extent that any such liabilities, losses, damages, costs or expenses are caused by gross negligence, willful misconduct or bad faith of Managing Member, as determined pursuant to a final, non-appealable judgment of a court of competent jurisdiction.

3.7 Liability for Deficits. None of the Members shall be liable to the Company for any deficit in its Capital Account, nor shall such deficits be deemed assets of the Company, except to the extent otherwise provided by law with respect to third-party creditors of the Company.

3.8 Company Property. All property owned by the Company, whether real or personal, tangible or intangible and wherever located, shall be deemed to be owned by the Company, and no Member, individually, shall have any ownership of such property.

3.9 Retirement, Resignation, Expulsion, Bankruptcy or Dissolution of a Member. The retirement, resignation, expulsion, Bankruptcy or dissolution of a Member shall not, in and of itself, dissolve the Company. Subject to Section 8.2(g), the successors in interest to the bankrupt Member shall, for the purpose of settling the estate, have all of the rights of such Member, including the same rights and subject to the same limitations that such Member would have had under the provisions of this Agreement to Transfer its Membership Interest. A successor in interest to a Member shall not become a substituted Member except as provided in this Agreement.

3.10 Withdrawal of Capital. No Member shall have the right to withdraw capital from the Company or to receive or demand distributions (except distributions described in Article VI) or return of its Capital Contributions until the Company is dissolved in accordance with this Agreement and applicable provisions of the Act. No Member shall be entitled to demand or receive any interest on its Capital Contributions.

3.11 [Reserved].

3.12 Covenants.

(a) Each Member represents and covenants to the Company and each other Member that (i) it is and will remain a "United States person," as defined in Section 7701(a)(30) of the Code and will not be subject to withholding under Section 1446 of the Code and (ii) it is not and will not become a Disqualified Entity.

(b) The Managing Member covenants to the Company and each other Member that no part of the assets of the Company is or will be used predominantly outside of the United States.

(c) Each Member covenants to the Company and each other Member that it will not take any action that would (i) cause the assets of the Company to become subject to the alternative depreciation system within the meaning of Section 168(g) of the Code or "tax-exempt use property" within the meaning of Section 168(h) of the Code; or (ii) result in the "recapture" under Section 50(a) of the Code of any ITC with respect to the Systems.

(d) The Managing Member shall be required to perform its duties and obligations hereunder in good faith and in a manner reasonably believed to be in the best interest of the Company.

(e) The Managing Member shall cause the Company to file (i) any applications, reports or other filings required to be made by the Company under any federal, state or local Legal Requirements applicable to the Members, the Company or the Project relating to the ownership, control and operation of the Project by the Company and (ii) any further filings that may be necessary, proper or advisable in connection with the matters referred to in clause (i) above; provided that the Managing Member shall provide the Class B Member and the Class C Member a reasonable opportunity to review and comment on any such filing that is outside of the normal course of operation of the Company or the Project prior to the submission thereof to the applicable Governmental Authority and shall consider in good faith all comments received from the Class B Member and the Class C Member. Each Member shall make their respective required filings under any other applicable Legal Requirements. In connection with the transactions contemplated by this Agreement, each of the Members and the Company shall: (A) cooperate with each other in connection with the making of all filings, notifications and any other material actions pursuant to this Section 3.12(e), including, subject to applicable Legal Requirements, by permitting counsel for the other Parties to review in advance, and consider in good faith the views of the other Parties in connection with, any proposed written communication to any Governmental Authority addressing the terms of this Agreement; and (B) furnish to the other Parties such information and assistance as such Parties may reasonably request in connection with (x) the preparation of any submissions to, or agency proceedings by, any Governmental Authority, or (y) obtaining any consents, approvals or waivers required by any Governmental Authority.

3.13 Closing Obligations. The obligation of the Class C Member to make its Capital Contributions is unconditional, except as provided herein and in the ECCA, and subject to full recourse.

3.14 Events of Default. An event of default with respect to a Member shall occur upon the occurrence of any of the following with respect to such Member: (i) failure by such Member to make any Capital Contribution required to be made by such Member when due or perform any other obligation with respect to such payment and the same is not cured within 5 Business Days after notice that the same is due, (ii) such Member makes a material representation or warranty which was untrue or inaccurate when made, or (iii) a material breach by such Member of any provision in this Agreement. Without in any way limiting any other remedies available to the Class A Member, the Class B Member or the Class C Member hereunder, upon an event of default by any such Member, the other Members shall have the right to suspend performance of its obligations that are prevented by such default.

3.15 Separateness. Each Member and the Company are separate and distinct entities, and the Members agree that the Company shall maintain its existence separate and distinct from any other Person, including, without limitation, adhering to the following:

(a) The Company has not formed, acquired or held and shall not form, acquire or hold any Subsidiary;

(b) The Company has not engaged in, sought, consented to or permitted and shall not engage in, seek, consent to or permit any dissolution, winding up, liquidation, consolidation or merger or any sale or other transfer of all or substantially all of its assets or any sale of assets outside the ordinary course of its business;

(c) The Company shall not incur any debt or contingent liabilities except as permitted by this Agreement;

(d) The Company shall not commingle assets with those of any other Person and shall hold its assets in its own name;

(e) The Company shall conduct its own business in its own name and not in the name of any other Person, including any Member;

(f) The Company shall maintain bank accounts (if any), books and records separate from any other Person;

(g) The Company shall observe all formalities of this Agreement and the Certificate of Formation;

(h) The Company shall not identify itself as a department or division of any other Person;

(i) The Company shall not acquire obligations or securities of its Members;

(j) The Company shall pay its own liabilities out of its own funds;

(k) The Company shall maintain adequate capital in light of its contemplated business operations and liabilities;

(l) The Company shall use its own stationery, invoices and checks separate from those of any other Person, including any Member;

(m) The Company shall pay the salaries of its own employees, if any, and maintain a sufficient number of employees in light of its contemplated business operations;

(n) The Company shall not guarantee or become obligated for the debts of any other entity or hold out its credit as being available to satisfy the obligations of any other Person;

(o) The Company shall not make any loans to any other Person other than in accordance with this Agreement;

(p) The Company shall conduct all transaction and maintain relationship with any Affiliates on an arm's length basis and on commercially reasonable terms;

(q) The Company shall not pledge its assets for the benefit of any other Person; and

(r) The Company shall hold itself out as a separate entity, and shall use commercially reasonable efforts to correct any known misunderstanding regarding its separate identity.

ARTICLE IV

CAPITAL CONTRIBUTIONS; CAPITAL ACCOUNTS

4.1 Capital Contributions.

(a) The Class C Member will make Capital Contributions to the Company at the times and in the amounts required under the ECCA. No Member will be obligated to make any Capital Contributions to the Company, except for the Capital Contributions of the Class C Member as required under the ECCA.

(b) The Managing Member shall be entitled to cause the Company to enforce the obligations of the Class C Member with respect to the Initial Capital Contribution or either Subsequent Capital Contribution to be made on or after the Effective Date, and the Company shall have all remedies available at law or in equity in the event any such obligation is not satisfied.

4.2 Capital Accounts.

(a) A Capital Account will be established and maintained for each Member in the manner required by the Treasury Regulations under Section 704(b) of the Code. If there is more than one Member in a class, then each of the Members in that class will have a separate Capital Account.

(b) A Member's Capital Account will be increased by (i) the amount of money the Member contributes to the Company, (ii) the Gross Asset Value of any property the Member contributes to the Company (net of liabilities secured by the property that the Company is considered to assume or take subject to under Section 752 of the Code), and (iii) the income and gain (or items thereof) that the Member is allocated by the Company, including any income and gain exempted from tax and gain described in Section 4.2(c). A Member's Capital Account will be decreased by (iv) the amount of money distributed to the Member by the Company, (v) the Gross Asset Value of any property distributed to the Member by the Company (net of liabilities secured by the property that the Member is considered to assume or take subject to under Section 752 of the Code), (vi) any expenditures of the Company described in Section 705(a)(2)(B) of the Code (i.e., expenditures that cannot be capitalized or deducted in computing taxable income) that are allocated to the Member, and (vii) losses and deductions (or items thereof) that are allocated by the Company to the Member, including losses described in Section 4.2(c), but the Capital Account will not be reduced again under this clause (vii) for expenditures that already reduced it under clause (vi).

(c) The Gross Asset Values of all the Company assets will be adjusted to equal their respective Gross Fair Market Values upon the occurrence of any of the following events: (i) if any new or existing Member contributes more than a de minimis amount of money or property, (ii) if more than a de minimis amount of money or other property is distributed by the Company to a Member to redeem its Membership Interest, or (iii) if the Company is liquidated within the meaning of Treasury Regulations Section 1.704-1(b)(2)(ii)(g). Following the occurrence of an event in clauses (i) and (ii) the Managing Member will make an adjustment to Gross Asset Value only if it reasonably determines, after Consultation with the other Members, that the adjustments are necessary or appropriate to reflect the relative economic interests of the Members in the Company. In addition, the Gross Asset Value of any Company asset that is distributed to a Member will be adjusted to equal the Gross Fair Market Value of the asset on the applicable date of distribution. In the event the Gross Asset Value of any item of the Company's property is adjusted as described in this Section 4.2(c), then the amount of the adjustment will be treated as an item of gain (if the adjustment increases the Gross Asset Value) or an item of loss (if the adjustment decreases the Gross Asset Value) from the disposition of such property.

(d) Within thirty (30) days after the Effective Date, the Managing Member shall determine the Capital Account balance of each Member as of the Effective Date and shall deliver to each of the Members a schedule setting forth such balances. If any Member disputes the Managing Member's determination of such Capital Account balances and notifies the Managing Member and the other Members in writing of such dispute within ten (10) Business Days after receiving the schedule setting forth the Managing Member's determination, the Members will work together in good faith to resolve such dispute.

(e) If all or a portion of a Membership Interest in the Company is Transferred in accordance with the terms of this Agreement (other than a Transfer solely constituting a pledge, mortgage, encumbrance or hypothecation), then the transferee will succeed to the Capital Account of the transferor to the extent it relates to the Membership Interest so Transferred.

(f) The provisions of this Agreement relating to maintenance of Capital Accounts are intended to comply with Treasury Regulation Sections 1.704-1(b) and 1.704-2, and will be interpreted and applied in a manner consistent with such Treasury Regulations or any successor provisions.

ARTICLE V

ALLOCATIONS

5.1 Maintenance of Separate Records for Phase 1 New Systems and Phase 2 New Systems. In order to properly carry out the allocations of income and loss as provided in this Article V, the income and loss from the ownership and operation of each of the Phase 1 New Systems and the Phase 2 New Systems during each Accounting Period shall be determined as set forth below and in Section 5.2.

(a) For purposes of this Agreement, "Phase 1 New Systems Income and Losses" shall mean, for any Accounting Period, the net income or loss attributable to the Phase 1 New Systems, and all constituent items of income, gain, loss, and deduction included therein, determined by assigning to the Phase 1 New Systems (i) a pro rata share of all Operating Revenue, Extraordinary Shared Facility Revenue, and Extraordinary Shared Facility Maintenance Expenses for such Accounting Period based upon the Phase 1 New Systems Output Percentage for such Accounting Period, (ii) all Specially Allocated Phase 1 New System Items for such Accounting Period, and (iii) a pro rata share of Indirect Operating Expense for such Accounting Period based upon the Phase 1 New Systems Capacity Percentage for such Accounting Period.

(b) For purposes of this Agreement, "Phase 2 New Systems Income and Losses" shall mean, for any Accounting Period, the net income or loss attributable to the Phase 2 New Systems, and all constituent items of income, gain, loss, and deduction included therein, determined by assigning to the Phase 2 New Systems (i) a pro rata share of all Operating Revenue, Extraordinary Shared Facility Revenue, and Extraordinary Shared Facility Maintenance Expenses for such Accounting Period based upon the Phase 2 New Systems Output Percentage for such Accounting Period, (ii) all Specially Allocated Phase 2 New System Items for such Accounting Period, and (iii) a pro rata share of Indirect Operating Expense for such Accounting Period based upon the Phase 2 New Systems Capacity Percentage for such Accounting Period.

(c) The Members acknowledge and agree that the intent of the definitions of Phase 1 New Systems Income and Losses and Phase 2 New Systems Income and Losses under Section 5.1(a) and 5.1(b) and the special allocations of Phase 1 New Systems Income and Losses and Phase 2 New Systems Income and Losses under Section 5.3(a)(i) is to ensure that (i) 100% of the results of operation of the Phase 1 New Systems will be allocated either to the Class A Member or the Class B Member, in accordance with Section 5.3, and 100% of the results of operation of the Phase 2 New Systems will be allocated to the Class C Member, (ii) that 100% of the ITC and any state income tax credits attributable to the Phase 1 New Systems will be allocated to the Class B Member and 100% of the ITC and any state tax credits attributable to the Phase 2 New Systems will be allocated to the Class C Member, and (iii) that no ITC with respect to the Phase 1 New Systems and the Phase 2 New Systems will be subject to recapture under Code section 50, and the provisions of this Article V shall be interpreted in a manner that is consistent with that intent.

(d) For purposes of this Agreement, the following terms shall have the following meanings:

(i) "Accounting Period" means each calendar month.

(ii) "Extraordinary Shared Facility Maintenance Expenses" shall mean, for any Accounting Period, any expenses recognized under GAAP during such Accounting Period that are not due to a casualty or damages to equipment for which insurance proceeds will be available and are either "exclusions" to repairs of the Shared Facilities under Section 4.8 of the MOMA, or that relate to replacement or repair of the Shared Facilities that are not merely ordinary maintenance and that are expected to extend the useful life of any portion of the Shared Facilities for more than one year.

(iii) "Extraordinary Shared Facility Revenue" shall mean, for any Accounting Period, any revenues recognized under GAAP during such Accounting Period (A) from any insurance proceeds due to damage or destruction of any Shared Facilities, to the extent that any such amounts received are in excess of the amount required to repair or replace such Shared Facilities, and (B) from any Governmental Authority as a result of payment for compensation due to any action in condemnation or eminent domain of all or any portion of the Shared Facilities.

(iv) "Indirect Operating Expenses" shall mean, for any Accounting Period, all expenses recognized under GAAP during such Accounting Period that do not directly relate solely to the operation of the Phase 1 New Systems or solely to the operation of the Phase 2 New Systems, including, without limitation, the charges for all common utility services, rent, common permit fees, PJM meter charges and administrative fees and expenses (including, without limitation, bank charges, legal fees, and accounting and auditor fees), but excluding any items included in Extraordinary Shared Facility Maintenance Expenses, Specially Allocated Phase 1 New System Items or Specially Allocated Phase 2 New System Items; provided, however, that Indirect Operating Expenses shall not include charges for natural gas required by the Systems at the Site and for which reimbursement has or will be sought or advance payment has been made.

(v) "Operating Revenue" shall mean, for any Accounting Period all revenues recognized under GAAP during such Accounting Period from the operation of the Project including net revenues from the sale of power, capacity and ancillary services into the PJM Market, revenues recognized from Delmarva or any successor in accordance with the Tariffs or any replacement thereof, interest and investment income, revenues from the Efficiency Guaranty (as defined in the MOMA), and any business interruption insurance proceeds or similar revenue replacement or revenue substitution insurance or other contracts, but excluding (A) any items included in Extraordinary Shared Facility Revenue, any Specially Allocated Phase 1 New System Items, and any Specially Allocated Phase 2 New System Items, (B) tax credits or tax benefits of any kind otherwise governed by Section 5.1(d)(x) or Section 5.1(d)(xi), (C) reimbursements or "pass-throughs" for the purchase of natural gas, (D) insurance proceeds otherwise governed by Section 5.1(d)(iii) (other than business interruption insurance proceeds), (E) warranty or guaranty payments by any manufacturer, contractor or operator of the Facilities or any part thereof otherwise governed by Section 5.1(d)(x) or Section 5.1(d)(xi), or (F) indemnification otherwise governed by Section 5.1(d)(x) or Section 5.1(d)(xi).

(vi) "Phase 1 New Systems Output Percentage" shall mean, for any Accounting Period in which Phase 1 New Systems are in operation, the percentage determined by dividing the total output of the Phase 1 New Systems (measured in kWh as determined by the Bloom System Meters (as defined in the MOMA)) for such Accounting Period by the total combined output of the Phase 1 New Systems and the Phase 2 New Systems (measured in kWh as determined by the Bloom System Meters (as defined in the MOMA)) for such Accounting Period.

(vii) "Phase 2 New Systems Output Percentage" shall mean, for any Accounting Period in which Phase 2 New Systems are in operation, the percentage determined by dividing the total output of the Phase 2 New Systems (measured in kWh as determined by the Bloom System Meters (as defined in the MOMA)) for such Accounting Period by the total combined output of the Phase 1 New Systems and the Phase 2 New Systems (measured in kWh as determined by the Bloom System Meters (as defined in the MOMA)) for such Accounting Period.

(viii) "Phase 1 New Systems Capacity Percentage" shall mean, for any Accounting Period in which Phase 1 New Systems are in operation, the percentage determined by dividing the total nameplate capacity of the Phase 1 New Systems (measured in MW) for such Accounting Period by the total nameplate capacity of the Phase 1 New Systems and the Phase 2 New Systems (measured in MW) for such Accounting Period; provided, if during a given Accounting Period the total nameplate capacity of either the Phase 1 New Systems or the Phase 2 New Systems at the beginning of such Accounting Period differs from the total nameplate capacity of such Systems at the end of such Accounting Period, then the nameplate capacity of such Systems shall be calculated as the average of the daily nameplate capacity of such Systems during such Accounting Period.

(ix) "Phase 2 New Systems Capacity Percentage" shall mean, for any Accounting Period in which Phase 2 New Systems are in operation, the percentage determined by dividing the total nameplate capacity of the Phase 2 New Systems (measured in MW) for such Accounting Period by the total nameplate capacity of the Phase 1 New Systems and the Phase 2 New Systems (measured in MW) for such Accounting Period; provided, if during a given Accounting Period the total nameplate capacity of either the Phase 1 New Systems or the Phase 2 New Systems at the beginning of such Accounting Period differs from the total nameplate capacity of such Systems at the end of such Accounting Period, then the nameplate capacity of such Systems shall be calculated as the average of the daily nameplate capacity of such Systems during such Accounting Period.

(x) "Specially Allocated Phase 1 New System Items" shall mean, for any Accounting Period, all revenue, expenses, tax credits, depreciation, income, gains and losses recognized under GAAP during such Accounting Period that are unique or related only to the operation, ownership or disposition of the Phase 1 New Systems, such as, without limitation, fees under the MOMA for the Phase 1 New Systems, other costs and expenses specifically related to the Phase 1 New Systems, revenue and income in respect of recoveries under the other Transaction Documents that are unique to the Phase 1 New Systems (including, without limitation, payments pursuant to the Output Guaranty and the Output Warranty (in each case as defined in the MOMA) pertaining only to the Phase 1 New Systems and any indemnification payments pertaining only to the Phase 1 New Systems), and gain or loss from the sale or disposition of Phase 1 New Systems.

(xi) "Specially Allocated Phase 2 New System Items" shall mean, for any Accounting Period, all revenue, expenses, tax credits, depreciation, income, gains and losses recognized under GAAP during such Accounting Period that are unique or related only to the operation, ownership or disposition of the Phase 2 New Systems, such as, without limitation, fees under the MOMA for the Phase 2 New Systems, other costs and expenses specifically related to the Phase 2 New Systems, revenue and income in respect of recoveries under the other Transaction Documents that are unique to the Phase 2 New Systems (including, without limitation, payments pursuant to the Output Guaranty and the Output Warranty (in each case as defined in the MOMA) pertaining only to the Phase 2 New Systems and indemnification payments pertaining only to the Phase 2 New Systems), and gain or loss from any sale or disposition of Phase 2 New Systems.

(e) For purposes of determining the Phase 1 New Systems Output Percentage and the Phase 2 New Systems Output Percentage for any Accounting Period, in the event of a Bloom Systems Meter (as defined in the MOMA) malfunction, the parties hereto will cooperate in good faith to develop appropriate adjustments.

5.2 Revenue and Expense Statement.

(a) Notwithstanding anything in this Agreement to the contrary, the Managing Member shall cause the Administrator to prepare and deliver to Class B Member and the Class C Member within twenty (20) days after the end of each Accounting Period a statement (the "Revenue and Expense Statement") setting forth the Administrator's good faith determination of each of the Members' allocated (in accordance with Section 5.1 and 5.3) revenues, expenses, income, gains and losses for such Accounting Period including the information set forth in Schedule 5.2, and prepared in accordance with GAAP.

(b) After receipt of each Revenue and Expense Statement from the Administrator, the Class B Member and the Class C Member shall have thirty (30) days to review the Revenue and Expense Statement. During each such thirty (30) day period, each such Member and its Representatives shall have reasonable access to the accounting records of the Company and to such historical financial information relating to the Revenue and Expense Statement as such Member may reasonably request for the purpose of reviewing the Revenue and Expense Statement and preparing a Statement of Objections (as defined below).

(c) On or prior to the thirtieth (30th) day after the receipt of each Revenue and Expense Statement by the Class B Member and the Class C Member, each such Member may object to the Revenue and Expense Statement by delivering to the other such Member a written statement setting forth the objecting Member's objections in reasonable detail, indicating each disputed item or amount and the basis for such objecting Member's disagreement therewith (the "Statement of Objections"). If either the Class B Member or the Class C Member timely delivers the Statement of Objections, the Class B Member and the Class C Member shall negotiate in good faith to resolve such objections within thirty (30) days after the delivery of the Statement of Objections. If the Class B Member and the Class C Member are able to resolve such objections within such thirty (30) day period, the Revenue and Expense Statement and the calculation of the Phase 1 New Systems Income and Losses and the Phase 2 New Systems Income and Losses (and all components thereof), with such changes as may have been previously agreed upon in writing by such Members, shall be final and binding.

(d) If the Class B Member and the Class C Member fail to reach an agreement with respect to all of the matters set forth in the Statement of Objections within the thirty (30) day period following delivery of the Statement of Objections, then any amounts remaining in dispute shall be submitted for resolution to the Independent Accountant who, acting as an expert and not an arbitrator, shall resolve the amounts in dispute only and make any resulting adjustments to the Revenue and Expense Statement and the calculation of the Phase 1 New Systems Income and Losses and/or the Phase 2 New Systems Income and Losses (and all applicable components thereof remaining in dispute) contained therein in each case in accordance with the terms of this Agreement. The Independent Accountant shall only decide the specific items under dispute by the Class B Member and the Class C Member, and may engage any engineers or other professionals as the Independent Accountant deems necessary to assist with such determination.

(e) The fees and expenses of the Independent Accountant (and any third parties engaged by the Independent Accountant) shall be paid fifty percent (50%) by the Class B Member and fifty percent (50%) by the Class C Member; provided, however, that if either, but not both, such Member's initial submission as to net income or net income allocations varies by more than five percent (5%) from the determination of the Independent Accountant, that party will pay the fees and expenses of the Independent Accountant.

(f) The Independent Accountant shall make a determination as soon as reasonably practicable within thirty (30) days (or such other time as the Class B Member and the Class C Member may agree in writing) after its engagement, and the Independent Accountant's resolution of the disputed items and its adjustments to the Revenue and Expense Statement and the calculation of the Phase 1 New Systems Income and Losses and/or the Phase 2 New Systems Income and Losses (and any applicable components thereof) contained therein shall be conclusive and binding upon the Members, absent fraud.

5.3 Allocations. After giving effect to the allocations in Section 5.4, for purposes of maintaining Capital Accounts, all items of Company income, loss, gain, deduction and credit for any Fiscal Year will be allocated among the Members as follows:

(a) Subject to Section 5.3(b) and Section 3.1(e):

(i) on and after the date hereof and until the Tariff Date, 100% of Phase 1 New Systems Income and Losses shall be allocated to the Class B Member, and 100% of Phase 2 New Systems Income and Losses shall be allocated to the Class C Member; and

(ii) on and after the Tariff Date, 5% of Phase 1 New Systems Income and Losses shall be allocated to the Class A Member, 95% of Phase 1 New Systems Income and Losses shall be allocated to the Class B Member, and 100% of Phase 2 New Systems Income and Losses shall be allocated to the Class C Member.

Notwithstanding anything to the contrary in this Section 5.3(a), 100% of any gain or loss resulting from any sale or other disposition of the Phase 1 New Systems shall be allocated to the Class B Member and 100% of any gain or loss resulting from any sale or other disposition of the Phase 2 New Systems shall be allocated to the Class C Member.

(b) No losses or deductions may be allocated to a Member pursuant to this Section 5.3 to the extent the allocation would lead to or increase a deficit in such Member's Adjusted Capital Account. Losses or deductions that cannot be allocated to a Member by reason of this Section 5.3(b) will be allocated to the other Members.

5.4 Adjustments. The following adjustments will be made in the allocations in Section 5.3 to comply with Treasury Regulation Section 1.704-1(b):

(a) In any Fiscal Year in which there is a net decrease in Company Minimum Gain, income and gain in the amount of the net decrease will be allocated to Members in the ratio required by Treasury Regulation Section 1.704-2. This provision is intended to comply with the minimum gain chargeback requirement in Treasury Regulation Section 1.704-2(f) and will be interpreted consistently therewith.

(b) In any Fiscal Year in which there is a net decrease in Minimum Gain Attributable to Member Nonrecourse Debt, income and gain in the amount of the net decrease will be allocated to each Member who was considered to have had a share of such minimum gain at the beginning of the Fiscal Year in the ratio required by Treasury Regulation Sections 1.704-2(i)(4) and 1.704-2(j)(2)(ii). This provision is intended to comply with the partner nonrecourse debt minimum gain chargeback requirement in Treasury Regulation Section 1.704-2(i)(4) and will be interpreted consistently therewith.

(c) In the event any Member unexpectedly receives any adjustments, allocations or distributions described in Treasury Regulation Sections 1.704-1(b)(2)(ii)(d)(4), (5) or (6), gross income will be specially allocated to each such Member in an amount and manner sufficient to eliminate, to the extent required by the Treasury Regulations, any deficit in the Member's Adjusted Capital Account as quickly as possible. However, an allocation will be made under this Section 5.4(c) only if and to the extent that the Member would have a deficit in its Adjusted Capital

Account after all other allocations provided for in Sections 5.3 and 5.4 have been tentatively made as if this Section 5.4(c) were not in this Agreement.

(d) In the event that any Member has a deficit in its Adjusted Capital Account at the end of any Fiscal Year after all the other allocations in Section 5.3 and 5.4 have been taken into account, then the Member will be specially allocated items of Company income and gain as quickly as possible to eliminate the deficit.

(e) Nonrecourse Deductions for any Fiscal Year will be allocated to the Members in the same ratio as other income and loss under Section 5.3(a).

(f) Any Member Nonrecourse Deductions for any Fiscal Year will be allocated to the Member who bears the economic risk of loss with respect to the Member Nonrecourse Debt to which the Member Nonrecourse Deductions are attributable in accordance with Treasury Regulation Section 1.704-2(i)(1).

(g) If the Company distributes property to a Member in liquidation of the Membership Interest of the Member and there is an adjustment in the adjusted tax basis of Company property under Section 734(b) of the Code, there will be a corresponding adjustment to the Capital Account of the Member receiving the distribution. If the Company distributes cash to a Member in excess of its outside basis in its Membership Interest, leading to an adjustment in the inside basis of the Company property under Section 734(b) of the Code, solely for purposes of adjusting Capital Accounts of the Members, the adjustment in the inside basis will be treated as gain or loss and be allocated among the Members in the same ratio as other gain or loss for the Fiscal Year in which the adjustment occurs. This provision is intended to comply with Treasury Regulation Sections 1.704-1(b)(2)(iv)(m)(2) and (4) and will be interpreted consistently therewith.

(h) The allocations in this Section 5.4 are required to comply with the Treasury Regulations. To the extent the Company can do so consistently with the Treasury Regulations, the net amount of the allocations under this Article V and Section 10.2 to each Member will be the net amount that would have been allocated to each Member if this Agreement did not have this Section 5.4.

5.5 Tax Allocations.

(a) All tax items of Company income, gain, deductions and losses for each Fiscal Year will be allocated in the same proportions as the allocations of book items of Company income, gain, deductions and losses were made for such Fiscal Year pursuant to Sections 5.3 and 5.4, provided, however, that (i) all state and federal tax credits (including, without limitation, the ITC) pertaining to the Phase 1 New Systems shall be allocated to the Class B Member in accordance with its 100% interest in Phase 1 New Systems Income and Losses and (ii) all state and federal tax credits (including, without limitation, the ITC) pertaining to the Phase 2 New Systems shall be allocated to the Class C Member in accordance with its 100% interest in Phase 2 New Systems Income and Losses.

(b) Notwithstanding Section 5.5(a), if, as a result of contributions of property by a Member to the Company or an adjustment to the Gross Asset Value of Company assets pursuant to this Agreement, there exists a variation between the adjusted basis of an item of Company property for United States federal income tax purposes and as determined under the definition of Gross Asset Value, allocations of income, gain, loss, and deduction will be allocated among the Members so as to take into account any variation between the adjusted basis of such property to the Company for United States federal income tax purposes and its initial Gross Asset Value using the traditional method pursuant to Treasury Regulation Section 1.704-3(b).

(c) To the extent that an adjustment to the adjusted tax basis of any Company asset is made pursuant to Section 743(b) of the Code as the result of a purchase of a Membership Interest in the Company, any adjustment to the depreciation, amortization, gain or loss resulting from such adjustment will affect the transferee only and will not affect the Capital Account of the transferor or transferee. In such case, the transferee will be required to agree to provide to the Company (i) information about the allocation of any step-up or step-down in basis to the Company's assets and (ii) the depreciation or amortization method for any step-up in basis to the Company's assets.

(d) Solely for purposes of determining a Member's proportionate share of the "excess non-recourse liabilities" of the Company within the meaning of Treasury Regulation Section 1.752-3(a)(3), each Member's share of such liability shall be consistent with the ratio of the Phase 1 New Systems Income and Losses over the sum of the Phase 1 New Systems Income and Losses and the Phase 2 New Systems Income and Losses, as to the Class B Member, and the ratio of the Phase 2 New Systems Income and Losses over the sum of the Phase 1 New Systems Income and Losses and the Phase 2 New Systems Income and Losses, as to the Class C Member, then in effect.

5.6 Transfer or Change in Company Interest. If the respective Membership Interests or allocation ratios described in this Article V of the existing Members in the Company change or if a Membership Interest is Transferred in compliance with this Agreement to any other Person, then, for the Fiscal Year in which the change or Transfer occurs, all income, gains, losses, deductions, credits and other tax incidents resulting from the operations of the Company shall be allocated, as between the Members for the Fiscal Year in which the change occurs or between the transferor and transferee, by taking into account their varying interests using the proration method permitted by Treasury Regulation Section 1.706-1(c)(2)(ii), unless otherwise agreed by all the Members.

5.7 Timing of Allocations. Items of income, gain, loss, deduction and credit will be allocated to the Members pursuant to this Article V as of the last day of each Fiscal Year; provided that such items shall also be allocated at such times as the Gross Asset Values of the Company's assets are adjusted pursuant to Section 4.2(c) and prior to any distribution under Section 10.2.

ARTICLE VI

DISTRIBUTIONS

6.1 Distributions.

(a) With respect to all periods prior to the Tariff Date, except as provided otherwise in Sections 6.1(d) through 6.1(h) or Section 10.2, Company Distributable Cash will be distributed to the Members on each Distribution Date as follows:

(i) to the Class B Member, any such Company Distributable Cash specifically relating to the Phase 1 New Systems or otherwise arising solely from the Phase 1 New Systems Income and Losses;

(ii) to the Class C Member, any such Company Distributable Cash specifically relating to the Phase 2 New Systems or otherwise arising solely from the Phase 2 New Systems Income and Losses; and

(iii) with respect to any Company Distributable Cash received with respect to an Accounting Period that does not specifically relate to either the Phase 1 New Systems or the Phase 2 New Systems and does not otherwise arise solely from either the Phase 1 New Systems Income and Losses or the Phase 2 New Systems Income and Losses, (A) a percentage equal to the Phase 1 New Systems Capacity Percentage for such Accounting Period to the Class B Member and (B) a percentage equal to the Phase 2 New Systems Capacity Percentage for such Accounting Period to the Class C Member;

with respect to clauses (i) through (iii), exclusive of any depreciation or amortization.

(b) With respect to all periods on and after the Tariff Date, except as provided otherwise in Section 3.1(e), Sections 6.1(c) through 6.1(h) or Section 10.2, Company Distributable Cash will be distributed to the Members on each Distribution Date as follows:

(i) to the Class A Member, 5% of any such Company Distributable Cash specifically relating to the Phase 1 New Systems or otherwise arising solely from the Phase 1 New Systems Income and Losses;

(ii) to the Class B Member, 95% of any such Company Distributable Cash specifically relating to the Phase 1 New Systems or otherwise arising solely from the Phase 1 New Systems Income and Losses; and

(iii) to the Class C Member, 100% of any such Company Distributable Cash specifically relating to the Phase 2 New Systems or otherwise arising solely from the Phase 2 New Systems Income and Losses; and

(iv) with respect to any Company Distributable Cash received with respect to an Accounting Period that does not specifically relate to either the Phase 1 New Systems or the Phase 2 New Systems and does not otherwise arise solely from either the Phase 1 New Systems Income and Losses or the Phase 2 New Systems Income and Losses, (A) a percentage equal to 5% of the Phase 1 New Systems Capacity Percentage for such Accounting Period to the Class A Member, (B) a percentage equal to 95% of the Phase 1 New Systems Capacity Percentage for such Accounting Period to the Class B Member and (C) a percentage equal to the Phase 2 New Systems Capacity Percentage for such Accounting Period to the Class C Member;

with respect to clauses (i) through (iv), exclusive of any depreciation or amortization.

(c) The Managing Member shall determine the amount of Company Distributable Cash arising solely from the Phase 1 New Systems Income and Losses and the amount of Company Distributable Cash arising solely from Phase 2 New Systems Income and Losses for such purposes by only using (A) cash flows from items of income, revenue and gain included in Phase 1 New Systems Income and Losses to pay expenses and losses included in Phase 1 New Systems Income and Losses, and (B) cash flows from items of income, revenue and gain included in Phase 2 New Systems Income and Losses to pay expenses and losses included in Phase 2 New Systems Income and Losses.

(d) Notwithstanding Section 6.1(a) or 6.1(b) or anything else to the contrary contained herein, before the Tariff Date:

(i) (A) any proceeds derived from any sale or other disposition of any of the Phase 1 New Systems, (B) any proceeds released from any reserves held for the benefit of the Phase 1 New Systems, (C) any insurance proceeds related to the Phase 1 New Systems or (D) any warranty or guaranty payments related to the Phase 1 New Systems shall be distributed 100% to the Class B Member; and

(ii) (A) any proceeds derived from any sale or other disposition of any of the Phase 2 New Systems, (B) any proceeds released from any reserves held for the benefit of the Phase 2 New Systems, (C) any insurance proceeds related to the Phase 2 New Systems or (D) any warranty or guaranty payments related to the Phase 2 New Systems shall be distributed 100% to the Class C Member;

provided that to the extent any such proceeds or payments are not specifically related to or are not derived from either the Phase 1 New Systems or the Phase 2 New Systems, then such proceeds or payments shall be applied as Company Distributable Cash pursuant to Section 6.1(a)(iii).

(e) Notwithstanding Section 6.1(a) or 6.1(b) or anything else to the contrary contained herein but subject to Section 3.1(e), on or after the Tariff Date:

(i) (A) any proceeds derived from any sale or other disposition of any of the Phase 1 New Systems on or after the Tariff Date shall be distributed 100% to the Class B

Member, (B) any proceeds released from any reserves held for the benefit of the Phase 1 New Systems shall be distributed 5% to the Class A Member and 95% to the Class B Member to the extent such reserves were created on or after the Tariff Date and 100% to the Class B Member to the extent such reserves were created before the Tariff Date, (C) any insurance proceeds related to claims arising with respect to the Phase 1 New Systems on or after the Tariff Date shall be distributed 100% to the Class B Member and (D) any warranty or guaranty payments related to claims for acts on or after the Tariff Date to the Phase 1 New Systems shall be distributed 5% to the Class A Member and 95% to the Class B Member to the extent such payments relate to performance or earnings on or after the Tariff Date and 100% to the Class B Member to the extent such payments relate to performance or earnings before the Tariff Date; and

(ii) (A) any proceeds derived from any sale or other disposition of any of the Phase 2 New Systems, (B) any proceeds released from any reserves held for the benefit of the Phase 2 New Systems, (C) any insurance proceeds related to the Phase 2 New Systems and (D) any warranty or guaranty payments related to the Phase 2 New Systems shall be distributed 100% to the Class C Member;

provided that to the extent any such proceeds or payments are not specifically related to or are not derived from either the Phase 1 New Systems or the Phase 2 New Systems, then such proceeds or payments shall be applied as Company Distributable Cash pursuant to Section 6.1(b)(iv).

(f) Notwithstanding Section 6.1(a) or 6.1(b) or anything else to the contrary contained herein, (i) any indemnification payments or payments for damages made to the Company shall be distributed 100% to the Class B Member if related to the Phase 1 New Systems, the Class B Member or any of its members (or their Affiliates), (ii) any indemnification payment or payments for damages made to the Company shall be distributed 100% to the Class C Member if related to the Phase 2 New Systems, the Class C Member or any of its members or shareholders (or their Affiliates) and (iii) any other indemnification payment or payments for damages made to the Company shall be applied by the Managing Member toward remedying or addressing the issues or events giving rise to such payment or payments to the extent necessary as determined by the Managing Member in good faith, and any amounts not so applied shall be distributed pro rata between the Class B Member and the Class C Member based upon the Phase 1 New Systems Capacity Percentage and the Phase 2 New Systems Capacity Percentage for the Accounting Period(s) to which such indemnification or payments relate.

(g) Notwithstanding Section 6.1(a) or 6.1(b) or anything else to the contrary contained herein, within three Business Days of receipt by the Company:

(i) The proceeds of a Class B Draw Request shall be distributed 100% to the Class B Member; and

(ii) The proceeds of a Class C Draw Request shall be distributed 100% to the Class C Member.

(h) Notwithstanding Section 6.1(a) or 6.1(b) or anything else to the contrary contained herein, any Company Distributable Cash determined by the Managing Member to specifically relate to, or to otherwise arise solely from, the Existing Systems (as defined in the Repurchase Agreement) shall be distributed to the Class A Member within thirty (30) days of the receipt of such Company Distributable Cash, to the extent not needed to pay expenses or other liabilities determined by the Managing Member to specifically relate to, or otherwise arise solely from, the Existing Systems (as defined in the Repurchase Agreement).

6.2 Withholding Taxes. If the Company is required to withhold taxes with respect to any allocation or distribution to any Member pursuant to any applicable federal, state or local tax laws, the Company may, after first notifying the Member and permitting the Member, if legally permitted, to contest the applicability of such taxes, withhold such amounts and make such payments to taxing authorities as are necessary to ensure compliance with such tax laws. Any funds withheld by reason of this Section 6.2 shall nonetheless be deemed distributed to the Member in question for all purposes under this Agreement. If the Company fails to withhold from actual distributions any amounts it was required to withhold, the Company may, at its option, as determined by Managing Member, (a) require the Member to which the withholding was credited to reimburse the Company for such withholding, or (b) reduce any subsequent distributions by the amount of such withholding. This obligation of a Member to reimburse the Company for taxes that were required to be withheld shall continue after such Member Transfers its Membership Interests in the Company. Each Member agrees to furnish the Company with any representations and forms as shall reasonably be requested by the Company or Managing Member to assist it in determining the extent of, and in fulfilling, any withholding obligations it may have.

6.3 Limitation upon Distributions. No distribution of Company Distributable Cash will be made if the distribution would violate any contract or agreement to which the Company is then a party (unless entered into in violation of this Agreement), the Act or any other Legal Requirement then applicable to the Company.

6.4 No Return of Distributions. Any distribution of Company Distributable Cash or property pursuant to this Agreement shall be treated as a compromise within the meaning of Section 18-502(b) of the Act and, to the full extent permitted by law, any Member receiving the payment of any such money or distribution of any such property shall not be required to return any such money or property to any Person, the Company or any creditor of the Company. However, if any court of competent jurisdiction holds that, notwithstanding the provisions of this Agreement, any Member is obligated to return such money or property; such obligation shall be the obligation of such Member and not of the other Members. Without limiting the generality of the foregoing, a deficit Capital Account of a Member shall not be deemed to be a liability of such Member nor an asset or property of the Company.

ARTICLE VII

ACCOUNTING AND RECORDS

7.1 Reports.

(a) The Managing Member shall cause the Administrator to prepare and deliver to each Member as soon as practical, but in no event later than thirty (30) days after the end of each calendar month, a written report in the form of Exhibit F (each, an "Operations Report") that will include a summary of the kilowatt hours produced and sold by the Company during such month with respect to each of the Phase 1 New Systems and the Phase 2 New Systems, information regarding the availability during such month of each of the Phase 1 New Systems, the Phase 2 New Systems and the Shared Assets, notice of material events, including but not limited to, defaults under Material Contracts, notice of cancellation, termination or other material change in the insurance provided pursuant to the MOMA, any Material Adverse Effect that has occurred at the Company, any regulatory (including FERC) filings, and such other relevant operational information as may from time to time be reasonably requested by any other Member.

(b) No later than November 1st of each calendar year, the Managing Member shall prepare or cause the Administrator to prepare, and shall submit to each Member, an annual capital and operating budget for the Company for the following Fiscal Year, which budget shall contain separate budgeting line items for each of the Phase 1 New Systems, the Phase 2 New Systems and the Shared Assets (the "Annual Budget").

7.2 Books and Records and Inspection.

(a) The Managing Member shall provide, or cause the Administrator to provide, to the Members:

(i) monthly, within thirty (30) days after the end of each calendar month, unaudited monthly financial statements of the Company, prepared by the Managing Member or the Administrator, prepared on a GAAP basis (subject to normal year-end audit adjustments and lack of footnotes) as of the end of the immediately-preceding calendar month, including a balance sheet and statements of income and changes in members' equity;

(ii) quarterly, within forty-five (45) days after the end of each Quarter, unaudited quarterly financial statements of the Company, prepared by the Managing Member or the Administrator, prepared on a GAAP basis (subject to normal year-end audit adjustments and lack of footnotes) as of the end of the immediately-preceding Quarter, including a balance sheet and statements of income and changes in members' equity; and

(iii) annually, within one hundred twenty (120) days after the end of each Fiscal Year (as such dates may be extended or waived by the Members), audited annual financial statements and report for the Company, prepared by the Independent Accountant or such other accountant selected by the Class C Member, prepared on a GAAP basis as of the end of the immediately-preceding Fiscal Year, including a balance sheet and statements of income, changes in members' equity and cash flows and related footnotes and accompanied by a report of the

Independent Accountant or other accountant, as applicable, stating that their examination was made in accordance with generally accepted auditing standards and whether in its opinion such financial statements and report fairly present the Company's cash flows, results of operations and changes in financial position on a GAAP basis; provided that the Class A Member shall be responsible for coordinating the preparation of audited financial statements for the Fiscal Year ending December 31, 2019 and for providing, or cause the Administrator to provide, to the Members audited annual financial statements and report for the Company for such Fiscal Year, and the Managing Member shall have no responsibility for preparing or delivering or causing the preparation or delivery of audited financial statements for such Fiscal Year; and provided further that all costs and expenses of the accountant in connection with such audited annual financial statements shall be paid by the Class C Member.

(b) The Managing Member shall use commercially reasonable efforts to cause the Administrator to provide to the Managing Member such information as may be necessary for the Managing Member to keep and maintain full and accurate books of account, financial records and supporting documents that reflect, completely, accurately and in reasonable detail in all material respects, each transaction of the Company and such other matters as are usually entered into the records or maintained by Persons engaged in a business of like character or as are required by law, and to prepare annual unaudited financial statements (including an income statement, balance sheet and statement of cash flows) with respect to the Company in accordance with GAAP. No Member shall have an obligation to provide to the Company or the other Member(s) any reports, statements or records prepared by the respective Member for its own internal reporting. The Managing Member shall ensure that financial records and reports of the Company shall be kept on an accrual basis and kept in accordance with GAAP.

(c) In addition to and without limiting the generality of Section 7.2(a), the Managing Member shall cause the Company to keep and shall, on behalf of the Company, maintain at the Company's principal office:

(i) true and full information regarding the status of the financial condition of the Company, including any financial statements until the applicable statute of limitations expires with respect to the Company tax year to which such information and financial statements relate;

(ii) promptly after becoming available, a copy of the Company's federal, state, and local income Tax Returns for each year;

(iii) minutes of the proceedings of the Members;

(iv) a current list of the name and last known business, residence or mailing address of each Member;

(v) a copy of this Agreement and the Company's Certificate of Formation, and all amendments thereto, together with executed copies of any written powers of attorney pursuant to which this Agreement and such Certificate of Formation and all amendments thereto which have been executed and copies of written consents of Members;

(vi) true and full information regarding the amount of cash and a description and statement of the agreed value of any other property and services contributed by each Member, and the date upon which each became a Member;

(vii) copies of records that would enable a Member to determine the Member's share of Company Distributable Cash under Section 6.1 and the Members' relative voting rights; and

(viii) all records related to the production and sale of Energy by the Company as it relates to the Phase 1 New Systems and the Phase 2 New Systems, respectively.

(d) Upon receiving reasonable prior notice to Managing Member, all books and records of the Company shall be open to inspection and copying by any of the Members or their Representatives during business hours and at such Member's expense, for any purpose reasonably related to such Member's interest in the Company; provided that any such inspection or copying is conducted in a manner which does not unreasonably interfere with the Company's business.

7.3 Bank Accounts, Notes and Drafts.

(a) All funds not required for the immediate needs of the Company shall be placed in Permitted Investments, which investments shall have a maturity appropriate for the anticipated cash flow needs of the Company. All Company funds shall be deposited and held in accounts which are separate from all other accounts maintained by the Members, and the Company's funds shall not be commingled with any funds of any other Person, including any Member or any Affiliate of a Member.

(b) The Members acknowledge that the Managing Member may maintain Company funds in accounts, money market funds, certificates of deposit, other liquid assets in excess of the insurance provided by the Federal Deposit Insurance Corporation, or other depository insurance institutions and that the Managing Member shall not be accountable or liable for any loss of such funds resulting from failure or insolvency of the depository institution, so long as any such maintenance of funds is in compliance with the first sentence of Section 7.3(a).

(c) Checks, notes, drafts and other orders for the payment of money shall be signed by such Persons as the Managing Member from time to time may authorize. When the Managing Member so authorizes, the signature of any such Person may be a facsimile.

7.4 Intentionally Omitted.

7.5 Partnership Status and Tax Elections.

(a) The Members intend that the Company will be taxed as a partnership for United States federal, state and local income tax purposes. The Members agree not to elect to be excluded from the application of Subchapter K of Chapter 1 of Subtitle A of the Code or any similar state statute and agree not to elect for the Company to be treated as a corporation, or an association taxable as a corporation, under the Code or any similar state statute.

(b) The Company will make the following elections on the appropriate Tax Returns:

(i) to the extent permitted under Section 706 of the Code, to adopt as the Company's fiscal year the calendar year;

(ii) to adopt the accrual method of accounting or otherwise change its method of accounting;

(iii) if a distribution of the Company's property as described in Section 734 of the Code occurs or a transfer of Membership Interest as described in Section 743 of the Code occurs, to elect pursuant to Section 754 of the Code to adjust the basis of the Company's properties;

(iv) to elect to amortize the organizational expenses of the Company ratably over a period of one hundred eighty (180) months as permitted by Section 709(b) of the Code; and

(v) if approved in writing by Members representing a Class Majority Vote, any other election the Managing Member may deem appropriate.

7.6 Company Tax Returns.

(a) The United States federal income Tax Returns for the Company and all other Tax Returns of the Company shall be prepared as directed by the Member chosen by the Managing Member (the "Tax Return Member"), which initially shall be the Class B Member. With respect to each period for which the Company is required to file income Tax Returns (each such period, a "Tax Year"), the Tax Return Member will cause the Company to prepare preliminary income Tax Returns and issue preliminary Schedules K-1 to the Members no later than March 1 of the following Tax Year. The Tax Return Member, with the consent of the Class B Member and the Class C Member, may extend the time for filing any such Tax Returns as provided for under applicable statutes; provided that, in the event of any such extension, the Tax Return Member shall provide each of the other Members with an estimate of such Member's distributive share of each category of tax items of the Company described in Section 702(a) of the Code for such Tax Year within 20 days of the filing of such extension. At the Company's expense, the Tax Return Member may cause the Company to retain an Accounting Firm to prepare or review and sign the necessary federal and state income

Tax Returns and information returns for the Company. Each Member shall provide such information possessed by such Member, if any, as may be reasonably requested by the Company for purposes of preparing such Tax Returns. At least 30 days prior to filing the federal and state income Tax Returns of the Company, which shall be filed no later than September 15th of each calendar year, the Tax Return Member shall deliver to the Class B Member and the Class C Member for their review a copy of the Company's federal and state income Tax Returns in the form proposed to be filed for each Fiscal Year and shall incorporate all reasonable changes to such proposed Tax Returns as are requested by such Members (who shall be required to make reasonable efforts to provide such changes at least 10 days prior to the filing date for such returns). The dispute provisions under Section 11.11 shall be invoked if either the Class B Member or the Class C Member requests any changes to any such Tax Return that are not accepted by the Tax Return Member; provided that the Accounting Firm preparing the Tax Return still must be willing to sign the Tax Return consistent with the resolution of the dispute; provided, further that if the dispute process would not be completed by the date that the Tax Return must be filed under this Section 7.6, then the Tax Return Member will file the Tax Return as prepared by the Tax Return Member (with all changes requested by the other Member that are accepted by the Tax Return Member) by the required date and will amend the Tax Return after a conclusion is reached in the dispute process if any issues in dispute are not resolved in favor of the Tax Return Member. Within 20 days after filing such federal and state income Tax Returns and information returns, the Tax Return Member shall cause the Company to deliver to each Member a copy of the Company's federal and state income Tax Returns and information returns as filed for each Fiscal Year, together with any additional tax-related information in the possession of the Company that such Member may reasonably and timely request in order to properly prepare its own income Tax Returns.

(b) If a Member notifies the Managing Member that any real property Taxes with respect to the Project were assessed against or invoiced to such Member, then the Managing Member will cause the Company to pay such Taxes in full and in a timely manner and, as appropriate, allocate such cost to either the Phase 1 New Systems Income and Losses or the Phase 2 New Systems Income and Losses.

7.7 Tax Audits.

(a) The Class B Member is hereby designated as the initial "partnership representative," as that term is used in Section 6223 of the Code (the "Partnership Representative"), of the Company, with all of the rights, duties and powers provided for in Sections 6221 through 6241 of the Code, inclusive. The Class B Member is hereby directed and authorized to take whatever steps the Class B Member, in its reasonable discretion, deems necessary or desirable to perfect such designation, including filing any forms or documents with the IRS, taking such other action as may from time to time be required under the Treasury Regulations. The Class B Member shall remain as the Partnership Representative so long as it remains a Member and retains any ownership interests in the Company, unless the Class B Member elects to no longer serve as Partnership Representative, in which event the Class C Member, at its election, shall either serve as the Partnership Representative or select another Person to serve as the Partnership Representative.

(b) The Partnership Representative shall direct the defense of any claims made by the IRS to the extent that such claims relate to the adjustment of Company items at the Company level, except that the strategy to be taken in connection with any such defense and the selection of counsel shall be approved by the Member most likely to be impacted by the outcome of the audit (for example, if the matter at issue is primarily the Phase 2 New Systems, the Class C Member shall directly assist with the oversight of the defense and the Class B Member will reasonably cooperate). The Partnership Representative shall cause the Company to retain and to pay the fees and expenses of counsel approved as described in the preceding sentence and to pay the fees and expenses of other advisors chosen by the Partnership Representative. The Partnership Representative shall promptly deliver to each Member a copy of all notices, communications, reports and writings received from the IRS by the Company relating to or potentially resulting in an adjustment of Company items, shall promptly advise each Member of the substance of any conversations with the IRS in connection therewith and shall keep the Members advised of all developments with respect to any proposed adjustments that come to its attention. In addition, the Partnership Representative shall (A) provide each Member with a draft copy of any correspondence or filing to be submitted by the Company in connection with any administrative or judicial proceedings relating to the determination of Company items at the Company level reasonably in advance of such submission, (B) incorporate all reasonable changes or comments to such correspondence or filing requested by any other Member and (C) provide each Member with a final copy of correspondence or filing. The Partnership Representative will provide each Member with notice reasonably in advance of any meetings or conferences with respect to any administrative or judicial proceedings relating to the determination of Company items at the Company level (including any meetings or conferences with counsel or advisors to the Company with respect to such proceedings) and each Member shall have the right to participate, at its sole cost and expense, in any such meetings or conferences. Without the consent of the Class B Member and the Class C Member, which consent shall not be unreasonably withheld, conditioned or delayed, the Partnership Representative shall not (i) commence a judicial action with respect to a federal income tax matter or appeal any adverse determination of a judicial tribunal; (ii) enter into a settlement agreement with the IRS; (iii) file any request contemplated by Section 6227 of the Code; (iv) enter into an agreement extending the period of limitations as contemplated in Section 6235(b) of Code; or (v) file any election pursuant to Section 6221(b) of the Code. Notwithstanding anything in this Agreement to the contrary, in the event the Company receives a notice of final partnership adjustment under Section 6231 of the Code, the Company shall make, and the Partnership Representative is hereby authorized and directed to make on behalf of the Company, the election described in Section 6226 of the Code. It is the intent of the Members that if and to the extent a claim made by the IRS relates solely to the Phase 1 New Systems, the Class B Member shall control the resolution of such dispute, and if and to the extent such a claim relates solely to the Phase 2 New Systems, the Class C Member shall control the resolution of such dispute, even if the Class B Member or Class C Member, as applicable, is not the Partnership Representative, and each Member will reasonably cooperate with the other consistent with such intent.

(c) Any cost or expense incurred by the Partnership Representative in connection with its duties as Partnership Representative and shall be paid by the Company.

(d) Notwithstanding anything to the contrary in this Section 7.7, each Member shall have the right to control any administrative or judicial proceedings relating to the amount of the ITC with respect to investments in the Phase 1 New Systems, as to the Class B Member, and the Phase 2 New Systems, as to the Class C Member or the eligibility of such investments for the ITC, and the Partnership Representative shall act as directed by such Member in connection with any such proceeding.

7.8 Cooperation. Subject to the provisions of this Article VII, each Member shall provide the other Members with such assistance as may reasonably be requested by such other Members in connection with the preparation of any Tax Return, any audit or other examination by any Governmental Authority, or any judicial or administrative proceedings relating to the liability for any Taxes with respect to the operations of the Company.

7.9 Fiscal Year. The fiscal year of the Company (the "Fiscal Year") shall be the same as the taxable year of the Company. The taxable year of the Company will be a year that ends on December 31st of each calendar year, or such other year as may be required by applicable federal income tax law.

ARTICLE VIII

MANAGEMENT

8.1 Management. Each of the Members acknowledges and agrees that the Managing Member shall have the authority, powers and responsibilities described herein; provided that the Managing Member shall not (i) take or permit any action that would be a Major Decision hereunder without the prior occurrence of a Class Majority Vote approving such action, or (ii) refrain from taking any action that has been approved as a Major Decision hereunder. Except for (a) Major Decisions, and (b) as otherwise required by applicable Legal Requirements, the powers of the Company shall be exercised by or under the authority of, and the business and affairs of the Company shall be managed under the direction of, the Managing Member, who shall take all actions for and on behalf of the Company not otherwise provided for in this Agreement. In addition, the Members may, with the consent of the Managing Member, vest in the Managing Member the authority to take actions for and on behalf of the Company not otherwise provided for in this Agreement. Any such vested authority shall require a Class Majority Vote.

8.2 Managing Member.

(a) The Managing Member shall be the Member designated to act as such hereunder from time to time in accordance with the provisions of this Section 8.2 (the "Managing Member"). The initial Managing Member shall be the Class B Member.

(b) If the Class B Member notifies the Class C Member that the Class B Member desires to resign as Managing Member and desires for the Company to engage an independent manager to manage the Company, the Class B Member and the Class C Member shall work together in good faith to engage an independent third party to manage the Company and any such third party so engaged shall have all rights, powers and obligations of the Managing Member under this Agreement (or such additional or different rights, powers and obligations as the Class B Member, the Class C Member and such third party may agree) and all references to the "Managing Member" in this Agreement shall be deemed to refer to such third party; provided that the resignation of the Class B Member as Managing Member shall not become effective until a third party so approved by the Class B Member and the Class C Member has been engaged by the Company.

(c) Notwithstanding anything to contrary in Section 8.2(a), upon a material breach by the Class B Member (including in its capacity as Managing Member, Tax Return Member, Partnership Representative or otherwise) under this Agreement, which material breach has not been cured within thirty (30) days of the Class B Member being notified of such material breach by the Class A Member or the Class C Member, as the case may be, the Class C Member shall have the sole and exclusive authority to remove the Class B Member as the Managing Member, Tax Return Member and Partnership Representative, subject to obtaining any necessary approvals from the Federal Energy Regulatory Commission; provided, however, that if such material breach cannot be cured within such period and such material breach does not result in a Material Adverse Effect, and as long as the Managing Member is proceeding with diligence to cure such material breach and has notified the Class C Member in writing of the actions being taken to so cure, the thirty (30) day cure period shall be extended by an additional sixty (60) days, for a total cure period of ninety (90) days; provided, further, that, for the avoidance of doubt, during such cure period in the case of the preceding clause, the Class B Member may continue as the Managing Member. Upon any such removal of the Class B Member as Managing Member, the Class C Member or, with the approval of the Class B Member (which the Class B Member may give or withhold in its sole and absolute discretion), the Class C Member's designee shall be deemed to be the replacement Managing Member, in which event all references to the "Managing Member" in this Agreement shall be deemed to refer to the Class C Member or such designee. The Class B Member and the Class C Member shall cooperate respecting the transition of Managing Member duties and responsibilities, including in securing any necessary approvals from the Federal Energy Regulatory Commission.

(d) The Managing Member will be responsible for and coordinate the operation and maintenance of the Project and shall operate and maintain the Project, or cause the Project to be operated and maintained, in accordance with the Prudent Operator Standard; provided, however, that the requirement related to the Prudent Operator Standard will be satisfied so long as Bloom or an Affiliate of Bloom is retained to provide operation and maintenance services for the Project (including under the MOMA). If Bloom ceases to operate and maintain the Project, including as a result of termination of the MOMA, the Class B Member and Class C Member shall work together in good faith to select a third party to operate and maintain the Project (a "Successor Operator"), and Class B Member will take reasonable actions necessary to facilitate the Successor Operator's full access to all intellectual property rights contemplated under the IP License as necessary for the operation and maintenance of the Project. The selection of a Successor Operator and any corresponding agreement for the operation and maintenance of the Project shall require the approval of both the Class B Member and the Class C Member, and the requirement to operate and maintain the Project or cause the Project to be operated and maintained in accordance with the Prudent Operator Standard will be deemed satisfied by any Successor Operator so approved performing under an operation and maintenance agreement for the Project so approved. Notwithstanding anything to the contrary in this Agreement, the Managing Member shall have no obligation to operate and maintain, or to coordinate the operation and maintenance of, the Project for any time period with respect to which neither Bloom nor any Successor Operator approved by the Class B Member and the Class C Member has been engaged by the Company to operate and maintain the Project.

(e) The Managing Member hereby covenants to cause the Company to implement any Major Decisions approved under this Agreement, and not to take any Major Decisions without a Class Majority Vote.

(f) The Managing Member shall be obligated to administer, enforce and diligently pursue all rights and remedies of the Company pursuant to all contracts to which the Company is a party in a commercially reasonable manner in accordance with their respective terms and the Prudent Operator Standard.

(g) In addition to the rights of the Class C Member as set forth in Section 8.2(a) above, the other Members (other than the Class A Member) may at any time (i) remove a Managing Member following any Bankruptcy of the Managing Member or foreclosure or involuntary transfer of the Membership Interests held by the Managing Member (or any Bankruptcy of any Person that Controls the Managing Member), and (ii) fill any vacancy as Managing Member caused by such removal.

(h) The Managing Member may, from time to time, designate one or more officers with such titles as may be designated by the Managing Member to act in the name of the Company with such authority as is delegated to the Managing Member hereunder and as may be delegated to such officer(s) by the Managing Member. Any such officers appointed by the Class A Member, acting as the Managing Member under the Third A&R LLCA, shall be deemed to be automatically removed from any such office upon the effectiveness of this Agreement, without any further action of any Person and any actions taken by such officers following such removal shall not have the power or authority to bind the Company. Any such officers appointed by the Class B Member, acting as the Managing Member, shall be deemed to be automatically removed from any such office upon the change of Managing Member pursuant to Section 8.2(a) or Section 8.2(g), without any further action of any Person and any actions taken by such officers following such date shall not have the power or authority to bind the Company; provided that all such officers shall cooperate with any such transition and shall provide written resignations or any further assurances regarding their removal as are reasonably requested by Southern.

8.3 Major Decisions.

(a) In addition to any other approval required by Applicable Law or this Agreement, Major Decisions are reserved to the Members, and none of the Company, the Managing Member, or any officer thereof shall do or take or make or approve any Major Decisions with respect to the Company without a Class Majority Vote.

(b) The Managing Member will submit proposed Major Decisions to the Class B Members and the Class C Members in writing in accordance with Section 11.1 for their approval, with each submission setting forth in reasonable detail the Major Decision proposed and the basis for the Managing Member's recommendation. Any Class B Member or Class C Member who fails to notify the Managing Member that it is approving or rejecting a proposed Major Decision within 10 Business Days after the date on which the Managing Member submits such proposed Major Decision to such Member shall be deemed to have approved the Major Decision.

8.4 Insurance.

(a) The Managing Member shall cause the Company to acquire and maintain (including making changes to coverage and carriers) casualty, general liability (including product liability), property damage and/or other types of insurance consistent with the Prudent Operator Standard and in compliance with the insurance requirements set forth on Schedule 8.4 and as otherwise required under the Transaction Documents. The Managing Member shall cause the Class B Member and the Class C Member to be included as additional insured to all insurance policies required in accordance with the provisions of this Agreement. Each required insurance policy must be written as a primary policy not contributing to or in excess of any policies carried by the Class B Member or the Class C Member, and each must contain waivers of subrogation in favor of the Class B Member and the Class C Member.

(b) Notwithstanding anything to the contrary in Section 8.4(a), the Managing Member shall be deemed to have satisfied its obligations under Section 8.4(a) if it contracts with Administrator to obtain and maintain on behalf of the Company insurance meeting the requirements set forth in Section 8.4(a), notwithstanding any failure by the Administrator to comply with its obligations.

8.5 Notice of Material Breach. The Managing Member shall promptly notify the Members (but in no event more than within 5 Business Days of obtaining actual knowledge) of any (a) notice of default delivered by a party to a Material Contract to the Company or the Managing Member or (b) default by a party to a Material Contract (other than the Company or any Affiliate thereof) under such Material Contract, in the case of either clause (a) or (b), which default could reasonably be expected to cause material harm to the Company.

8.6 Letter of Credit.

(a) In the event that the Class B Member has (i) upon the occurrence of a Tariff Event (as defined in the Southern ECCA as in effect on the date hereof), a claim for Tariff Damages (as defined in the Southern ECCA as in effect on the date hereof) under Section 7.1(c) of the Southern ECCA or (ii) a claim for Assumed Tax Benefits Damages (as defined in the Southern ECCA as in effect on the date hereof) under Section 7.1(d) of the Southern ECCA, and, in either case, Bloom fails to pay such claim when due and payable, the Class B Member may request the Managing Member to cause the Company to draw on the Letter of Credit by delivering to Managing Member (with a copy to the Class C Member) a notice in the form of Exhibit G (with the items in brackets therein completed) along with a draft sight draft in the form of Exhibit A to the Letter of Credit (a "Class B Draw Request"); provided, no Class B Draw Request may exceed the Class B LC Cap.

(b) In the event that the Class C Member has (i) a claim for Indemnified Costs under Section 7.1(b) of the ECCA, (ii) upon the occurrence of a Tariff Event, a claim for payment of Tariff Damages under Section 7.1(c) of the ECCA, (iii) a claim for Assumed Tax Benefits Damages under Section 7.1(d) of the ECCA, or (iv) a claim for Losses under Section 7.1(e) or Section 7.1(f) of the ECCA, and, in any case, Bloom fails to pay such claim when due and payable, the Class C Member may request the Managing Member to cause the Company to draw on the Letter of Credit by delivering to Managing Member (with a copy to the Class B Member) a notice in the form of Exhibit H (with the items in brackets therein completed), along with a draft sight draft in the form of Exhibit A to the Letter of Credit (a "Class C Draw Request"); provided, no Class C Draw Request may exceed the Class C LC Cap.

(c) Upon receipt of an executed Draw Request, Managing Member shall complete and submit the sight draft to the Issuing Bank within 1 Business Day for the draw amount specified in the Draw Request (the "Draw Amount") and take all other actions required to cause payment thereof by the Issuing Bank. The Draw Amount, upon receipt by the Company, will be treated as Company Available Cash and will be distributed in accordance with Section 6.1(g). If the Draw Amount is in excess of the Aggregate LC Cap, Managing Member will notify the Members thereof but will have no obligation to take any further action under this Section 8.6; provided, Managing Member shall have no obligation to calculate the Aggregate LC Cap and may rely on the certification in a Draw Request delivered in accordance with Section 8.6(a) or Section 8.6(b).

(d) Until the date the LC Cap is reduced to $0.00, the Class A Member will renew the Letter of Credit annually either at least 15 days prior to expiration thereof or have it annually renewed automatically by its terms. If the Letter of Credit is not renewed as set forth in this Section 8.6(d), the Managing Member shall cause the Company to draw the full available amount of the Letter of Credit and cause the Company to hold such funds in escrow as cash security until an alternative letter of credit arrangement is instituted; provided that the Managing Member may cause amounts of such funds to be distributed to the Class B Member and the Class C Member equal to the Draw Amounts the Class B Member or the Class C Member, respectively, would have been entitled to request pursuant to Draw Requests if the Letter of Credit had not terminated, upon receipt of certification from the Class B Member or the Class C Member, as applicable (with a copy to the

Class B Member or the Class C Member, as applicable), that such Member would have been so entitled.

(e) Any cash collateral under the Letter of Credit or cash security held by the Company pursuant to Section 8.6(d) above as of December 31, 2025, will be released in full to the Class A Member to the extent funds remain.

(f) Each of the parties will cooperate with each other to amend the Letter of Credit each month to reflect the reduced Aggregate LC Cap for such month, if any.

(g) The Company is acting solely as the Members' agent with respect to the Letter of Credit. The Company has and will have no legal or equitable interest in the Letter of Credit or the proceeds thereof at any time, and neither the Letter of Credit nor the proceeds thereof shall be property of the Company's bankruptcy estate if the Company becomes a debtor under the Bankruptcy Code.

ARTICLE IX

TRANSFERS, CHANGES OF CONTROL AND INDEMNIFICATION

9.1 Restrictions Applicable to All Transfers by Members.

(a) Each Member may sell, transfer, assign, convey, pledge, mortgage, encumber, hypothecate or otherwise dispose of all or any part of its Membership Interests or any interest, rights or obligations with respect thereto, or permit a Change of Control of any entity subject to a restriction on Change of Control under this Article IX (any such action, a "Transfer"), only in accordance with this Article IX.

(b) A Member shall not Transfer or permit any Transfer of any Membership Interests if such Transfer would:

(i) constitute a violation of any securities laws or any other applicable federal or state laws rules or regulations, or the order of any court or administrative body having jurisdiction over the Company or any of its assets or any material contract, lease, security, indenture or agreement binding on the Company or its assets;

(ii) result in any adverse Tax effects on any non-transferring Member, unless the transferor has agreed to indemnify the other Members or the Company, as applicable, against any such adverse tax effects in a manner reasonably acceptable to the other Members;

(iii) require the Company to register as an investment company under the 1940 Investment Company Act; or

(iv) result in a transfer to a Disqualified Entity.

Any attempted Transfer of a Membership Interest that does not comply with this Article IX shall be null and void and not recognized by the Company for any purpose and, for the avoidance of doubt, the Company and the non-transferring Member hereby reserve all of their respective remedies and recourse under contract and law with respect to any such Transfer, including (without limitation) the right to seek and obtain injunctive relief.

9.2 Conditions to Transfers of Membership Interests. Except as otherwise provided in this Article IX, all Transfers of Membership Interests must satisfy the following conditions in addition to the conditions set forth in Section 9.1:

(a) The transferring Member must give written notice of the proposed Transfer to each of the other Members not less than 30 days prior to the effective date of the proposed Transfer;

(b) The transferring Member and the prospective transferee must each execute, acknowledge and deliver to the Company (as applicable) an assignment agreement substantially in the form of Exhibit D and such other instruments as the other Members may reasonably deem necessary or appropriate to confirm the transferor's intention that the transferee become a Member in its place and the transferee's undertaking to be bound by the terms of this Agreement and to assume the obligations of the transferor under this Agreement and, to the extent the transferor is to be released from such obligations, the ECCA. The prospective transferee shall make the representations and warranties in such assignment agreement and be bound by this Agreement as of the date of such Transfer; provided that, unless the transferee becomes the Managing Member the covenants in Sections 3.12(b), (d) and (e) shall not apply;

(c) The transferring Member and the prospective transferee shall pay any out-of-pocket expenses of the Company and the other Members resulting from the Transfer;

(d) The transferring Member and the prospective transferee shall have all permits and consents required for such Transfer;

(e) Such Transfer by a Member, other than a Transfer to an Affiliate of the transferring Member, shall not be a Transfer of less than such Member's entire Membership Interests;

(f) If the transferring Member is the Managing Member at such time, then the Transferee must be a Qualified Manager;

(g) In the case of any Transfer by the Class B Member, the Class B Member shall assign to the transferee, and the transferee shall assume, all rights of Southern Power Company under the IP License;

(h) The transferee of a Membership Interest and its Affiliates must not be in litigation or other material dispute with any of the other Members or their respective Affiliates;

(i) The transferring Member shall have obtained the prior written consent of the other Members (other than the Class A Member) to such transfer, not to be unreasonably withheld, conditioned or delayed; and

(j) Such Transfer does not result in a material breach of a Project Document.

9.3 [Reserved].

9.4 Conditions to Changes of Control of Upstream Entities.

(a) With respect to any Transfer that is a Change of Control of a Member (other than the Class C Member, so long as Assured Guaranty Municipal Corp. is the Class C Member), in addition to the conditions set forth in Section 9.1:

(i) The transferring Person and the prospective transferee shall pay any out-of-pocket expenses of the Company or the other Members resulting from the Transfer;

(ii) The transferring entity and the prospective transferee shall have all permits and consents required for such Transfer as they apply to the Company; and

(iii) The transferring Member shall have obtained the prior written consent of the Class B Member and the Class C Member.

(b) Upon any Change of Control of the Class B Member (other than a Change of Control of Southern Company or Southern Power Company), the Class B Member shall cease to be the Managing Member immediately upon receipt of any required Governmental Approvals and the Class C Member shall be entitled to appoint a new Managing Member.

(c) For the avoidance of doubt, (1) a Change of Control of Bloom Energy Corporation shall not be deemed to be a Change of Control of the Class A Member, and (2) neither a Change of Control of Southern Company nor a Change of Control of Southern Power Company shall be deemed to be a Change of Control of the Class B Member.

9.5 Certain Permitted Transfers. Except as otherwise provided in Section 9.1 and this Section 9.5, notwithstanding the provisions set forth in Section 9.3, the following Transfers (the "Permitted Transfers") may be made at any time and from time to time, without restriction and without notice to, approval of, filing with, consent by, or other action of or by, any Member or other Person:

(a) The grant of any security interest in any Membership Interest pursuant to any security agreement any Member may enter into with lenders;

(b) any Transfer in connection with any foreclosure or other exercise of remedies in respect of any Class B Membership Interest or Class C Membership Interest subject to a security interest referred to in Section 9.5(a); provided, however, that the requirements in Sections 9.2(a), (b), (d), (f), (g) and (j) shall be satisfied in respect of any such Transfer of such Membership Interests; and

(c) any Transfer of any Class C Membership Interests in accordance with Section 7.1(f) of the ECCA.

9.6 Regulatory and Other Authorizations and Consents. In connection with any Transfer pursuant to Section 9.5 (the "Designated Transfer"), each Member involved shall use all commercially reasonable efforts to obtain all authorizations, consents, orders and approvals of, give all notices to and make all filings with, all Governmental Authorities and third parties that may be or become necessary for the Designated Transfer, and will cooperate fully with the other Members in promptly seeking to obtain all such authorizations, consents, orders and approvals, giving such notices and making such filings, including the provision to such third parties and Governmental Authorities of such financial statements and other publicly available financial information with respect to such Member, as such third parties or Governmental Authorities may reasonably request; provided, however, that no Member involved shall have any obligation to pay any consideration to obtain any such consents. In addition, the Members involved shall keep each other reasonably apprised of their efforts to obtain necessary consents and waivers from third parties or Governmental Authorities and the responses of such third parties and Governmental Authorities to requests to provide such consents and waivers.

9.7 Admission. Any transferee of all or part of any Membership Interests pursuant to a Transfer made in accordance with this Agreement shall be admitted to the Company as a substitute Member upon its execution of a counterpart to this Agreement.

9.8 Security Interest Consent. If any Member grants a security interest in any Membership Interest in a Permitted Transfer, upon request by such Member, each other Member will execute and deliver to any person holding such security interest (for itself and/or for the benefit of other lenders) such acknowledgments, consents or other instruments as such person may reasonably request to confirm that such grant and any foreclosure or other exercise of remedies in respect of such Membership constitutes a Permitted Transfer under, and subject to the terms of, this Agreement.

9.9 Tag-along Rights.

(a) Participation. If the Class B Member (the "Selling Member") proposes to Transfer any portion of its Membership Interest (including any indirect Transfer of such Membership Interest effected by a direct or indirect Transfer by Southern Power Company of its membership interest in the Class B Member, but, for the avoidance of doubt, excluding any direct or indirect Transfer of any interests in Southern Company or Southern Power Company) to any Person that is not an Affiliate of the Class B Member (a "Proposed Transferee"), the Class C Member (the "Tag-along Member") shall be permitted to participate in such sale (a "Tag-along Sale") on the terms and conditions set forth in this Section 9.9.

(b) Sale Notice. Prior to the consummation of any Tag-along Sale, the Selling Member shall deliver to the Company and the Tag-along Member a written notice (a "Sale Notice") of the proposed Tag-along Sale no more than ten (10) Business Days after the execution and delivery by all of the parties thereto of the definitive agreement entered into with respect to the Tag-along Sale and, in any event, no later than twenty (20) Business Days prior to the closing date of such Tag-along Sale. The Sale Notice shall make reference to the Tag-along Member' rights hereunder and shall describe in reasonable detail: (i) the aggregate number of Class B Membership Interests the Proposed Transferee proposes to purchase; (ii) the identity of the Proposed Transferee; (iii) the proposed date, time and location of the closing of the Tag-along Sale; (iv) the purchase price per Class B Membership Interest, the form of consideration (cash or otherwise) and the other material terms and conditions of the Transfer; and (v) a copy of any form of agreement proposed to be executed in connection therewith.

(c) Exercise of Tag-along Right.

(i) The Tag-along Member shall have the right to Transfer in the Tag-along Sale such percentage of the Class C Membership Interests then held by the Tag-along Member as is equal to the percentage of the Class B Membership Interests proposed to be sold by the Selling Member in such Tag-along Sale (such amount, the "Tag-along Portion").

(ii) The Tag-along Member may exercise its right to participate in a Tag-along Sale by delivering to the Selling Member a written notice (a "Tag-along Notice") stating its election to do so by no later than twenty (20) Business Days after receipt of the Sale Notice (the "Tag-along Period").

(iii) The election of the Tag-along Member set forth in a Tag-along Notice shall be irrevocable, and, to the extent such election is made, the Tag-along Member shall be bound and obligated to consummate the Transfer on the terms and conditions set forth in this Section 9.9.

(d) Waiver. If the Tag-along Member does not deliver a Tag-along Notice in compliance with Section 9.9(c)(ii) it shall be deemed to have waived all of the Tag-along Member's rights to participate in the Tag-along Sale with respect to the Membership Interests owned by the Tag-along Member, and the Selling Member shall thereafter be free to sell to the Proposed Transferee the Class B Membership Interests identified in the Sale Notice at a per Class B Membership Interest price that is no greater than the applicable per Class B Membership Interest price set forth in the Sale Notice and on other terms and conditions which are not materially more favorable to the Class B Member than those set forth in the Sale Notice, without any further obligation to the non-accepting Tag-along Member.

(e) Conditions of Sale.

(i) In any Tag-along Sale in which the Tag-along Member elects to participate, the price per Class C Membership Interest purchased (prior to deduction of the Tag-along Member's share of related expenses) shall equal the price per Class B Membership Interest purchased in such Tag-along Sale (prior to deduction of the Selling Member's share of related expenses) multiplied by a fraction in which the numerator is the total nameplate capacity of the Phase 2 New Systems (measured in MW) and the denominator is the total nameplate capacity of the Phase 1 New Systems (measured in MW) as of the date of delivery of the Sale Notice.

(ii) The Tag-along Member shall make or provide the same representations, warranties, covenants, indemnities and agreements as the Selling Member makes or provides in connection with the Tag-along Sale; provided, that the Tag-along Member shall only be obligated to make individual representations and warranties with respect to its title to and ownership of the applicable Membership Interests, authorization, execution and delivery of relevant documents, enforceability of such documents against the Tag-along Member, and other matters relating to the Tag-along Member, but not any of the foregoing with respect to any other Members or their Membership Interests or the Company; provided, further, that all representations, warranties, covenants and indemnities shall be made by the Selling Member and the Tag-along Member severally and not jointly and any indemnification obligation shall be pro rata based on the consideration received by the Selling Member and the Tag-along Member, in each case in an amount not to exceed the aggregate proceeds received by the Selling Member and the Tag-along Member in connection with the Tag-along Sale.

(f) Cooperation. The Tag-along Member shall take all actions as may be reasonably necessary to consummate the Tag-along Sale, including, without limitation, entering into agreements and delivering certificates and instruments, in each case, consistent with the agreements being entered into and the certificates being delivered by the Selling Member, but subject to Section 9.9(e)(ii).

(g) Expenses. Fees and expenses incurred by the Company or by the Managing Member in connection with a Tag-along Sale in which the Tag-along Member elects to participate and for the benefit of both the Selling Member and the Tag-along Member (it being understood that costs incurred by or on behalf of a Selling Member for its sole benefit will not be considered to be for the benefit of the Tag-along Member), to the extent not paid or reimbursed by the Company or the Proposed Transferee, shall be borne by the Selling Member and the participating Tag-along Member on a pro rata basis, based on the consideration received by each such Member; provided, that no Tag-along Member shall be obligated to make any out-of-pocket expenditure prior to the consummation of the Tag-along Sale and neither the Managing Member nor the Company shall be obligated to incur any fees or expenses solely for the benefit of the Class C Member.

(h) Consummation of Sale. The Selling Member shall have sixty (60) days following the expiration of the Tag-along Period in which to consummate the Tag-along Sale, on terms not more favorable to the Selling Member than those set forth in the Tag-along Notice (which such sixty (60) day period may be extended for a reasonable time not to exceed ninety (90) days to the extent reasonably necessary to obtain required approvals or consents from any Governmental Authority). If at the end of such period the Selling Member has not completed the Tag-along Sale, the Selling Member may not then effect a Transfer that is subject to this Section 9.9 without again fully complying with the provisions of this Section 9.9.

(i) Transfers in Violation of the Tag-along Right. If the Selling Member sells or otherwise Transfers to the Proposed Transferee any of its Membership Interests in breach of this Section 9.9, then the Tag-along Member shall have the right to sell to the Selling Member, and the Selling Member undertakes to purchase from the Tag-along Member, the number of Membership Interests that the Tag-along Member would have had the right to sell to the Proposed Transferee pursuant to this Section 9.9, for a per Class C Membership Interest amount equal to the price per Class B Membership Interest multiplied by a fraction in which the numerator is the total nameplate capacity of the Phase 2 New Systems (measured in MW) and the denominator is the total nameplate capacity of the Phase 1 New Systems (measured in MW) as of the date of the sale or Transfer and for the form of consideration and upon the terms and conditions on which the Proposed Transferee bought such Class B Membership Interests from the Selling Member, but without indemnity being granted by any Tag-along Member to the Selling Member. The Selling Member shall also reimburse the Tag-along Member for any and all reasonable and documented out-of-pocket fees and expenses, including reasonable legal fees and expenses, incurred pursuant to the exercise or the attempted exercise of the Tag-along Member's rights under this Section 9.9(i). Such right to sell and to be reimbursed shall be the Tag-along Member's sole remedy for such breach.

9.10 Indemnification; Other Rights of the Members.

(a) The Class A Member agrees to indemnify, defend and hold harmless the Class B Indemnified Parties, the Class C Indemnified Parties, and the Company from and against any and all Indemnified Costs (as determined by treating the Class A Member and the Managing Member (so long as the Class A Member or its Affiliate is serving as the Managing Member) as the "Indemnifying Party" for purposes of the definition of such term); provided, however, except with respect to Indemnified Costs (w) resulting from a breach of Sections 3.12(a), 9.1, 9.2, or 9.4, (x) resulting from fraud or willful misconduct, (y) resulting from failure to pay any amount due to Class B Indemnified Parties or Class C Indemnified Parties or the Company, as the case may be, under this Agreement or the ECCA or (z) resulting from a Third Party Claim, in no event will the Class A Member's aggregate obligations (including any prior indemnity payments by the Class A Member under this Agreement or under the ECCA) to collectively indemnify the Class B Indemnified Parties, the Class C Indemnified Parties and the Company hereunder exceed the aggregate amount of distributions received by the Class A Member from the Effective Date through the date of such claim for indemnification.

(b) Beginning on the Effective Date (or, with respect to any additional Member that becomes a Member after the Effective Date, on the first date on which such Person becomes a Member hereunder) and continuing thereafter, the Class B Member agrees to indemnify, defend and hold harmless the Class A Indemnified Parties and the Class C Indemnified Parties from and against any and all Indemnified Costs (as determined by treating the Class B Member and the Managing Member (so long as the Class B Member or its Affiliate is serving as the Managing Member) as the "Indemnifying Party" for purposes of the definition of such term); provided, however, except with respect to Indemnified Costs (x) resulting from fraud or willful misconduct, (y) resulting from failure to pay any amount due to Class A Indemnified Parties or the Class C Indemnified Parties, as the case may be, under this Agreement or the ECCA, or (z) resulting from a Third Party Claim, in no event will the Class B Member's aggregate obligation (including any prior indemnity payments by the Class B Member under this Agreement or under the ECCA) to indemnify the Class C Indemnified Parties hereunder exceed the Capital Contributions of the Class C Member as of the date of such claim for indemnification or will the Class B Member's aggregate obligation (including any prior indemnity payments by the Class B Member under this Agreement or under the ECCA) to indemnify the Class A Indemnified Parties exceed the aggregate amount of distributions received by the Class A Member from the Effective Date through the date of such claim for indemnification.

(c) Beginning on the Effective Date (or, with respect to any additional Member that becomes a Member after the Effective Date, on the first date on which such Person becomes a Member hereunder) and continuing thereafter, the Class C Member agrees to indemnify, defend and hold harmless the Class A Indemnified Parties and the Class B Indemnified Parties from and against any and all Indemnified Costs (as determined by treating the Class C Member and the Managing Member (so long as the Class C Member or its Affiliate is serving as the Managing Member) as the "Indemnifying Party" for purposes of the definition of such term); provided, however, except with respect to Indemnified Costs (x) resulting from fraud or willful misconduct, (y) resulting from failure to pay any amount due to Class A Indemnified Parties or Class B Indemnified Parties under this Agreement or the ECCA or (z) resulting from a Third Party Claim, in no event will the Class C Member's aggregate obligations (including any prior indemnity payments by the Class C Member under this Agreement or under the ECCA) to indemnify the Class B Indemnified Parties hereunder exceed the Capital Contributions of the Class B Member as of the date of such claim for indemnification or will the Class C Member's aggregate obligation (including any prior indemnity payments by the Class C Member under this Agreement or under the ECCA) to indemnify the Class A Indemnified Parties exceed the aggregate amount of distributions received by the Class A Member from the Effective Date through the date of such claim for indemnification.

(d) Other than with respect to Indemnified Costs resulting from Third Party Claims, no claim for indemnification may be made with respect to any Indemnified Costs (other than fraud, willful misconduct, or failure to pay any amount due to Indemnified Parties under any Transaction Document) until the aggregate amount of such costs for which indemnification is (or previously has been) sought by the Indemnified Party under all Transaction Documents exceeds One Hundred Thousand Dollars ($100,000) and once such threshold amount of claims has been reached, the relevant Indemnified Party and its Affiliates shall have the right to be indemnified for all such Indemnified Costs. Claims for indemnification under this Agreement and the other Transaction Documents shall not be duplicative of one another and shall not allow for duplicative recoveries.

9.11 Indemnification of Members by the Company. Each Member Party shall be exculpated from liability for and defended, indemnified and held harmless by the Company as set forth in Section 3.6(a).

9.12 Direct Claims. In any case in which an Indemnified Party seeks indemnification under Section 9.10 that is not subject to Section 9.13 because no Third Party Claim is involved, the Indemnified Party shall promptly notify the Indemnifying Party in writing of any amounts that the Indemnified Party claims are subject to indemnification under the terms of this Article IX. The failure of the Indemnified Party to exercise promptness in such notification shall not amount to a waiver of such claim, except to the extent the resulting delay materially and adversely prejudices the position of the Indemnifying Party with respect to such claim.

9.13 Third Party Claims. An Indemnified Party shall give written notice to the Indemnifying Party within 10 days after it has actual knowledge of commencement or assertion of any Third Party Claim in respect of which the Indemnified Party may seek indemnification under Section 9.10. Such notice shall state the nature and basis of such Third Party Claim and the events and the amounts thereof to the extent known. Any failure to so notify the Indemnifying Party shall not relieve the Indemnifying Party from any liability that the Indemnifying Party may have to the Indemnified Party under this Article IX, except to the extent the failure to give such notice materially and adversely prejudices the Indemnifying Party. In case any such action, proceeding or claim is brought against an Indemnified Party, so long as it has acknowledged in writing to the Indemnified Party that it is liable for such Third Party Claim pursuant to this Section 9.13, the Indemnifying Party shall be entitled to participate in and, unless in the reasonable judgment of the Indemnified Party a conflict of interests between it and the Indemnifying Party may exist in respect of such Third Party Claim or such Third Party Claim entails a material risk of criminal penalties or civil fines or non-monetary sanctions being imposed on the Indemnified Party or a risk of materially adversely affecting the Indemnified Party's business (a "Third Party Penalty Claim"), to assume the defense thereof, with counsel selected by the Indemnifying Party and reasonably satisfactory to the Indemnified Party, and after notice from the Indemnifying Party to the Indemnified Party of its election so to assume the defense thereof, the Indemnifying Party shall not be liable to the Indemnified Party for any legal or other expenses subsequently incurred by the latter in connection with the defense thereof; provided the Parties agree that the handling of any Tax contests involving the Company will be governed by Section 7.7. In the event that (i) the Indemnifying Party advises an Indemnified Party that the Indemnifying Party will not contest a claim for indemnification hereunder, (ii) the Indemnifying Party fails, within 30 days of receipt of any indemnification notice to notify, in writing, such Indemnified Party of its election, to defend, settle or compromise, at its sole cost and expense, any such Third Party Claim (or discontinues its defense at any time after it commences such defense) or (iii) in the reasonable judgment of the Indemnified Party, a conflict of interests between it and the Indemnifying Party exists in respect of such Third Party Claim or the action or claim is a Third Party Penalty Claim, then the Indemnified Party may, at its option, defend, settle or otherwise compromise or pay such action or claim or Third Party Claim in each case, at the sole cost and expense of the Indemnifying Party. In any event, unless and until the Indemnifying Party elects in writing to assume and does so assume the defense of any such claim, proceeding or action, the Indemnifying Party shall be liable for the Indemnified Party's reasonable costs and expenses arising out of the defense, settlement or compromise of any such action, claim or proceeding. The Indemnified Party shall cooperate to the extent commercially reasonable with the Indemnifying Party in connection with any negotiation or defense of any such action or claim by the Indemnifying Party. The Indemnifying Party shall keep the Indemnified Party fully apprised at all times as to the status of the defense or any settlement negotiations with respect thereto. If the Indemnifying Party elects to defend any such action or claim, then the Indemnified Party shall be entitled to participate in such defense with counsel of its choice at its sole cost and expense unless otherwise specified herein; provided that any such participation of the Indemnified Party shall be at the Indemnifying Party's sole cost and expense to the extent such participation relates to a Third Party Penalty Claim. If the Indemnifying Party does not assume such defense, the Indemnified Party shall keep the Indemnifying Party apprised at all times as to the status of the defense; provided, however, that the failure to keep the Indemnifying Party so informed shall not affect the obligations of the Indemnifying Party hereunder. The Indemnifying Party shall not be liable for any settlement of any action, claim or proceeding effected without its written consent; provided, however, that the Indemnifying Party shall not unreasonably withhold, delay or condition any such consent. Notwithstanding anything in this Section 9.13 to the contrary, the Indemnifying Party shall not, without the Indemnified Party's prior written consent, (i) settle or compromise any claim or consent to entry of judgment in respect thereof which involves any condition other than payment of money by the Indemnified Party, (ii) settle or compromise any claim or consent to entry of judgment in respect thereof without first demonstrating to Indemnified Party the ability to pay such claim or judgment, or (iii) settle or compromise any claim or consent to entry of judgment in respect thereof that does not include, as an unconditional term thereof, the giving by the claimant or the plaintiff to the Indemnified Party, a full and complete release from all liability in respect of such claim.

9.14 No Duplication. Any liability for indemnification under this Article IX shall be determined without duplication of recovery. Without limiting the generality of the prior sentence, if a statement of facts, condition or event constitutes a breach of more than one representation, warranty, covenant or agreement which is subject to the indemnification obligation in Section 9.10, only one recovery of Indemnified Costs per Indemnified Party shall be allowed.

9.15 Sole Remedy. Except in the case of fraud, willful misconduct or failure to pay, the enforcement of the claims of the Parties under Article IX of this Agreement are the sole and exclusive remedies that a Party shall have under this Agreement and the ECCA for the recovery of Indemnified Costs; provided, however, that notwithstanding anything to the contrary in this Agreement, each Party hereby reserves all equitable remedies.

9.16 Final Date for Assertion of Indemnity Claims. All claims by an Indemnified Party for indemnification pursuant to this Article IX resulting from breaches of representations or warranties in Article III of the ECCA shall be forever barred unless the other Party is notified within the time periods provided in Section 7.7 of the ECCA, provided that if written notice of a claim for indemnification has been given by an Indemnified Party on or prior to the last day of the applicable period, then the obligation of the other Party to indemnify such Indemnified Party pursuant to this Article IX shall survive with respect to such claim until such claim is finally resolved.

9.17 Reasonable Steps to Mitigate. Each Indemnified Party will take, at the Indemnifying Party's own reasonable cost and expense, all reasonable commercial steps identified by Indemnifying Party to the Indemnified Parties to mitigate all Indemnified Costs (other than any such Indemnified Costs that are Taxes), which steps may include availing itself of any defenses, limitations, rights of contribution, claims against third Persons and other rights at law or equity. The Indemnified Parties will provide such evidence and documentation of the nature and extent of the Indemnified Costs as may be reasonably requested by the Indemnifying Party.

9.18 Net of Insurance Benefits. All Indemnified Costs shall be net of insurance recoveries from insurance policies of the Company (including under the existing title policies) to the extent that any proceeds of such policies, less any costs, expenses or premiums incurred by the Company in connection therewith, are distributed by the Company to the Indemnified Party; provided, however, such amount shall account for any costs or expenses incurred by the Indemnified Party in connection with obtaining insurance proceeds with respect to any breach or nonperformance hereunder.

9.19 No Consequential Damages. Indemnified Costs shall not include, and an Indemnifying Party shall have no obligation to indemnify any Indemnified Party for or in respect of, any punitive, consequential or exemplary damages of any nature including but not limited to damages for lost profits or revenues or the loss or use of such profits or revenue, loss by reason of plant shutdown or inability to operate at rated capacity, increased operating expenses of plant or equipment, increased costs of purchasing or providing equipment, materials, labor, services, costs of replacement, power or capital, debt service fees or penalties, inventory or use charges, damages to reputation, damages for lost opportunities, or claims of the Company's customers, Members or Affiliates, regardless of whether said claim is based upon contract, warranty, tort (including negligence and strict liability) or other theory of law unless payable by such Indemnified Party as part of a Third Party Claim; provided, however, that the lost profits or revenues (and the loss or use thereof) language set forth in this Section 9.19 shall not be interpreted to exclude from Indemnified Costs any damages, losses, claims, liabilities, demands charges, suits, Taxes, penalties, costs or expenses that would otherwise be included within the definition of Indemnified Costs because they result from a reduction in the profits of the Company.

9.20 Payment of Indemnification Claims. All claims for indemnification shall be paid by the Indemnifying Party in immediately available funds in U.S. dollars. Any undisputed portion of an indemnification claim shall be paid promptly by the Indemnifying Party to the Indemnified Parties involved. An Indemnifying Party may dispute any portion of an indemnification claim; provided, however, that such disputed indemnification claim shall be paid promptly by the Indemnifying Party to the Indemnified Party together with interest at a market rate upon the final determination of the payable amount of the claim (if any) by a court of competent jurisdiction.

9.21 Repayment; Subrogation. If the amount of any Indemnified Costs, at any time after the making of an indemnity payment in respect thereof, is reduced by recovery, settlement or otherwise under any insurance coverage (excluding any proceeds from self-insurance or flow through insurance policies) or under any claim, recovery, settlement or payment by or against any other entity, the amount of such reduction, less any costs, expenses or premiums incurred in connection therewith, must promptly be repaid by the Indemnified Party to the Indemnifying Party net of any Taxes imposed upon the Indemnified Party in respect of such amounts, but taking into account any Tax benefit the Indemnified Party receives as a result of such repayment. Upon making any indemnity payment (other than any indemnity payment relating to Taxes), the Indemnifying Party will, to the extent of such indemnity payment, be subrogated to all rights of the Indemnified Party against any third party, except third parties that provide insurance coverage to the Indemnified Party or its Affiliates, in respect of the Indemnified Costs to which the indemnity payment relates. Without limiting the generality or effect of any other provision hereof, each such Indemnified Party and the Indemnifying Party shall duly execute upon request all instruments reasonably necessary to evidence and perfect the above described subrogation rights, and otherwise cooperate in the prosecution of such claims at the direction of the Indemnifying Party. Nothing in this Section 9.21 will be construed to require any Party to obtain or maintain any insurance coverage.

ARTICLE X

DISSOLUTION AND WINDING-UP

10.1 Events of Dissolution. The Company shall be dissolved and its affairs shall be wound up upon the first to occur of any of the following:

(a) the written consent of the Members representing a Class Majority Vote to dissolve and terminate the Company;

(b) the entry of a decree of judicial dissolution under Section 18-802 of the Act;

(c) the disposition of all or substantially all of the Company's business and assets;

(d) the issuance of a final, nonappealable court order which makes it unlawful for the business of the Company to be carried on; or

(e) at any time there are no members of the Company unless the business of the Company is continued in accordance with the Act.

10.2 Distribution of Assets.

(a) The Members hereby appoint the Managing Member to act as the liquidator upon the occurrence of one of the events in Section 10.1. Upon the occurrence of such an event, the liquidator will proceed diligently to wind up the affairs of the Company and make final distributions as provided herein and in the Act. The liquidator may sell, and will use commercially reasonable efforts to obtain the best possible price for, any or all Company property, including to Members. In no event, without the approval of Members by a Class Majority Vote, will a sale to a Member be for an amount that is less than fair market value (determined by the Appraisal Method if the Members (by a Class Majority Vote) are unable to agree on the fair market value).

(b) The liquidator will first pay, satisfy or discharge from Company funds all of the debts, liabilities and obligations of the Company (including all expenses incurred in liquidation) or otherwise make adequate provision for payment and discharge thereof (including the establishment of a cash escrow fund for contingent, conditional or unmatured liabilities in such amount and for such term as the liquidator may reasonably determine) in the order of priority as provided by law.

(c) All assets of the Company will be treated as if sold.

(d) Items of income, gain, loss and deduction for the taxable year of liquidation, including any gain or loss upon the deemed sale of a Company asset under Section 10.2(c) hereof, will be allocated among the members as provided under Section 5.3 after giving effect to the allocations in Section 5.4.

(e) After the allocations in clause (d) have been made, then cash and property will be distributed pro rata to the Members in the amount of the positive balances in their Capital Accounts by the end of the taxable year during which the liquidation occurs (or, if later, within ninety (90) days after the date of such liquidation).

(f) The distribution of cash and property to a Member under this Section 10.2 constitutes a complete return to the Member of its Capital Contributions and a complete distribution to the Member on its Membership Interests in the Company of all the Company's property and constitutes a compromise to which all Members have consented within the meaning of Section 18-502(b) of the Act. If the assets of the Company remaining after the payment or discharge of the debts and liabilities of the Company are insufficient to return Capital Contributions of each Member, such Member shall have no recourse against the Company or any other Member, except as provided in Section 9.10.

10.3 In-Kind Distributions. There shall be no distribution of assets of the Company in kind without a prior Class Majority Vote.

10.4 Certificate of Cancellation.

(a) When all debts, liabilities and obligations have been paid and discharged or adequate provisions have been made therefor and all of the remaining property and assets have been distributed to the Members, a certificate of cancellation shall be executed and filed by the liquidator with the Secretary of State of the State of Delaware, which certificate shall set forth the information required by Section 18-203 of the Act.

(b) Upon the filing of the certificate of cancellation, the existence of the Company shall cease.

(c) All costs and expenses in fulfilling the obligations under this Section 10.4 shall be borne by the Company.

ARTICLE XI

MISCELLANEOUS

11.1 Notices. Unless otherwise provided herein, any offer, acceptance, election, approval, consent, certification, request, waiver, notice or other communication required or permitted to be given hereunder (collectively referred to as a "Notice"), shall be in writing and delivered (a) in person, (b) by registered or certified mail with postage prepaid and return receipt requested, (c) by recognized overnight courier service with charges prepaid or (d) by facsimile transmission, directed to the intended recipient at the address of such Member on Schedule 4.2(d) or at such other address as any Member hereafter may designate to the others in accordance with a Notice under this Section 11.1. A Notice or other communication will be deemed delivered on the earliest to occur of (i) its actual receipt when delivered in person, (ii) the fifth (5th) Business Day following its deposit in registered or certified mail, with postage prepaid, and return receipt requested, (iii) the second (2nd) Business Day following its deposit with a recognized overnight courier service or (iv) the date of receipt of a facsimile or, if such date of receipt is not a Business Day, the next Business Day following such date of receipt; provided the sender can and does provide evidence of successful transmission. Any Notice or other communication received on a day that is not a Business Day or later than 5:00 p.m. on a Business Day shall be deemed to be received on the next Business Day.

11.2 Amendment. Except for an amendment of Schedule 4.2(d), an amendment of Annex II to reflect the issuance of additional Membership Interests or a Transfer of Membership Interests, or an amendment in connection with the admission of a new Member, in each case in accordance with the terms of this Agreement, this Agreement may be changed, modified or amended only by an instrument in writing duly executed by all Members.

11.3 Partition. Each of the Members hereby irrevocably waives, to the extent it may lawfully do so, any right that such Member may have to maintain any action for partition with respect to the Company property.

11.4 Waivers and Modifications. Any waiver or consent, express, implied or deemed, to or of any breach or default by any Person in the performance by that Person of its obligations with respect to the Company or any action inconsistent with this Agreement is not a consent or waiver to or of any other breach or default in the performance by that Person of the same or any other obligations of that Person with respect to the Company or any other such action. Failure on the part of a Person to insist in any one or more instances upon strict performance of any provisions of this Agreement, to take advantage of any of its rights hereunder, or to declare any other Person in default with respect to the Company, irrespective of how long that failure continues, does not constitute a waiver by the Person so failing of its rights with respect to that other Person or its rights with respect to that default until the applicable statute of limitations period has lapsed. All waivers and consents hereunder shall be in writing duly executed by all Members affected by such waiver or consent and shall be delivered to the other Members in the manner described in Section 11.1.

11.5 Severability. Except as otherwise provided in the succeeding sentence, every term and provision of this Agreement is intended to be severable, and if any term or provision of this Agreement is illegal or invalid for any reason whatsoever, such illegality or invalidity shall not affect the legality or validity of the remainder of this Agreement. The preceding sentence shall be of no force or effect if the consequence of enforcing the remainder of this Agreement without such illegal or invalid terms or provision would be to cause any Party to lose the benefit of its economic bargain.

11.6 Successors; No Third-Party Beneficiaries. This Agreement is binding on and inures to the benefit of the Members and their respective heirs, legal representatives, successors and permitted assigns. Nothing in this Agreement shall provide any benefit to any third party or entitle any third party to any claim, cause of action, remedy or right of any kind, it being the intent of the Members that this Agreement shall not be construed as a third-party beneficiary contract. To the full extent permitted by Legal Requirements, no creditor or other third party having dealings with the Company shall have the right to pursue any other right or remedy hereunder or at law or in equity, it being understood and agreed that the provisions of this Agreement shall be solely for the benefit of, and may be enforced solely by, the parties hereto and their respective successors and permitted assigns. None of the rights of the Members herein set forth to make Capital Contributions or loans to the Company shall be deemed an asset of the Company for any purpose by any creditor or other third party, nor may such rights or obligations be sold, transferred or assigned by the Company or pledged or encumbered by the Company to secure any debt or other obligation of the Company or of any of the Members.

11.7 Entire Agreement. This Agreement, including the Schedules, Annexes and Exhibits attached hereto or incorporated herein by reference, and the ECCA constitute the entire agreement of the Members with respect to the matters covered herein. This Agreement supersedes all prior agreements and oral understandings among the parties hereto with respect to such matters.

11.8 Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware, excluding any conflict of laws rule or principle that might refer the governance or construction of this Agreement to the law of another jurisdiction.

11.9 Further Assurances. In connection with this Agreement and the transactions contemplated hereby, each Member shall execute and deliver any additional documents and instruments and perform any additional acts that may be reasonably required or useful to carry out the intent and purpose of this Agreement and as are not inconsistent with the terms hereof.

11.10 Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be an original but all of which together will constitute one instrument, binding upon all parties hereto, notwithstanding that all of such parties may not have executed the same counterpart.

11.11 Dispute Resolution. In the event a dispute, controversy or claim arises hereunder, the aggrieved party will promptly provide written notification of the dispute to the other party within 10 days after such dispute arises. A meeting will be held promptly between the parties, attended by representatives of the parties with decision-making authority regarding the dispute, to attempt in good faith to negotiate a resolution of the dispute. If the parties are not successful in resolving a dispute within twenty-one (21) days, the parties will thereafter be entitled to pursue all such remedies as may be available to them; provided that the parties hereby irrevocably submit to the exclusive jurisdiction of any state or federal court in New York county, New York or any state of federal court in the State of Delaware with respect to any action or proceeding arising out of or relating to this Agreement. For the avoidance of doubt, no Member waives its right to maintain a legal action or proceeding in the courts of the State of Delaware with respect to matters relating to the organization or internal affairs of the Company.

11.12 Confidentiality.

(a) Each of the Members shall, and shall cause their Affiliates and their respective stockholders, members, subsidiaries and Representatives to, hold confidential all information they may have or obtain concerning the Class C Member, the Class B Member, any other Member, the Company and their respective assets, business, operations or prospects or this Agreement (the "Confidential Information"); provided, however, such Confidential Information shall not include information that (i) becomes generally available to the public other than as a result of a disclosure by such Member or any of its Representatives, (ii) becomes available to such Member or any of its Representatives on a nonconfidential basis prior to its disclosure by the Company or its Representatives, (iii) is required or requested to be disclosed by such Member or any of its Affiliates or their respective stockholders, members, subsidiaries or Representatives as a result of any applicable Legal Requirement or rule or regulation of any stock exchange, the Financial Industry Regulatory Authority, Inc., the New York Department of Financial Services or other regulatory authority or self-regulatory authority having jurisdiction over such Member, (iv) is required or requested by the IRS in connection with the Project, including in connection with a request for any private letter ruling, any determination letter or any audit, (v) is required to be disclosed by such Member to its auditors and advisers (including, without limitation, legal and financial advisers) who need to know such information in connection with the transactions contemplated hereby and who are subject to duties of confidentiality or bound by confidentiality obligations consistent with those set forth in this Section 11.12(a) restricting further disclosure of such Confidential Information, (vi) is required to be disclosed to rating agencies requesting such information, or (vii) is independently developed by Member or any of its Representatives; provided that with respect to clauses (iii), (iv), (v) and (vi), if such Confidential Information remains or is reasonably believed to remain generally unavailable to the public, such information will remain Confidential Information in all other respects and for all other purposes. If such party becomes compelled by legal or administrative process to disclose any Confidential Information, such party will provide the other Members (to the extent it is legally able to do so) with prompt notice of any such disclosure (other than any disclosure in connection with routine regulatory filings, reviews or audits, or requests for regulatory approvals in the ordinary course of the recipient's business, which, in each case, may be made without notice or restriction) so that the other Members may seek a protective order or other appropriate remedy or waive compliance with the non-disclosure provisions of this Section 11.12(a) with respect to the information required to be disclosed. If such protective order or other remedy is not obtained, or such other Members waive compliance with the non-disclosure provisions of this Section 11.12(a) with respect to the information required to be disclosed, the first party will furnish only that portion of such information that it is advised, by opinion of counsel, is legally required to be furnished and will exercise reasonable efforts, at the other Members' expense, to obtain reliable assurance that confidential treatment will be accorded such information, including, in the case of disclosures to the IRS described in clause (iv) above, to obtain reliable assurance that, to the maximum extent permitted by applicable Legal Requirements, such information will not be made available for public inspection pursuant to Section 6110 of the Code.

(b) Except to the extent necessary for the exercise of its rights and remedies and the performance of its obligations under this Agreement, the Project Documents and Transaction Documents (including without limitation, the ownership, operation and administration of the Company), the Class A Member, the Class B Member, the Class C Member and their respective Affiliates will hold confidential and not disclose directly or indirectly, any of the economic terms particular to this Agreement and the ECCA, including the amount of any Member's Capital Contribution, economic returns thereon or the identity of any Member other than with respect to the disclosures of the type described in clause (a)(i) through (vii) above or in clause (c) below that are permitted for the other Members and their respective Affiliates. The foregoing shall not restrict either the Class B Member or the Class C Member (or any Affiliate) from using project data related to the Project in connection with the development of other energy projects by such Member (or any of its Affiliates).

(c) Nothing in Section 11.12(a) and (b) shall be construed as prohibiting a party hereunder or its Affiliates from using such Confidential Information in connection with (i) any claim against another Member or the Managing Member hereunder or under any other Transaction Document or Project Document, (ii) any exercise by a party hereunder of any of its rights hereunder and under any other Transaction Document or Project Document (including without limitation, the ownership, operation and administration of the Company) and (iii) a disposition by a Member of all or a portion of its Membership Interest or a disposition of an equity interest in such Member or its Affiliates, or a potential financing of the Project; provided that such potential purchaser or lender shall have entered into a confidentiality agreement with respect to Confidential Information on customary terms used in confidentiality agreements in connection with corporate acquisitions before any such information may be disclosed. In addition, each Member hereby acknowledges that the United States federal securities laws, among other things, prohibit certain persons in possession of material, non-public information concerning companies or securities from buying or selling securities issued by those companies or disclosing that material, non-public information to others who buy or sell those securities while in possession of that information (or disclose that information to others who buy or sell). Notwithstanding anything herein to the contrary, the Parties and their respective Representatives may disclose to any and all Persons, without limitation of any kind, the U.S. federal income tax treatment and tax structure of the transaction and all materials of any kind (including opinions and other tax analyses) that are provided to such Party relating to such tax treatment and tax structure, except where confidentiality is reasonably necessary to comply with securities laws. For this purpose, "tax structure" is limited to facts relevant to the U.S. federal income tax treatment of the transaction and does not include information relating to the identity of the Parties, their Affiliates, agents or advisors.

(d) Notwithstanding Section 11.12(a), (b) and (c), Class C Member may issue a press release or disclose on its website or marketing materials the fact of its investment in the Company and the nature of its investment; provided (i) that the Class C Member must provide a copy of any such press release or the details of any such disclosure to the Class B Member at least two (2) Business Days prior to publication or disclosure thereof and (ii) that any such press release mentioning or referring to the Class B Member or any of its Affiliates (other than the Company) by name or setting forth the amount invested shall require the prior written consent of the Class B Member, not to be unreasonably withheld, condition or delayed.

11.13 Joint Efforts. To the full extent permitted by applicable Legal Requirements, neither this Agreement nor any ambiguity or uncertainty herein will be construed against any of the parties hereto, whether under any rule of construction or otherwise. On the contrary, this Agreement has been prepared by the joint efforts of the respective attorneys for, and has been reviewed by, each of the parties hereto.

11.14 Specific Performance. The Members agree that irreparable damage will result if this Agreement is not performed in accordance with its terms, and the Members agree that any damages available at law for a breach of this Agreement would not be an adequate remedy. Therefore, to the full extent permitted by law, the provisions hereof and the obligations of the Members hereunder shall be enforceable in a court of equity, or other tribunal with jurisdiction, by a decree of specific performance, and appropriate injunctive relief may be applied for and granted in connection therewith. Such remedies and all other remedies provided for in this Agreement shall, however, be cumulative and not exclusive and shall be in addition to any other remedies that a Member may have under this Agreement, at law or in equity.

11.15 Survival. All representations, warranties, covenants and obligations made or undertaken by a Party in this Agreement or in any other Transaction Document are material, have been relied upon by the other Parties and, except as otherwise provided elsewhere in this Agreement (or, with respect to any representations, warranties, covenants and obligations made or undertaken in any other Transaction Document, in such Transaction Document), shall continue in full force and effect, together with the associated rights of indemnification, indefinitely; provided that all indemnities and reimbursement obligations made pursuant to this Agreement shall survive dissolution and liquidation of the Company until expiration of the longest applicable statute of limitations (including extensions and waivers) with respect to the matter for which a Person would be entitled to be indemnified or reimbursed, as the case may be.

11.16 Effective Date. This Agreement shall have no force or effect unless and until the transactions contemplated by the ECCA to take place on the Closing Date occur, at which time this Agreement shall automatically and without any further action, other than the execution hereof, become effective simultaneously with the other actions occurring on the Closing Date.

11.17 Recourse Only to Member. The sole recourse of the Company for performance of the obligations of any Member hereunder shall be against such Member and its assets and not against any assets or property of any present or future stockholder, partner, member, officer, employee, servant, executive, director, agent, authorized representative or Affiliate of such Member.

[*Remainder of this page left intentionally blank. Signature page follows.*]

IN WITNESS WHEREOF, each Member has caused this Fourth Amended and Restated Limited Liability Company Agreement to be signed by a duly authorized officer as of the date first above written.

CLASS A MEMBER:

DIAMOND STATE GENERATION HOLDINGS, LLC

By:
Name:
Title:

CLASS B MEMBER:

SP DIAMOND STATE CLASS B HOLDINGS, LLC

By:
Name:
Title:

CLASS C MEMBER:

ASSURED GUARANTY MUNICIPAL CORP.

By:

Name:

Title:

ACKNOWLEDGED AND AGREED FOR PURPOSES OF SECTION 8.6(g):

COMPANY

DIAMOND STATE GENERATION PARTNERS, LLC

By:

Name:

Title:

ANNEX I

DEFINITIONS

[See attached]

ANNEX II

MEMBERSHIP INTERESTS

CLASS A MEMBERSHIP INTERESTS

Class A Member	Number of Class A Membership Interests Owned	Percentage of Class A Membership Interests Owned
Diamond State Generation Holdings, LLC	**5**	**100%**

CLASS B MEMBERSHIP INTERESTS

Class B Member	Number of Class B Membership Interests Owned	Percentage of Class B Membership Interests Owned
SP Diamond State Class B Holdings, LLC	**100**	**100%**

CLASS C MEMBERSHIP INTERESTS

Class C Member	Number of Class C Membership Interests Owned	Percentage of Class C Membership Interests Owned
Assured Guaranty Municipal Corp.	**100**	**100%**

SCHEDULE 4.2(d)

MEMBER NAMES AND ADDRESSES

Member Name and Address

Diamond State Generation Holdings, LLC
4353 North 1st Street
San Jose, CA 95134
Attn: Mark Mesler
Email: [*]

SP Diamond State Class B Holdings, LLC
c/o Southern Power Company
30 Ivan Allen Jr. Blvd., NW
Bin SC 1108
Atlanta, GA 30308
Attention: Adam Houston, Assistant Comptroller
E-mail: [*]

with copies to:

Southern Power Company
30 Ivan Allen Jr. Blvd., NW
Bin SC 1108
Atlanta, GA 30308
Attention: John Pemberton, General Counsel
Attention: Sonnet Edmonds, Corporate Secretary
E-mail: [*][*]
Telephone: (404) [*]

Assured Guaranty Municipal Corp.
1633 Broadway
New York, New York 10019
Attention: General Counsel
Email: g[*]

Schedule 5.2

Revenue and Expense Statement Information

i. Revenue allocation % calculation (including the Phase 1 New Systems Output Percentage and the Phase 2 New Systems Output Percentage)

ii. Total revenue calculation (including Operating Revenue and Extraordinary Shared Facility Revenue)

iii. PJM charges support

iv. Total Red Lion and Brookside rental expense calculation

v. Other COGS – utilities/communication line expenses supports

vi. Professional Services Expenses – legal fees, etc. supports

vii. Other Miscellaneous Expenses

viii. Operating Expenses of the Project

ix. Specially Allocated Phase 1 New System Items and Specially Allocated Phase 2 New System Items

x. Phase 1 New Systems Income and Loss and Phase 2 New Systems Income and Loss

Schedule 8.4

Required Insurance

Insurance. At all times the Company shall maintain in force and effect the following insurance with insurance companies rated “A-” or better, with a minimum size rating of “X” by AM Best’s Insurance Guide and Key Ratings (or an equivalent rating by another nationally recognized insurance rating agency of similar standing if AM Best’s Insurance Guide and Key Ratings shall no longer be published), which insurance shall not be subject to cancellation, termination or other material adverse changes unless the insurer delivers to the Managing Member written notice of the cancellation, termination or change at least thirty (30) days in advance of the effective date of the cancellation, termination or material adverse change or if notice from the insurer to the Managing Member of material adverse change is not available on commercially reasonable terms then Managing Member shall provide the Members with such notice as soon as reasonably possible after becoming aware of such change.

(a) Commercial General Liability Insurance, including bodily injury and property damage liability (arising from premises, operations, contractual liability endorsements, products liability, or completed operations) with limits not less than One Million Dollars ($1,000,000.00) per occurrence and Two Million Dollars ($2,000,000.00) annual aggregate limit at policy inception;

(b) If there is exposure, automobile liability insurance in accordance with prudent industry practice with a limit of not less than One Million Dollars ($1,000,000.00), combined single limit per occurrence;

(c) Umbrella liability insurance acting in excess of underlying employer’s liability, commercial general liability and automobile liability policies with limits not less than Twenty Five Million Dollars ($25,000,000.00) per occurrence;

(d) All Risk Property insurance shall be provided for all property and equipment with a limit of not less than the aggregate full replacement cost of the Project;

(e) Business interruption coverage insuring the loss of expected gross revenues for a period of not less than 12 months; and

(f) Environmental/pollution liability insurance with a limit of not less than Ten Million Dollars ($10,000,000.00) per claim.

EXHIBIT A

FORM OF CERTIFICATE FOR CLASS A MEMBERSHIP INTEREST

THE INTERESTS REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "***ACT***") OR ANY STATE SECURITIES LAWS. ACCORDINGLY, SUCH INTERESTS MAY NOT BE SOLD, TRANSFERRED OR OTHERWISE DISPOSED OF WITHOUT COMPLIANCE WITH SUCH ACT AND SUCH STATE SECURITIES LAWS, AND DIAMOND STATE GENERATION PARTNERS, LLC MAY REQUIRE AN OPINION OF COUNSEL SATISFACTORY TO IT THAT NO VIOLATION OF SUCH ACT AND SUCH STATE SECURITIES LAWS WILL RESULT FROM ANY PROPOSED SALE, TRANSFER OR OTHER DISPOSITION OF SUCH INTERESTS.

THIS CERTIFICATE EVIDENCES AN INTEREST IN DIAMOND STATE GENERATION PARTNERS, LLC AND SHALL BE A SECURITY FOR THE PURPOSES OF ARTICLE 8 OF THE UNIFORM COMMERCIAL CODE AS IN EFFECT IN THE STATE OF NEW YORK.

No. [A-[_]]   Class A Membership Interests

Diamond State Generation Partners, LLC
a Delaware Limited Liability Company
Certificate of Interest

This certifies that [___________________] is the owner of [5] Class A Membership Interests in Diamond State Generation Partners, LLC (the "***Company***"), which membership interests are subject to the terms of the Fourth Amended and Restated Limited Liability Company Agreement of Diamond State Generation Partners, LLC, dated as of December 23, 2019, as the same may be further amended, restated, supplemented or otherwise modified from time to time in accordance with the terms thereof (the "***Limited Liability Company Agreement***").

This Certificate of Interest may be transferred by the lawful holders hereof only in accordance with the provisions of the Limited Liability Company Agreement.

IN WITNESS WHEREOF, the said Company has caused this Certificate of Interest to be signed by its duly authorized signatory this [__] day of [_______], 2019.

Diamond State Generation Partners, LLC

By:_

Name:

Title:

[Reverse]

INSTRUMENT OF TRANSFER OF
MEMBERSHIP INTEREST IN
Diamond State Generation Partners, LLC

FOR VALUE RECEIVED, the undersigned does hereby sell, assign and transfer unto ____

(print or type name of assignee)

the membership interest evidenced by and within the Certificate of Interest herewith, and does hereby irrevocably constitute and appoint ___________________ as attorney to transfer said interest on the books of Diamond State Generation Partners, LLC, with full power of substitution in the premises.

Dated as of:

[_____________________]
By:__
Name:
Title:

EXHIBIT B

FORM OF CERTIFICATE FOR CLASS B MEMBERSHIP INTEREST

THE INTERESTS REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "***ACT***") OR ANY STATE SECURITIES LAWS. ACCORDINGLY, SUCH INTERESTS MAY NOT BE SOLD, TRANSFERRED OR OTHERWISE DISPOSED OF WITHOUT COMPLIANCE WITH SUCH ACT AND SUCH STATE SECURITIES LAWS, AND DIAMOND STATE GENERATION PARTNERS, LLC MAY REQUIRE AN OPINION OF COUNSEL SATISFACTORY TO IT THAT NO VIOLATION OF SUCH ACT AND SUCH STATE SECURITIES LAWS WILL RESULT FROM ANY PROPOSED SALE, TRANSFER OR OTHER DISPOSITION OF SUCH INTERESTS.

THIS CERTIFICATE EVIDENCES AN INTEREST IN DIAMOND STATE GENERATION PARTNERS, LLC AND SHALL BE A SECURITY FOR THE PURPOSES OF ARTICLE 8 OF THE UNIFORM COMMERCIAL CODE AS IN EFFECT IN THE STATE OF NEW YORK.

No. [B-[_]] Class B Membership Interests

Diamond State Generation Partners, LLC
a Delaware Limited Liability Company
Certificate of Interest

This certifies that [____________________] is the owner of [100] Class B Membership Interests in Diamond State Generation Partners, LLC (the "***Company***"), which membership interests are subject to the terms of the Fourth Amended and Restated Limited Liability Company Agreement of Diamond State Generation Partners, LLC, dated as of December 23, 2019, as the same may be further amended, restated, supplemented or otherwise modified from time to time in accordance with the terms thereof (the "***Limited Liability Company Agreement***").

This Certificate of Interest may be transferred by the lawful holders hereof only in accordance with the provisions of the Limited Liability Company Agreement.

IN WITNESS WHEREOF, the said Company has caused this Certificate of Interest to be signed by its duly authorized signatory this [___] day of [______], 2019.

Diamond State Generation Partners, LLC
By:_

Name:
Title:

[Reverse]

INSTRUMENT OF TRANSFER OF
MEMBERSHIP INTEREST IN
Diamond State Generation Partners, LLC

FOR VALUE RECEIVED, the undersigned does hereby sell, assign and transfer unto ____

(print or type name of assignee)

the membership interest evidenced by and within the Certificate of Interest herewith, and does hereby irrevocably constitute and appoint __________________ as attorney to transfer said interest on the books of Diamond State Generation Partners, LLC, with full power of substitution in the premises.

Dated as of:

[____________________]
By:__
Name:
Title:

EXHIBIT C

FORM OF CERTIFICATE FOR CLASS C MEMBERSHIP INTEREST

THE INTERESTS REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "***ACT***") OR ANY STATE SECURITIES LAWS. ACCORDINGLY, SUCH INTERESTS MAY NOT BE SOLD, TRANSFERRED OR OTHERWISE DISPOSED OF WITHOUT COMPLIANCE WITH SUCH ACT AND SUCH STATE SECURITIES LAWS, AND DIAMOND STATE GENERATION PARTNERS, LLC MAY REQUIRE AN OPINION OF COUNSEL SATISFACTORY TO IT THAT NO VIOLATION OF SUCH ACT AND SUCH STATE SECURITIES LAWS WILL RESULT FROM ANY PROPOSED SALE, TRANSFER OR OTHER DISPOSITION OF SUCH INTERESTS.

THIS CERTIFICATE EVIDENCES AN INTEREST IN DIAMOND STATE GENERATION PARTNERS, LLC AND SHALL BE A SECURITY FOR THE PURPOSES OF ARTICLE 8 OF THE UNIFORM COMMERCIAL CODE AS IN EFFECT IN THE STATE OF NEW YORK.

No. [C-[_]]   Class C Membership Interests

Diamond State Generation Partners, LLC
a Delaware Limited Liability Company
Certificate of Interest

This certifies that [___________________] is the owner of [100] Class C Membership Interests in Diamond State Generation Partners, LLC (the "***Company***"), which membership interests are subject to the terms of the Fourth Amended and Restated Limited Liability Company Agreement of Diamond State Generation Partners, LLC, dated as of December 23, 2019, as the same may be further amended, restated, supplemented or otherwise modified from time to time in accordance with the terms thereof (the "***Limited Liability Company Agreement***").

This Certificate of Interest may be transferred by the lawful holders hereof only in accordance with the provisions of the Limited Liability Company Agreement.

IN WITNESS WHEREOF, the said Company has caused this Certificate of Interest to be signed by its duly authorized signatory this [__] day of [_______], 2019.

Diamond State Generation Partners, LLC

By:_

Name:

Title:

[Reverse]

INSTRUMENT OF TRANSFER OF
MEMBERSHIP INTEREST IN
Diamond State Generation Partners, LLC

FOR VALUE RECEIVED, the undersigned does hereby sell, assign and transfer unto ____

(print or type name of assignee)

the membership interest evidenced by and within the Certificate of Interest herewith, and does hereby irrevocably constitute and appoint __________________ as attorney to transfer said interest on the books of Diamond State Generation Partners, LLC, with full power of substitution in the premises.

Dated as of:

[____________________]
By:__
Name:
Title:

EXHIBIT D

FORM OF ASSIGNMENT AGREEMENT

This ASSIGNMENT OF MEMBERSHIP INTERESTS, dated as of [_________] [__], 20[__] (this "Assignment Agreement"), is by and between [____________________], a [___________] (the "Assignor") and [____________________], a [___________] (the "Assignee").

W I T N E S S E T H :

WHEREAS, Diamond State Generation Partners, LLC, a Delaware limited liability company (the "Company"), was formed by virtue of its Certificate of Formation filed with the Secretary of State of the State of Delaware on [___________], and is governed by the Fourth Amended and Restated Limited Liability Company Agreement of the Company, dated as of December 23, 2019, executed by the Assignor and [_______________], a [_________], with all amendments thereto (the "LLC Agreement");

WHEREAS, the Assignor is currently a [Class A Member][Class B Member][Class C Member] of the Company;

WHEREAS, pursuant to the LLC Agreement, the Assignor has agreed to transfer to Assignee and Assignee has agreed to accept from the Assignor, on the terms and subject to the conditions set forth in the LLC Agreement, [Class A] [Class B] [Class C] Membership Interests of the Company;

WHEREAS, pursuant to the LLC Agreement, the parties thereto have agreed to admit the Assignee as a [Class A] [Class B][Class C] Member of the Company; and

NOW, THEREFORE, in consideration of the mutual covenants and agreements and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned do hereby agree as follows:

1. Defined Terms. All capitalized terms not defined herein are used herein as defined in the LLC Agreement.

2. Instructions to Transfer to Assignee. As of the date hereof, the Assignor hereby assigns and transfers unto Assignee complete record and beneficial ownership of [__] [Class A][Class B][Class C] Membership Interests in the Company, together with all rights and benefits associated therewith and the Assignee hereby assumes from Assignor complete record and beneficial ownership of [__] [Class A][Class B][Class C] Membership Interests in the Company, together with all rights and benefits associated therewith. The Assignor hereby irrevocably instructs the Company to register on the books of the Company the transfer to Assignee of complete record and beneficial ownership of [__][Class A][Class B][Class C] Membership Interests in the Company previously owned by Assignor.

3. Further Assurances. Subject to the terms and conditions of the LLC Agreement, at any time, or from time to time after the date hereof, the Assignor and Assignee shall, at the other's reasonable request, and at the requesting party's expense, execute and deliver such instruments of transfer, conveyance, assignment and assumption, in addition to this Assignment Agreement, and take such other action as either of them may reasonably request in order to evidence the transfer effected hereby.

4. Successors and Assigns. This Assignment Agreement and all of the provisions hereof shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

5. Counterparts. This Assignment Agreement may be signed in any number of counterparts, each of which shall be deemed an original, with the same effect as if the signatures hereto were upon the same instrument. This Assignment Agreement shall become effective when each party hereto shall have received a counterpart hereof signed by the other party.

6. Governing Law. This Assignment Agreement shall be governed by, and construed and enforced in accordance with, the laws of the State of New York applicable to contracts performed in that State.

[Remainder of page intentionally left blank. Signature page to follow.]

IN WITNESS WHEREOF, each party hereto has caused this Assignment of Membership Interests to be signed on its behalf as of the date first written above.

[______________________]
as the Assignor

By: __
Name:
Title:

[_____________________]
as the Assignee

By: __
Name:
Title:

EXHIBIT E

MAJOR DECISIONS

1. Engage in any business or activity that is not related or incidental to, or consistent with, operation of the Phase 1 New Systems and Phase 2 New Systems and the activities contemplated by the Phase 1 CapEx Agreement, the Phase 2 CapEx Agreement, the MOMA and the Administrative Services Agreement;

2. Merge, consolidate, convert, or otherwise reorganize the Company with or into another entity or change the state or other jurisdiction where the Company is organized;

3. Convert or reorganize the Company into another entity form (including a corporation) or cause the Company to be taxed as a corporation for federal income tax purposes;

4. Amend or otherwise modify the LLC Agreement;

5. Dissolve the Company;

6. Adopt a business plan and/or budget, or amend, substitute, or modify any previously adopted business plan or budget, other than in accordance with Section 7.1(b);

7. Other than with respect to (i) transactions contemplated by the Phase 1 CapEx Agreement or the Phase 2 CapEx Agreement or (ii) as necessary to keep the Phase 1 New Systems and the Phase 2 New Systems in full operation or to comply with Applicable Laws or the Tariff, or (iii) transactions having a value or potential cost to the Company that is less than $500,000, individually or in the aggregate, either (A) purchase, lease, or otherwise acquire or improve property of any kind or nature, or purchase, lease, or otherwise acquire any additional interest therein, or (B) dispose of any property;

8. Guarantee the obligations of any Person;

9. Institute, prosecute, or settle any claim, litigation or other proceeding involving the Company in excess of $500,000, individually or in the aggregate, other than any claim, litigation or other proceeding by and among the Parties to the Transaction Documents in connection therewith;

10. Release any Person or Persons from any liability or potential liability to the Company in excess of $500,000, individually or in the aggregate;

11. Confess judgment against the Company;

12. File for Bankruptcy or make an assignment for the benefit of creditors or consent to the institution of any proceedings in bankruptcy against the Company, including any liquidation, dissolution or reorganization in Bankruptcy;

13. Agree to indemnify, defend, or hold harmless any person except as part of commercial arrangements in the Ordinary Course of Business;

14. Other than entering into, and binding or obligating the Company with respect to, the Phase 1 CapEx Agreement, the Phase 2 CapEx Agreement, the ECCA, the Administrative Services Agreement and the MOMA (and any contracts specifically contemplated by those agreements), or as necessary to keep the Phase 2 New Systems and the Phase 1 New Systems in full operation or to comply with Applicable Laws or the Tariffs, enter into any transaction, or bind or obligate the Company with respect to any agreement (or series of related agreements), that has (or have) a potential value or cost to the Company of more than $500,000, individually or in the aggregate, or agree on behalf of the Company to any material amendment, modification, alteration, waiver, or adjustment with respect to any such transaction (including any material amendment, modification, alteration, waiver, or adjustment with respect to, the Phase 1 CapEx Agreement, the Phase 2 CapEx Agreement, the ECCA, the Administrative Services Agreement and the MOMA);

15. Other than entering into the Phase 1 CapEx Agreement, the Phase 2 CapEx Agreement, the ECCA, the Administrative Services Agreement and the MOMA, enter into, amend, restate, substitute, or modify, or make any other decision with respect to, any contract, agreement, transaction, or other arrangement between the Company and any Member or any affiliate of any Member;

16. Issue additional equity interests in the Company;

17. Grant any option, conversion right, right of first offer or refusal, or similar right to purchase any of the Company's assets or any equity interest in the Company, with the exception of the sale of scrap, damaged or obsolete equipment;

18. Incur any indebtedness for borrowed money or loan any funds of the Company to any Person;

19. Create any Encumbrance on all or part of the Company's assets, other than Permitted Liens;

20. Redeem or otherwise liquidate all or any portion of any equity interest in the Company;

21. Submit any regulatory filings, except in the ordinary course of business consistent with past practice;

22. Establish any reserves from Company Distributable Cash other than in accordance with an established budget;

23. Enter into, amend, modify or terminate any energy marketing agreement or scheduling agreement, including that certain Energy Management Services Agreement dated as of March 2, 2012 between the Company and White Pine Energy Consulting, LLC;

24. Terminate any services required to be provided to the Company under the Administrative Services Agreement or remove or replace the Administrator thereunder;

25. Remove or replace the Operator pursuant to the MOMA or terminate or extend beyond the Tariff Date the Warranty Period pursuant to (and as defined in) the MOMA;

26. Agree to setoff any amounts owed by or to the Company under any Transaction Documents, the Phase 1 CapEx Agreement or the Phase 2 CapEx Agreement;

27. (a) Cause the Company to pay or incur any expense if the amount of such expense would exceed one hundred ten percent (110%) of the amount budgeted therefor in the Base Case Model; provided that the foregoing shall not restrict the ability of the Managing Member to pay or incur any expense needed to remedy any emergency or force majeure situation or (b) modify or vary the Base Case Model or the amount of any expenses budgeted therefor in the Base Case Model;

28. Consent to any waiver or amendment of the IP License;

29. Consent to any waiver or amendment of the Letter of Credit; or

30. Agree to do any of the foregoing.

EXHIBIT F

FORM OF OPERATIONS REPORT

Exhibit G

Form of Class B Draw Request

[Managing Member]
c/o Diamond State Generation Partners, LLC
[Address]
[Address]
[Address]
Attention: [___]
E-Mail: [___]

With a copy to:

Assured Guaranty Municipal Corp.
1633 Broadway
New York, New York 10019
Attention: General Counsel
Email: [*]

[Date]

RE: Fourth Amended and Restated Limited Liability Company Agreement of Diamond State Generation Partners, LLC, dated as of December 23, 2019 (as amended, modified for supplemented from time to time, the "LLCA"), by and between Diamond State Generation Holdings, LLC, a Delaware limited liability company, SP Diamond State Class B Holdings, LLC, a Delaware limited liability company (the "Class B Member") and Assured Guaranty Municipal Corp., a New York insurance company. Capitalized terms used herein but undefined have the meanings set forth in the LLCA.

This Class B Draw Request is made pursuant to Section 8.6(a) of the LLCA for a Draw Amount of $[___].

The undersigned, an authorized representative of the Class B Member, hereby certifies that (i) it has a claim under Section 7.1 of the Southern ECCA for which Bloom has not paid when such claim was due and payable and (ii) the Draw Amount set forth above does not exceed the Class B LC Cap.

On behalf of the Class B Indemnified Parties the Class B Member directs the Company to draw an amount equal to the Draw Amount set forth above.

Attached hereto is a draft sight draft in the form of Exhibit A to the Letter of Credit for the Draw Amount set forth above.

CLASS B MEMBER:

SP DIAMOND STATE CLASS B HOLDINGS, LLC

By:

Name:

Title:

Exhibit H

Form of Class C Draw Request

[Managing Member]
c/o Diamond State Generation Partners, LLC
[Address]
[Address]
[Address]
Attention: [___]
E-Mail: [___]

With a copy to:

SP Diamond State Class B Holdings, LLC
c/o Southern Power Company
30 Ivan Allen Jr. Blvd., NW
Bin SC 1108
Atlanta, GA 30308
Attention: Adam Houston, Assistant Comptroller
E-mail: [*]

and

Southern Power Company
30 Ivan Allen Jr. Blvd., NW
Bin SC 1108
Atlanta, GA 30308
Attention: John Pemberton, General Counsel
Attention: Sonnet Edmonds, Corporate Secretary
E-mail: [*][*]
Telephone: (404) [*]

[Date]

RE: Fourth Amended and Restated Limited Liability Company Agreement of Diamond State Generation Partners, LLC, dated as of December 23, 2019 (as amended, modified for supplemented from time to time, the "LLCA"), by and between Diamond State Generation Holdings, LLC, a Delaware limited liability company, SP Diamond State Class B Holdings, LLC, a Delaware limited liability company and Assured Guaranty Municipal Corp., a New York insurance company ("Class C Member"). Capitalized terms used herein but undefined have the meanings set forth in the LLCA.

This Class C Draw Request is made pursuant to Section 8.6(b) of the LLCA for a Draw Amount of $[___].

The undersigned, an authorized representative of the Class C Member, hereby certifies that (i) it has a claim under Section 7.1 of the ECCA for which Bloom has not paid when such claim was due and payable and (ii) the Draw Amount set forth above does not exceed the Class C LC Cap.

On behalf of the Class C Indemnified Parties the Class C Member directs the Company to draw an amount equal to the Draw Amount set forth above.

Attached hereto is a draft sight draft in the form of Exhibit A to the Letter of Credit for the Draw Amount set forth above.

CLASS C MEMBER:

ASSURED GUARANTY MUNICIPAL CORP.

By:

Name:

Title:

Exhibit 10.33

Redacted Exhibit: This Exhibit contains certain identified information that has been excluded because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed. Redacted information is identified by [*],

FUEL CELL SYSTEM SUPPLY AND INSTALLATION AGREEMENT

between

BLOOM ENERGY CORPORATION,

as Seller

and

DIAMOND STATE GENERATION PARTNERS, LLC,

as Buyer

dated as of December 23, 2019

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FUEL CELL SYSTEM SUPPLY AND INSTALLATION AGREEMENT

This Fuel Cell System Supply and Installation Agreement (this "Agreement"), dated as of December 23, 2019 (the "Agreement Date"), is entered into by and between BLOOM ENERGY CORPORATION, a Delaware corporation ("Seller"), and DIAMOND STATE GENERATION PARTNERS, LLC, a Delaware limited liability company ("Buyer"). Seller and Buyer are referred to in this Agreement individually, as a "Party" and, collectively, as the "Parties."

RECITALS

WHEREAS, Seller is in the business of designing, engineering, constructing, commissioning, operating, and maintaining solid oxide fuel cell power generating facilities;

WHEREAS, Buyer owns a group of Bloom Systems and the applicable BOF, of which seventeen and seven-tenths megawatts (17.7 MW) have been newly upgraded (the "Phase 1 New Systems") pursuant to that certain Fuel Cell System Supply and Installation Agreement, by and between Buyer and Seller, dated June 14, 2019 (the "Phase 1 CapEx Agreement") and other agreements;

WHEREAS, Buyer desires to purchase an additional nine and eight-tenths megawatts (9.8 MW) of new Bloom Systems and New BOF on a full turn-key basis (upon completion, the "Phase 2 New Systems", and collectively, with the Phase 1 New Systems, the "Project"), pursuant to the terms herein;

NOW, THEREFORE, in consideration of the mutual covenants, representations, warranties and agreements hereinafter set forth, and intending to be legally bound hereby, the Parties agree as follows:

AGREEMENT

ARTICLE I.
DEFINITIONS

Section 1.1 Definitions. As used in this Agreement, capitalized terms not otherwise defined shall have the meanings set forth below:

"A&R Administrative Services Agreement" means that certain Second Amended and Restated Administrative Services Agreement, amended and restated as of even date herewith, by and between Seller, as "Administrator," and Buyer, as "Project Company."

"A&R MOMA" means that certain Second Amended and Restated Master Operations and Maintenance Agreement, dated as of even date herewith, by and between Seller, as "Operator," and Buyer as "Owner."

"Affiliate" of any Person means a Person that directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with, the Person specified, provided that notwithstanding anything in this Agreement to the contrary, Seller is not an Affiliate of Buyer. For purposes of this Agreement, the direct or indirect ownership of over fifty percent (50%) of the outstanding voting securities of an entity, or the right to receive over fifty percent (50%) of the profits or earnings of an entity shall be deemed to constitute control. Such other relationships as in fact results in actual control over the management, business and affairs of an entity, shall also be deemed to constitute control.

"Agreement" is defined in the preamble.

"Agreement Date" is defined in the preamble.

"Appraisal Procedure" means within fifteen (15) days of a Party invoking the procedure described in this definition Buyer and Seller shall engage a Qualified Appraiser, mutually acceptable to them, to conclusively determine within fifteen (15) days after appointment the Fair Market Value of a Phase 2 New System.

"Bankruptcy" as to any Person means (a) such Person admits in writing its inability to pay its debts generally as they become due; (b) such Person files a petition or answer seeking reorganization or arrangement under the federal bankruptcy laws or any other Legal Requirements of the United States of America or any State, district or territory thereof; (c) such Person makes an assignment for the benefit of creditors; (d) such Person consents to the appointment of a receiver of the whole or any substantial part of its assets; (e) such Person has a petition in bankruptcy filed against it, and such petition is not dismissed within sixty (60) days after the filing thereof; (f) a court of competent jurisdiction enters an order, judgment, or decree appointing a receiver of the whole or any substantial part of such Person's assets, and such order, judgment or decree is not vacated or set aside or stayed within sixty (60) days from the date of entry thereof; or (g) under the provisions of any other law for the relief or aid of debtors, any court of competent jurisdiction shall assume custody or control of the whole or any substantial part of such Person's assets and such custody or control is not terminated or stayed within sixty (60) days from the date of assumption of such custody or control.

"Bankruptcy Laws" is defined in Section 9.3.

"Base Case Model" means the economic model titled "Project Leone Model_2nd Single Investor_12.7.19 Blue Mountain (Current LLCA) v03" posted to the Electronic Data Room on December 21, 2019.

"Bill of Sale" means a bill of sale substantially in the form set forth in Exhibit B.

"Bloom System" means a solid oxide fuel cell power generating system, capable of being powered by natural gas, which is designed, constructed and installed by Bloom Energy Corporation. For the avoidance of doubt, each Phase 2 New System constitutes a "Bloom System" for purposes of this Agreement.

"Bloom System Meter" means, with respect to a Bloom System, the internal electricity generation meter located within such Bloom System, which is designed to measure the actual electricity output in kWh produced by such Bloom System and which has the specifications listed on Exhibit A.

"BOF" means, for each Site, the (a) existing balance of facility items included in each Facility as of the Agreement Date, including, as applicable, Electrical Interconnection Facilities, the natural gas supply facilities, the water supply facilities, the data communications facilities, the foundations formerly used for the Removed Systems or currently used for the Phase 1 New Systems and any other facilities and equipment formerly ancillary to the Removed Systems or currently ancillary to the Phase 1 New Systems and installed in connection with the Facility at each Site and all other things ancillary to the Facility and required on or in the vicinity of the Site which were necessary for operation of the Removed Systems prior to their decommissioning, which are necessary for operation of the Phase 1 New Systems or which are otherwise required by the Tariff or Site Lease for such Site ("Existing BOF"), and (b) any new balance of facility items installed in a Facility after the Agreement Date, including, as applicable, any new components in respect of Electrical Interconnection Facilities, the natural gas supply facilities, the water supply facilities, or the data communications facilities, the foundations for the Phase 2 New Systems and any other facilities and equipment ancillary to the Phase 2 New Systems and installed in connection with the Facility at each Site and all other things ancillary to the Facility and required on or in the vicinity of the Site which are necessary to achieve Commissioning with respect to any Phase 2 New System at each such Site or which are otherwise required by the Tariff or Site Lease for any Phase 2 New System or Site ("New BOF"). For clarity, "BOF" excludes any Existing BOF item that is removed from a Facility as part of the Installation Services as of the date of such removal.

"Brookside Facility" means the Bloom Systems and BOF at 512 E. Chestnut Hill Road, Newark, DE 19713.

"BTUs" means British Thermal Units.

"Business Day" means a day other than a Saturday, Sunday or other day on which banks in New York, New York, or San Francisco, California, are authorized or required to close.

“Buyer” is defined in the preamble.

“Buyer Default” is defined in Section 10.2.

“Buyer Indemnitee” is defined in Section 11.3(a).

“Buyer Manager” is defined in Section 3.10(a).

“Claiming Party” is defined in Section 10.6.

“Code” means the Internal Revenue Code of 1986, as amended.

“Commissioned” and “Commissioning” means, with respect to any Phase 2 New System, the completion and the performance of all of the following activities:

(a) such Phase 2 New System has been installed at the applicable Facility specified in the Purchase Order, and has been Placed in Service;

(b) (i) such Phase 2 New System, based on a [*] period of operation, (A) is producing power at one hundred percent (100%) of the System Capacity of such Phase 2 New System, as measured by the Bloom System Meter and (B) is operating at or above the Minimum Efficiency Level and (ii) Seller has provided Buyer with evidence reasonably satisfactory to Buyer of each of the foregoing;

(c) Seller has (i) performed and successfully completed all necessary acts required under the applicable Interconnection Agreement (e.g., performance testing), if any, and (ii) obtained any required permission from the applicable Person granting Buyer permission to interconnect such Phase 2 New System with the distribution or transmission facilities of such applicable Person;

(d) Seller shall have delivered Seller’s Certificate of Commissioning to Buyer; and

(e) Seller shall have delivered to Buyer each of the Seller Deliverables indicated on Exhibit C as items for delivery prior to or at Commissioning.

“Commissioning Date Deadline” means January 31, 2020.

“Commissioning Milestone” means, with respect to any Phase 2 New System, the completion of all of the requirements of Commissioning.

“Confidential Information” is defined in Section 8.1.

“Construction Report” is defined in Section 5.1(a)(iii).

“DDP (Incoterms 2010)” means Delivered Duty Paid (DDP) as such term is used in the International Rules for the Interpretation of Trade Terms (identified as “INCOTERMS® 2010”) as prepared by the International Chamber of Commerce.

"Delay LDs" is defined in Section 2.7(a).

"Delayed Phase 2 New System(s)" is defined in Section 2.7.

"Delivery" means the physical delivery of all New BOF materials or equipment or all material components of a Phase 2 New System to the applicable Site. Upon achievement of Delivery, such material components of a Phase 2 New System or New BOF materials shall have been "Delivered."

"Delivery Date" means for each Phase 2 New System, the date upon which the Delivery Milestone is achieved for such Phase 2 New System, as set forth in Seller's Certificate of Delivery Milestone Completion.

"Delivery Milestone" means, with respect to any Phase 2 New System, the completion of the following activities:

(a) all material components comprising a complete Phase 2 New System have been Delivered;

(b) such Phase 2 New System has been placed upon its applicable concrete pad in an approved location pursuant to the applicable Site Lease and is available for installation, startup, and Commissioning;

(c) if required by the applicable Site Lease, Buyer has received approval of the Site plans and/or single line drawings from the applicable Site Landlord in respect of the Phase 2 New Systems and New BOF to be installed, and Existing BOF to be reconfigured, at such Site; and

(d) Seller shall have delivered Seller's Certificate of Delivery Milestone Completion to Buyer.

"Deposit" is defined in Section 2.4(a)(i).

"Documentation" means Phase 2 New System documentation for a Facility, including testing, engineering, specifications, and operations and maintenance manuals, Training Materials, drawings, reports, standards, schematics, directions, samples and patterns, including any such Documentation required to be delivered prior to Commissioning under Section 3.3(a)(v).

"DPL" means Delmarva Power & Light Company, d/b/a Delmarva Power, an investor owned utility company regulated by the Delaware Public Service Commission.

"DPL Agreements" means the service applications between Buyer and DPL with respect to the REPS Act, the Tariff and the Gas Tariff, whereby DPL shall (a) serve as the agent for collection of amounts due from Buyer (if any) and for disbursement of amounts due to Buyer under the Tariff and (b) sell to Buyer natural gas under the Gas Tariff.

"DSGP Operating Agreement" means that certain Fourth Amended and Restated Limited Liability Company Agreement of Diamond State Generation Partners, LLC, as amended and restated as of even date herewith, between Diamond State Generation Holdings, LLC, SP Diamond State Class B Holdings, LLC, and Assured Guaranty Municipal Corp.

"ECCA" means that certain Equity Capital Contribution Agreement, dated as of the date hereof, among Seller, Diamond State Generation Holdings, LLC, SP Diamond State Class B Holdings, LLC, Assured Guaranty Municipal Corp. and Buyer.

"Efficiency" means, with respect to a Phase 2 New System, the quotient of F/E, where (a) F = the fuel consumed by such Bloom System measured in BTUs on a higher heating value basis, as measured by the mass flow controller, which has the specifications listed on Exhibit A and which is included in such Phase 2 New System, and (b) E = the electricity produced by such Bloom System, measured in kWh, as measured by the Bloom System Meter.

"Electrical Interconnection Facilities" means the equipment and facilities required to safely and reliably interconnect a Facility to the transmission system of DPL or distribution system of PJM pursuant to the Interconnection Agreement for such Facility, including the collection system between each Phase 2 New System, transformers and all switching, metering, communications, control and safety equipment, including the facilities described in any applicable Interconnection Agreement.

"Electronic Data Room" means the electronic data room known as "Project Leone Dataroom" established by the Seller and made available to the Investor.

"Environmental Law" means any Legal Requirement which pertains to health, safety, any Hazardous Material, or the environment (including ground or air or water or noise pollution or contamination, and underground or above ground tanks) and shall include without limitation, the Solid Waste Disposal Act, 42 U.S.C. § 6901 et seq.; the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. § 9601 et seq., as amended by the Superfund Amendments and Reauthorization Act of 1986; the Hazardous Materials Transportation Act, 49 U.S.C. § 1801 et seq.; the Federal Water Pollution Control Act, 33 U.S.C. § 1251 et seq.; the Clean Air Act, 42 U.S.C. § 7401 et seq.; the Toxic Substances Control Act, 15 U.S.C. § 2601 et seq.; the Safe Drinking Water Act, 42 U.S.C. § 300f et seq.; and any other local, state or federal environmental statutes, and all rules, regulations, orders and decrees now or hereafter promulgated under any of the foregoing, as any of the foregoing now exist or may be changed or amended or come into effect in the future.

"Environmental Requirements" means any Environmental Law, agreement or restriction (including any condition or requirement imposed by any insurance or surety company), as the same now exists or may be changed or amended or come into effect in the future, which pertains to health, safety, any Hazardous Material, or the environment.

"Existing BOF" has the meaning set forth in the definition of "BOF."

"Facility" means, with respect to each of the Brookside Facility and the Red Lion Facility, the Phase 1 New Systems, Phase 2 New Systems and BOF at such Site, as may at any point in time share a single Interconnection Point and be operated as a unified whole.

"Facility Services" has the meaning afforded to such term in the A&R MOMA.

"Fair Market Value" means, with respect to any Phase 2 New System, the price at which such asset would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell, and both having reasonable knowledge of the relevant facts, and specifically with respect to a Phase 2 New System or any portion thereof, as determined consistently with Section 4.05 of Revenue Procedure 2007-65.

"FERC" means the Federal Energy Regulatory Commission and any successor.

"Force Majeure Event" means any event or circumstance that (a) prevents a Party from performing its obligations under this Agreement; (b) was not reasonably foreseeable by such Party; (c) was not within the reasonable control of, or the result of the negligence of such Party or a breach of this Agreement by such Party; and (d) such Party is unable to reasonably mitigate, avoid or cause to be avoided with the exercise of due diligence. "Force Majeure Event" may include, provided that the conditions in (a) through (d) in the foregoing sentence are met, a failure or interruption of performance due to an act of God, civil or military authority, war, civil disturbances, terrorist activities, fire, explosions, the external power delivery system (a/k/a the grid) being out of the required specifications or totally failing (a/k/a brownout or blackout), or electric grid curtailment. Notwithstanding the foregoing, Force Majeure Event does not include the lack of economic resources of a Party. Force Majeure Events do not include the failure of a Party's contractor, subcontractor or supplier to furnish sufficient or proper labor, services, materials or equipment in accordance with its contractual obligations (unless such failure is caused solely by a Force Majeure Event). A Force Majeure Event includes fire and explosion, if the fire or explosion does not occur as a result of the failure of a Bloom System or BOF.

"Fundamental Representation" means the representations provided in Section 6.1(b), Section 6.1(h), Section 6.1(k), Section 6.1(o), Section 6.1(s), and Section 9.6.

"GAAP" means United States generally accepted accounting principles consistently applied.

"Gas Supply Agreement" means, with respect to (a) the Brookside Facility, that certain Large Volume Gas Qualified Fuel Cell Provider – Renewable Capable Service Agreement, dated as of June 19, 2012, by and between DPL and Buyer; and (b) the Red Lion Facility, that certain Large Volume Gas Qualified Fuel Cell Provider – Renewable Capable Service Agreement, dated as of December 12, 2012, by and between DPL and Buyer.

"Gas Tariff" means DPL's Service Classification "LVG-QFCP-RC" filed for gas service applicable to REPS Qualified Fuel Cell Provider Projects and approved by the DPSC in Order no. 8062 dated October 18, 2011, as adopted and supplemented by DPSC's Findings, Opinion and Order No. 8079, dated December 1, 2011.

"Governmental Approvals" means (a) any authorizations, consents, approvals, licenses, rulings, permits, tariffs, rates, certifications, variances, orders, judgments, decrees by or with a relevant Governmental Authority and (b) any required notice to, any declaration of, or with, or any registration or filing by, or with, any relevant Governmental Authority.

"Governmental Authority" means any foreign, federal, state, local or other governmental, regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, court, tribunal, arbitrating body or other governmental authority, or the applicable Regional Transmission Organization or Independent System Operator subject to the jurisdiction of FERC (i.e., PJM as of the Agreement Date).

"Hazardous Material" means and includes those elements or compounds which are contained or regulated as a hazardous substance, toxic pollutant, pesticide, air pollutant, or as defined in any Environmental Law, order or decree of any Governmental Authority for the protection of human health, water, safety or the environment or is otherwise included in the definition of "Hazardous Materials," "Hazardous Substance" or a similar term in a Site Lease.

"Indemnifiable Loss" means any claim, demand, suit, loss, liability, damage (including any losses arising as a result of the loss, reduction, deferral or recapture of any ITC), obligation, payment, penalty, fine, cost or expense (including the cost and expense of any investigation, action, suit, proceeding, assessment, judgment, settlement or compromise relating thereto and reasonable attorneys' fees and reasonable disbursements in connection therewith).

"Indemnified Party" is defined in Section 11.4.

"Indemnifying Party" is defined in Section 11.4.

"Installation Services" is defined in Section 3.3(a).

"Intellectual Property" shall mean any or all of the following and all rights therein, whether arising under the laws of the United States or any other jurisdiction: (a) all patents and patent applications (and all reissues, divisions, re-examinations, renewals, extensions, provisionals, continuations and continuations-in-part thereof), patent disclosures and inventions (whether patentable or not); (b) all trade secrets, know-how and confidential and proprietary information; (c) all copyrights and copyrightable works (including computer programs) and registrations and applications therefor and any renewals, modifications and extensions thereof; (d) all moral and economic rights of authors and inventors, however denominated, throughout the world; (e) unregistered and registered design rights and any registrations and applications for registration thereof; (f) trademarks, service marks, trade names, service names, brand names, trade dress, logos, slogans, corporate names, trade styles, domain names and other source or business identifiers, whether registered or not, together with all applications therefor and all extensions and renewals thereof and all goodwill associated therewith; (g) semiconductor chip "mask" works, and registrations and applications for registration thereof; (h) database rights; (i) all other forms of intellectual property, including waivable or assignable rights of publicity or moral rights; and (j) any similar, corresponding or equivalent rights to any of the foregoing anywhere in the world.

[*]

"Interconnection Agreement" means, with respect to (a) the Brookside Facility, that certain Standard Agreement for Interconnection and Parallel Operation of Generation Facilities, dated as of March 27, 2012, by and between DPL and Buyer, with respect to PJM Generation Interconnection Request Queue Position X2-083; and (b) the Red Lion Facility, that certain Interconnection Service Agreement, dated as of June 19, 2012, by and among PJM Interconnection, L.L.C., Buyer, and DPL, with respect to PJM Generation Interconnection Request Queue Position X1-097.

"Interconnection Point" means, with respect to (a) the Brookside Facility, the "Point of Interconnection" specified in the Interconnection Agreement for such Facility; and (b) the Red Lion Facility, the "Point of Interconnection" specified in the Interconnection Agreement for such Facility.

"Investor" means each of Southern Power Company and Assured Guaranty Municipal Corp., as the case may be.

"Invoice Due Date" means the date specified on a Payment Notice duly delivered by Seller to Buyer and accepted by Buyer for the Phase 2 New Systems.

"IP License" is defined in Section 9.1.

"IRS" means the Internal Revenue Service.

"ITC" means an investment tax credit pursuant to Code Sections 38(b)(1), 46 and 48(a).

"Knowledge" means (a) as to any Person other than a natural person, the actual knowledge (including any knowledge which would reasonably have been obtained after due inquiry) of such Person and its managers, directors officers and employees who have responsibility for the transactions contemplated by this Agreement, and (b) in respect of any Person who is a natural Person, the actual knowledge (including any knowledge which would reasonably have been obtained after due inquiry) of such Person.

"kW" means kilowatt.

"kWh" means kilowatt-hour.

"Legal Requirement" means any law, statute, act, decree, ordinance, rule, directive (to the extent having the force of law), tariff, order, treaty, code or regulation or any interpretation of any of the foregoing, including Environmental Requirements, as enacted, issued or promulgated by any Governmental Authority, NERC, any Person that NERC has delegated its authority to under the Federal Power Act or any Person that operates an interstate electric transmission system, including all amendments, modifications, extensions, replacements or re-enactments thereof, in each case applicable to or binding upon such Person or any of its properties or to which such Person or any of its property is subject.

"Liens" means any lien, security interest, mortgage, hypothecation, encumbrance or other restriction on title or property interest.

"Major Service Provider" is defined in Section 12.14.

"Managers" means Seller Manager and Buyer Manager.

"Manufacturer's Warranty" is defined in Section 4.1(b).

"Manufacturer's Warranty Period" means, for (a) each Phase 2 New System, the period beginning on the Commissioning Date of such Phase 2 New System and ending on the first (1st) anniversary thereof, and (b) the New BOF at a Facility, the period beginning on the date that installation and commissioning of such BOF has been completed and ending on the first (1st) anniversary of the Commissioning Date of last Phase 2 New System Commissioned at such Facility.

"Material Adverse Effect" means, for any Person or any Facility, as applicable, any change, effect or occurrence that, individually or in the aggregate, is or could reasonably be expected to be materially adverse to (a) the business, earnings, assets, results of operations, property or condition (financial or otherwise) of such Person or any Facility, as applicable, (b) the validity or enforceability of the Tariff, any Transaction Document, any Site Lease or the transactions contemplated by this Agreement, or (c) any Person's ability to perform its obligations under any Transaction Document or any Site Landlord's ability to perform its obligations under the applicable Site Lease.

"Maximum Liability" means, with respect to each Party, [*].

"Milestone(s)" means each of the (a) Delivery Milestone, and (b) the Commissioning Milestone.

"Minimum Efficiency Level" means an Efficiency equal to 7,550 BTU/kWh.

"MW" means megawatt.

"Nameplate Capacity" means the maximum electrical output of a generator as rated by the manufacturer determined at the normal operating conditions designated by the manufacturer.

"NERC" means the North American Electric Reliability Corporation or any successor.

"New BOF" has the meaning set forth in the definition of "BOF."

"Party" and "Parties" have the meanings set forth in the preamble.

"Payment Notice" means a notice delivered from Seller to Buyer pursuant to Section 2.5(c) substantially in the form set forth in Exhibit D.

"Performance Standards" is defined in Section 3.9.

"Permits" means all Governmental Approvals that are necessary under applicable Legal Requirements or this Agreement to have been obtained at such time in light of the stage of development of the Project to perform the Installation Services for the Phase 2 New Systems as contemplated in this Agreement or for a Party to enter into this Agreement or to consummate any transaction contemplated hereby, in each case in accordance with all applicable Legal Requirements.

"Permitted Liens" means any (a) Liens that are released or otherwise terminated at or prior to the date of achievement of the Delivery Milestone of the encumbered assets; (b) obligations or duties to any Governmental Authority arising in the ordinary course of business (including under licenses and Permits held by Buyer and under all Legal Requirements); (c) obligations or duties under easements, leases or other property rights; and (d) any other Liens agreed to in writing by Seller and Buyer.

"Person" means any individual, partnership, limited liability company, joint venture, corporation, trust, unincorporated organization, or governmental entity or any department or agency thereof.

"Phase 1 CapEx Agreement" is defined in the Recitals.

"Phase 1 New Systems" is defined in the Recitals.

"Phase 2 New Systems" is defined in the Recitals.

"PJM" means PJM Interconnection, LLC.

"PJM Agreements" is defined in the Tariff.

"PJM Market Rules" means (a) the rules and obligations set forth in Section C (*Sales of Energy, Capacity, Other Available Product*) of the Tariff, and (b) the provisions of all applicable PJM rules and procedures pertaining to generation and transmission, including the rules and procedures concerning the dispatch of generation or scheduling transmission set forth in the applicable PJM tariff, the PJM operating agreement, and applicable PJM manuals.

"Placed in Service" means, with respect to any Phase 2 New System, the completion and performance of all of the following activities: (a) obtaining the necessary licenses and Permits (if any) for the operation of such Phase 2 New System and the sale of power generated by the Phase 2 New System in accordance with clause (d) of this definition, (b) satisfactory completion of all tests necessary for the proper operation of such Facility in accordance with clause (d) of this definition, (c) if necessary, synchronization of such Phase 2 New System onto the electric distribution and transmission system of DPL or PJM, as applicable, and (d) the commencement of regular, continuous, daily operation of such Phase 2 New System.

"Pre-Commissioning Equipment Warranty" is defined in Section 4.1(a).

"Pre-Commissioning Equipment Warranty Period" is defined in Section 4.1(a).

"Project" is defined in the Recitals.

"Prudent Electrical Practices" means those practices, methods, equipment, specifications and standards of safety and performance, as the same may change from time to time, as are commonly used by a significant portion of the grid-tied fuel cell electrical generation industry operating in the United States and/or approved or recommended by the NERC as good, safe and prudent engineering practices in connection with the design, construction, operation, maintenance, repair and use of electrical and other equipment, facilities and improvements of electrical generating facilities, including any applicable practices, methods, acts, guidelines, standards and criteria of FERC and all applicable Legal Requirements.

"Purchase Date" means, with respect to a Phase 2 New System, the date that the conditions set forth in Section 2.6(b) (as such conditions may be waived by Buyer in its sole discretion) are satisfied with respect to such Phase 2 New System, as such date is evidenced in the Bill of Sale for such Phase 2 New System.

"Purchase Order" means Buyer's purchase order for the Phase 2 New Systems to be purchased by Buyer in substantially the form of Exhibit E.

"Purchase Price" means, with respect to all Phase 2 New Systems, the price for the design, installation and purchase of each Phase 2 New System, of $[*] per kW, equal, in aggregate, to $[*].

"Qualified Appraiser" means a nationally recognized third-party appraiser reasonably acceptable to Buyer and Seller which shall (a) be qualified to appraise power systems similar to the Phase 2 New Systems, and experienced in such businesses in the general geographic region of the relevant Facility, and (b) not be associated with either Buyer or Seller or any Affiliate thereof. If the Parties cannot agree on a third-party appraiser within fifteen (15) days of a Party invoking the Appraisal Procedure, then Marshall & Stevens Incorporated shall act as the Qualified Appraiser.

"Qualified Fuel Cell Provider" shall have the meaning afforded such term in Section 352(16) of the Renewable Energy Portfolio Standards Act, as amended by S.B. 124, enacted July 10, 2011 (Title 26, Chap. 1, section 351 et seq. of the Code of the State of Delaware).

"Qualified Fuel Cell Provider Project" shall have the meaning afforded such term in Section 352(17) of the Renewable Energy Portfolio Standards Act, as amended by S.B. 124, enacted July 10, 2011 (Title 26, Chap. 1, section 351 et seq. of the Code of the State of Delaware).

"Red Lion Facility" means the Bloom Systems and BOF at 1493 River Road, New Castle, DE 19720.

"Removed Systems" means those Bloom Systems at each Site which are owned by Seller and scheduled for removal by Seller.

"Representatives" of a Party means such Party's authorized representatives, including its professional and financial advisors.

"REPS Act" means the Renewable Energy Portfolio Standards Act, as amended by S.B.124, enacted July 10, 2011 (Title 26, Chap. 1, section 351 et seq. of the Code of the State of Delaware).

"Repurchase Amount" means, with respect to any Phase 2 New System, (a) the sum of (i) the applicable Repurchase Value, and (ii) one hundred percent (100%) of any Taxes, if any, that are required to be paid by Seller in connection with the return and repurchase of such Phase 2 New System, minus (b) the amount of any Delay LDs paid by Seller pursuant to Section 2.7, in respect of such Phase 2 New System.

"Repurchase Value" means, with respect to any Phase 2 New System, the greater of (a) the Fair Market Value of such Phase 2 New System (as determined under the Appraisal Procedure if Buyer and Seller cannot agree as to that Fair Market Value within ten (10) days), and (b) 100% of the Purchase Price for such Phase 2 New System until the first anniversary of Commissioning, declining by [*] on such first anniversary and on each anniversary of such date thereafter (for example, on the fourth anniversary of Commissioning, the Repurchase Value will decline to [*]% of the Purchase Price), in each case as calculated as of the date that Seller becomes obligated to pay such amount to Buyer.

"Seller" is defined in the preamble.

"Seller Default" is defined in Section 10.1.

"Seller Deliverables" means, with respect to each Phase 2 New System, the items listed in Exhibit C.

"Seller Indemnitee" is defined in Section 11.2.

"Seller Manager" is defined in Section 3.10(a).

"Seller Personnel" means any Person who is performing any Installation Services at the direction (or on behalf) of Seller, including the Seller Manager, any subcontractors (at any tier), Service Providers (including Major Service Providers), Representatives, or agents (irrespective if such Person is employed or engaged by Seller, Buyer, an Affiliate of Seller or any other Person).

"Seller's Certificate of Commissioning" means a certificate, substantially in the form set forth in Exhibit H, issued by Seller to Buyer pursuant to paragraph (d) of the definition of Commissioning.

"Seller's Certificate of Delivery Milestone Completion" means a certificate, substantially in the form set forth in Exhibit G, issued by Seller to Buyer pursuant to paragraph (d) of the definition of Delivery Milestone.

"Seller's Intellectual Property" is defined in Section 9.1.

"Service Provider" means an installation contractor appointed by Seller and, if required, approved by Buyer pursuant to Section 12.14.

"Shipment" means for each Phase 2 New System, shipment of such Phase 2 New System from Seller's manufacturing facility to the Site.

"Site" means, with respect to the Brookside Facility and the Red Lion Facility, the real property leased to Buyer for the use of such Facility pursuant to the Site Lease for such Facility.

"Site Landlord" means the applicable landlord under a Site Lease.

"Site Lease" means, with respect to (a) the Brookside Facility, that certain Lease Agreement, dated as of April 19, 2012, by and between the Delaware Department of Transportation and Buyer; and (b) the Red Lion Facility, that certain Amended and Restated Lease Agreement, dated as of June 26, 2012, by and between DPL and Buyer.

"Software" shall mean all computer software that is necessary for Buyer to own and operate the Phase 2 New Systems in compliance with the terms of this Agreement, the Tariff, PJM Market Rules, the PJM Agreements, the DPL Agreements, the DSGP Operating Agreement, and the Site Leases.

"Software License" is defined in Section 9.2(a).

"Specifications" means the specifications for the Phase 2 New Systems, as applicable, as set forth in Exhibit A.

"System Capacity" means, with respect to a Phase 2 New System, the "System Capacity" set forth on the applicable specification sheet provided by the manufacturer of such Phase 2 New System.

"Tariff" means Service Classification "QFCP-RC" as administered by DPL, as approved by the DPSC in Order no. 8062 dated October 18, 2011, as adopted and supplemented by DPSC's Findings, Opinion and Order No. 8079, dated December 1, 2011.

"Tax" (and, with correlative meaning, "Taxes") means:

(a) any taxes, customs, duties, charges, fees, levies, penalties or other assessments imposed by any federal, state, local or foreign taxing authority, including income, gross receipts, windfall profit, severance, property, production, sales, use, license, excise, franchise, net worth, employment, occupation, payroll, withholding, social security, alternative or add-on minimum, ad valorem, transfer, stamp, or environmental tax, or any other tax, custom, duty, fee, levy or other like assessment or charge of any kind whatsoever, together with any interest, penalty, addition to tax, or additional amount attributable thereto; and

(b) any liability for the payment of amounts with respect to payment of a type described in clause (a), including as a result of being a member of an affiliated, consolidated, combined or unitary group, as a result of succeeding to such liability as a result of merger, conversion or asset transfer or as a result of any obligation under any tax sharing arrangement or tax indemnity agreement.

"Term" means the period which (a) shall commence on the Agreement Date and (b) shall, unless terminated earlier under ARTICLE X of this Agreement or unless extended by mutual agreement of the Parties, terminate on the date on which the last Phase 2 New System in the Project achieves Commissioning.

"Third Party Claim" means any claim, action, or proceeding made or brought by any Person who is not (a) a Party to this Agreement, or (b) an Affiliate of a Party to this Agreement.

"Third Party Warranty" is defined in Section 3.7.

"Training Materials" is defined in Section 12.15.

"Transaction Documents" means the ECCA, DSGP Operating Agreement, the A&R MOMA, this Agreement and the A&R Administrative Services Agreement.

Section 1.2 Other Definitional Provisions.

(a) All exhibits, annexes, and schedules attached to this Agreement are incorporated herein by this reference and made a part hereof for all purposes. References to sections, exhibits, annexes and schedules are, unless otherwise indicated, references to sections, exhibits, annexes and schedules to this Agreement. References to a section shall mean the referenced section and all sub-sections thereof.

(b) As used in this Agreement and in any certificate or other documents made or delivered pursuant hereto or thereto, financial and accounting terms not defined in this Agreement or in any such certificate or other document, and financial and accounting terms partly defined in this Agreement or in any such certificate or other document to the extent not defined, will have the respective meanings given to them under GAAP. To the extent that the definitions of financial and accounting terms in this Agreement or in any such certificate or other document are inconsistent with the meanings of such terms under GAAP, the definitions contained in this Agreement or in any such certificate or other document will control.

(c) The words "hereof," "herein," "hereunder," and words of similar import when used in this Agreement will refer to this Agreement as a whole and not to any particular provision of this Agreement. The terms "including" and "includes" mean "including without limitation" and "includes without limitation," respectively.

(d) The definitions contained in this Agreement are applicable to the singular as well as the plural forms of such terms and to the masculine as well as to the feminine and neuter genders of such terms.

(e) Any agreement or instrument defined or referred to herein or in any instrument or certificate delivered in connection herewith means (unless otherwise indicated herein) such agreement or instrument as from time to time amended, amended and restated, modified or supplemented and includes (in the case of agreements or instruments) references to all attachments thereto and instruments incorporated therein.

(f) Any references to a Person are also to its permitted successors and assigns.

(g) References to any statute, code or statutory provision are to be construed as a reference to the same as it exists as of the Agreement Date or Purchase Date, as applicable, and include references to all bylaws, instruments, orders and regulations for the time being made thereunder or deriving validity therefrom unless the context otherwise requires.

ARTICLE II.
PURCHASE AND SALE

Section 2.1 Appointment of Seller. Subject to Section 12.13, Buyer hereby appoints Seller to act as Buyer's provider of Phase 2 New Systems and Installation Services, and Seller hereby accepts such appointment and agrees to provide all such Phase 2 New Systems and Installation Services, inclusive of all labor, equipment, materials, supplies, and tests therefor, in accordance with the terms and conditions set forth in this Agreement. Seller's entire consideration for supplying the Phase 2 New Systems, the associated BOF therefor, and the Installation Services for such Phase 2 New Systems shall be the Purchase Price for such Phase 2 New Systems. Seller shall bear the financial risk regarding any cost overruns, claims for subcontractors or other liabilities in respect of the Phase 2 New Systems and the associated Installation Services.

Section 2.2 Conceptual Design. Each Phase 2 New System and BOF to be installed hereunder shall be installed in accordance with the conceptual design for the Project, as set forth hereto as Annex A.

Section 2.3 Purchase Order.

(a) On the Agreement Date, Buyer will submit to Seller an executed Purchase Order for the Phase 2 New Systems and Seller shall promptly accept the Purchase Order by countersigning and returning it to Buyer; provided that the failure of Seller to countersign or return to Buyer the Purchase Order shall not invalidate the Purchase Order and Seller shall be obligated to deliver the Phase 2 New Systems under the Purchase Order as contemplated by this Agreement.

(b) Accordingly, in furtherance and not in limitation of the foregoing, Seller shall not provide Buyer with a Payment Notice for, and Buyer shall have no obligation to issue a Purchase Order or otherwise pay any portion of the Purchase Price unless Buyer has received the corresponding Initial Funding (as defined in the ECCA) or Subsequent Funding (as defined in the ECCA).

Section 2.4 Invoicing of Purchase Price.

(a) Seller shall invoice Buyer hereunder in three (3) separate installments as follows:

(i) on the Agreement Date, the initial Deposit for all Phase 2 New Systems to be purchased hereunder in the amount of $[*] (the "Deposit");

(ii) upon Commissioning of Phase 2 New Systems with an aggregate Nameplate Capacity of at least six megawatts (6.0 MW), the (A) Purchase Price for such Phase 2 New Systems less (B) such Phase 2 New System's pro-rata share of the Deposit; and

(iii) upon Commissioning of any other Phase 2 New Systems prior to the Commissioning Date Deadline, the (A) Purchase Price for such Phase 2 New Systems less (B) such Phase 2 New System's pro-rata share of the Deposit.

(b) Each invoice issued pursuant to Section 2.4(a)(ii) and Section 2.4(a)(iii) shall:

(i) include the following information for each applicable Phase 2 New System:

(1) Buyer's Purchase Order number;

(2) the Facility and location (e.g., the Bloom "Site ID") within such Facility in which such Phase 2 New System is installed;

(3) the serial number and System Capacity of each Phase 2 New System;

(4) the Purchase Price, including details of (x) all amounts previously paid towards or credited against the Purchase Price, and (y) all amounts remaining due and payable on the Purchase Price;

(5) the Delivery Date;

(6) the Purchase Date;

(7) Seller wiring instructions/ACH instructions and contact information for a Seller Representative or Seller's bank to confirm the validity of such instructions; and

(8) the date of achievement of Commissioning.

(ii) include a final waiver and release of Liens for such Phase 2 New System, conditioned only upon final payment of the Purchase Price for such Phase 2 New System, executed by Seller in substantially the form set forth in Exhibit I.

(c) In the event that more than six megawatts (6.0 MW) but less than the full nine and eight-tenths megawatts (9.8 MWs) of Phase 2 New Systems (in each case as measured by aggregate Nameplate Capacity) are Commissioned by the Commissioning Date Deadline, then Seller shall refund the pro-rata portion of the Deposit for such Phase 2 New Systems that were not Commissioned.

(d) Buyer shall, promptly following receipt of an invoice and reasonable supporting documentation thereof, remit to Seller all deposits, performance assurance, or amounts otherwise posted or provided by Seller in connection with any Governmental Approvals, or interconnection applications, in each case with respect to a Phase 2 New System that has been Commissioned and to the extent that such amounts are returned by such counterparty to Buyer and not Seller.

(e) The Purchase Price includes, and Seller shall be solely liable for payment of, all state and local sales, use or other transfer Taxes attributable to the transfer of the Phase 2 New System that has been Commissioned and any Taxes arising as a result of any components of such Phase 2 New System or any Phase 2 New System being acquired from a source outside of the United States.

(f) Seller shall consider in good faith any requests made by Buyer following the Agreement Date to include additional information related to any Phase 2 New Systems to be purchased hereunder in connection with invoices issued with respect to Phase 2 New Systems that have been Commissioned.

Section 2.5 Payment of Purchase Price.

(a) Buyer shall pay the Deposit on the Agreement Date and shall pay all other outstanding Purchase Price invoices in accordance with the terms of this Section 2.5.

(b) Not less than five (5) Business Days prior to the Invoice Due Date for all invoices to be paid by Buyer, Seller shall deliver to Buyer:

(i) A draft Payment Notice, setting forth the anticipated aggregate Purchase Price for all Phase 2 New Systems to be paid;

(ii) Seller's Certificates of Commissioning evidencing the achievement of the Commissioning Milestone achieved by the applicable Phase 2 New Systems prior to the date of such draft Payment Notice; and

(iii) A statement of any estimated Delay LDs to be deducted for any Delayed Phase 2 New System(s).

(c) Not less than one (1) Business Days prior to the applicable Invoice Due Date for all invoices issued pursuant to Section 2.4(a)(ii) and Section 2.4(a)(iii) that are to be paid by Buyer, Seller shall deliver to Buyer:

(i) An executed Payment Notice, setting forth the actual aggregate Purchase Price for all Phase 2 New Systems to be paid by Buyer, which amount shall in no event exceed the amount notified by Seller to Buyer in the applicable draft Payment Notice;

(ii) Seller's Certificates of Commissioning, to the extent not previously delivered, evidencing the achievement of the Commissioning Milestones achieved as of such date by the applicable Phase 2 New Systems between the date on which the draft Payment Notice and accompanying Seller's Certificates of Commissioning were delivered and the date on which the executed Payment Notice was delivered;

(iii) Written confirmation of any Delay LDs payable; provided that Buyer shall have the right, in good faith, to dispute Seller's calculation of any Delay LDs; and

(iv) A duly executed certificate from Leidos Engineering, LLC in the form attached hereto as Exhibit M.

(d) Buyer shall, on the applicable Invoice Due Date indicated in the executed Payment Notice delivered by Seller pursuant to Section 2.5(c), make Purchase Price payments for each Phase 2 New System included in such undisputed Payment Notice for which Seller has issued invoices pursuant to Section 2.4(a)(ii) and Section 2.4(a)(iii) and delivered Seller's Certificates of Commissioning evidencing the satisfaction of the Commissioning Milestone.

(e) [Reserved]

(f) Seller shall promptly pay all subcontractors working on the Phase 2 New Systems (including, for clarification, subcontractors working off-Site), and shall, at the time of each payment made to any such subcontractor, obtain a partial or final Lien waiver, as applicable, in a form approved by Buyer, and promptly provide Buyer with a copy of each such Lien waiver for any payments made to (i) a subcontractor in excess of [*] for any invoice or [*] in the aggregate or (ii) a Major Service Provider. Seller shall discharge any Liens by such subcontractors within thirty (30) days of receiving notice thereof. Seller shall release all Liens in favor of Seller on each Facility upon final payment of the Purchase Price for the final Phase 2 New System installed at such Facility. Upon the failure of Seller to discharge a Lien required to be discharged under this Section 2.5, or else promptly to provide a bond in an amount and from a surety acceptable to Buyer to protect against such Lien, in each case, within thirty (30) days after Seller is aware of the existence thereof, Buyer may, but shall not be obligated to, pay, discharge or obtain a bond or security for such Lien and, upon such payment, discharge or posting of security therefor, shall be entitled immediately to recover from Seller the amount thereof, together with all reasonable and necessary expenses actually incurred by Buyer in connection with such payment or discharge, or to set off all such amounts against any amounts owed by Buyer to Seller hereunder or under the A&R MOMA.

(g) With respect to any payment due from one party to the other pursuant to this Agreement, unless being contested in good faith, interest shall accrue daily at the lesser of a monthly rate of one percent (1.0%) or the highest rate permissible by law on the unpaid balance.

(h) Buyer at its sole option is hereby authorized to setoff any undisputed amounts owed Buyer under the A&R MOMA or this Agreement, as applicable, and which are past due against any amounts owed by Buyer to Seller under the A&R MOMA or this Agreement. The rights provided by this paragraph are in addition to and not in limitation of any other right or remedy (including any right to set-off, counterclaim, or otherwise withhold payment) to which Buyer may be entitled (whether by operation of law, contract or otherwise).

Section 2.6 Purchase and Sale of Phase 2 New Systems. Upon the satisfaction of the conditions set forth in Section 2.6(b) (as may be waived by Buyer in its sole discretion) with respect to a Phase 2 New System, Seller shall sell, assign, convey, transfer and deliver to Buyer, and Buyer shall purchase, assume and acquire from Seller, all of Seller's right, title and interest in and to such Phase 2 New System, effective as of the Purchase Date.

(a) Conditions Precedent to the Purchase Date. Buyer's obligation to purchase, assume, and acquire a Phase 2 New System from Seller shall be subject to Seller's satisfaction of the following conditions precedent (as may be waived by Buyer in its sole discretion):

(i) such Phase 2 New System has not been Placed in Service;

(ii) Seller has delivered Seller's Certificate of Delivery Milestone Completion for such Phase 2 New System to Buyer;

(iii) Seller has delivered a Bill of Sale for such Phase 2 New System to Buyer, dated as of the date set forth in Seller's Certificate of Delivery Milestone Completion for such Phase 2 New System; and

(iv) each representation and warranty made by Seller on such Purchase Date is true and correct as of such Purchase Date; and

(v) each of the Transaction Documents remains in full force and effect.

(b) Should Phase 2 New Systems with an aggregate Nameplate Capacity of at least six megawatts (6.0 MW) not be Commissioned by the Commissioning Date Deadline, then (i) the provisions of Section 7.1(f) of the ECCA shall apply to the applicable parties thereto and (ii) Seller will refund to Buyer the Deposit plus an amount equal to 5% thereof (the "Refund Price"). Upon receipt of the Refund Price, Buyer may terminate this Agreement by written notice. Payment of the Refund Price by Seller under this Section 2.6(c) or under Section 7.1(f) of the ECCA to the Class C Member, when paid, will constitute full and complete satisfaction of all amounts due and payable as a result of

Seller's failure to Commission at least six megawatts (6.0 MW) aggregate Nameplate Capacity of Phase 2 New Systems by the Commissioning Date Deadline.

Section 2.1 Delay Liquidated Damages; Failure to Complete end of 2019. To the extent Phase 2 New Systems are Placed in Service on or after January 1, 2020 (the "Delayed Phase 2 New System(s)"):

(a) Failure by Seller to have caused the Delayed Phase 2 New System(s) to be Placed in Service prior to January 1, 2020 will have directly caused substantial damage to Buyer, which damage cannot be ascertained with reasonable certainty. Accordingly, Seller agrees to pay liquidated damages for any such delays in accordance with this Section 2.7 ("Delay LDs").

(b) Delay LDs will be calculated as $4.00 per kW of System Capacity of each Delayed Phase 2 New Systems for each day beginning on January 1, 2020 and continuing thereafter until, but excluding the date that Seller causes each such Delayed Phase 2 New System to be Placed in Service.

(c) Any Delay LDs that Seller is obligated to pay to Buyer pursuant to this Section 2.7 shall be deducted from the Purchase Price payment made pursuant to Section 2.4(a)(ii) and Section 2.4(a)(iii). In no event shall Seller's failure to cause a Phase 2 New System to be Placed in Service before January 1, 2020 excuse Seller from its obligation to cause such Phase 2 New Systems to be Placed in Service or the performance of any of its other obligations hereunder; *provided*, if Buyer has elected to terminate this Agreement pursuant to Section 2.6(c) above, then neither the final payment of purchase price nor the Delay LDs will be due and payable for such Phase 2 New Systems.

(d) The Parties agree that Buyer's actual damages in the event of such delays or failures would be extremely difficult or impracticable to determine and that Buyer's estimate of its costs and lost revenues in the event of such delays or failure may be different than the amount of Delay LDs provided herein. After negotiation, the Parties have agreed that the Delay LDs provided for in this Section 2.7 are in the nature of liquidated damages and are a reasonable and appropriate measure of the damages that Buyer would incur as a result of such delays or failures, and do not represent a penalty. In no event shall Delay LDs be considered to be claims, for indirect, punitive, special or consequential damages or loss of profits.

(e) Except for Buyer's termination rights set forth in Section 10.3, Delay LDs will be Buyer's sole remedy for Seller's failure to Place in Service one or more Phase 2 New Systems by January 1, 2020.

ARTICLE III.
DELIVERY AND INSTALLATION OF PHASE 2 NEW SYSTEMS AND NEW BALANCE OF FACILITIES

Section 3.1 Access to Site. Seller shall be responsible for ascertainment of the suitability of the Facilities, the environment around the Facilities, the Facilities' soil condition and other ground conditions for installation of the Phase 2 New Systems. Buyer shall provide Seller with access to the Facilities as necessary to permit Seller to deliver each Phase 2 New System to the applicable Site and to install and Commission such Phase 2 New System in the applicable Project in accordance with the applicable Site Lease.

Section 3.2 Delivery; Title; Risk of Loss. Delivery of each Phase 2 New System shall be DDP (Incoterms 2010) to its Site, in accordance with the Uniform Commercial Code then in effect. Title to each Phase 2 New System and to any related New BOF (to the extent the Cost Segregation Report reflects that such New BOF is part of the "fuel cell power plant" of such Phase 2 New System within the meaning of Section 48(c)(1)(C) of the Code) shall pass to Buyer upon the Purchase Date of such Phase 2 New System, and such title shall be good and marketable and free of all Liens, except for Permitted Liens. From and after the Purchase Date of each Phase 2 New System all risk of loss or damage to such Phase 2 New System and such related New BOF shall be borne by Buyer. Title and risk of loss or damage to all other New BOF at a Facility that is not part of the "fuel cell power plant" of any Phase 2 New System at such Facility within the meaning of Section 48(c)(1)(C) of the Code shall pass to Buyer on the date that installation and commissioning of such New BOF has been completed, and such title shall be good and marketable and free of all Liens, except for Permitted Liens.

Section 3.3 Installation Services.

(a) Seller shall perform all development, design, engineering, procurement, construction, and commissioning services necessary in connection with the installation, interconnection, testing, start-up, and commissioning the Phase 2 New Systems to achieve Commissioning (collectively, "Installation Services"), including the following activities:

(i) Seller shall be solely responsible for the means, methods, techniques, sequences, and procedures employed for execution and completion of the engineering, procuring, constructing, installing, and commissioning any New BOF and for reconfiguring any Existing BOF required for Phase 2 New Systems to achieve Commissioning, and Seller shall cause each Phase 2 New System to achieve Commissioning without any compensation or reimbursement by Buyer, other than the Purchase Price under this Agreement;

(ii) Within thirty (30) days following Commissioning of the last Phase 2 New System Purchased hereunder and installed at a Facility, Seller shall remove and dispose of any Existing BOF that is unnecessary for operation of the Phase 2 New Systems at a Facility; *provided*, that Seller may leave in place any properly stubbed and undamaged natural gas, water and/or electrical stub-ups and any undamaged concrete pads if such items in the condition that Seller leaves them are permitted to be so left in place under the applicable Site Lease, Prudent Electrical Practices, and applicable Legal Requirements;

(iii) Seller shall obtain and maintain, or cause to be obtained and maintained (where required, in the name of Buyer), all Permits necessary to design, install, commission, construct, occupy, and operate each Phase 2 New System at each Site;

(iv) Seller shall cause to be performed any and all studies, reports and applications (in the name of Buyer) that are necessary for interconnection to the distribution and transmission facilities of DPL or PJM, as applicable to the particular Facility;

(v) Seller shall perform all commissioning work in accordance with the provisions of Schedule 3.3(a)(ii).

(vi) If requested by Buyer, Seller shall provide operator training and associated training materials to personnel and Representatives of Buyer sufficient to instruct Buyer on operation of such Phase 2 New System in connection with safety requirements and in conformance with Prudent Electrical Practices;

(vii) [Reserved]

(viii) Seller shall deliver to Buyer each of the Seller Deliverables set forth on Exhibit C in accordance with the timing for each such item as set forth on such Exhibit C;

(ix) Following Commissioning of all Phase 2 New Systems to be installed in a Facility, Seller shall promptly remove all waste materials and rubbish from and around the Site as well as all of its tools, construction equipment, machinery, and surplus materials as reasonably necessary to restore each Site to a condition reasonably satisfactory to the applicable Site Landlord or as otherwise required by the applicable Site Lease;

(x) Seller's supply of the Phase 2 New Systems hereunder, and performance of the Installation Services therefor, shall be fully comprehensive of all services, labor, and equipment necessary to complete installation of a fully commissioned and operating Phase 2 New System in accordance with this Agreement, the applicable Interconnection Agreement, and the applicable Site Lease;

(xi) Seller shall, and shall cause each of its subcontractors to, install the Phase 2 New Systems at each Site using items that are new, and undamaged at the time of such use or installation; and

(xii) Seller shall pay all amounts owed to its subcontractors and vendors in connection with the performance of the Installation Services on a timely basis and shall hold Buyer harmless against any claims asserted by such subcontractors and vendors.

(b) Seller shall be responsible, at its sole cost and expense, for maintaining and complying with all Permits required to perform the Installation Services under this Agreement. Buyer agrees to cooperate with and assist Seller in obtaining such Permits.

(c) Seller shall cause all Installation Services to be performed in a good and workmanlike manner, free from defective materials, and in accordance with the Performance Standards, free and clear of all Liens other than Permitted Liens.

Section 3.4 Commissioning Date Deadline. Seller shall cause all Phase 2 New Systems to be Placed in Service and Commissioned by the Commissioning Date Deadline.

Section 3.5 Insurance. Seller shall maintain the insurance described in Annex B.

Section 3.6 Disposal; Right of First Refusal.

(a) Except as set forth in Section 12.4 of this Agreement and Section 11.9 of the MOMA, in the event that Buyer decides to scrap, abandon or otherwise dispose of any Bloom System, Buyer shall notify Seller and Seller shall have the right but not the obligation to obtain title to the Bloom System and remove the Bloom System at Seller's cost; provided, however, that Seller will not be responsible for remediation of the Site in which the Bloom System was located.

(b) Except as set forth in Section 12.4, in the event that Buyer or its Affiliates desire to sell or otherwise transfer title to any Bloom System to a transferee other than an Affiliate of Buyer, Buyer shall notify Seller and Seller shall have the right of first refusal to purchase or acquire the Bloom System on the same terms and conditions of such sale. In the event that Seller exercises such right of first refusal, Seller shall, promptly following payment of the purchase price of such Bloom System, remove the Bloom System at Seller's cost, including the remediation of the Site in which the Bloom System was located in accordance with the terms of the applicable Site Lease.

(c) Notwithstanding the foregoing, Seller shall not be permitted to exercise any right under this Section 3.6 if Seller (as Operator) is exercising the corresponding right pursuant to Section 2.4 of the A&R MOMA.

Section 3.7 Third Party Warranties. If any express or implied warranties, indemnities, guaranties, remedies, covenants and other rights which any subcontractor or supplier has made to Seller with respect to any good, service, or other deliverable furnished under this Agreement in respect of a Phase 2 New System or New BOF (each a "Third Party Warranty") would provide any additional rights to Buyer beyond the warranties under ARTICLE IV, then (a) such Third Party Warranty providing additional rights will be for the benefit of and passed through to Buyer to the fullest extent possible, (b) Seller transfers and assigns to Buyer all of Seller's right, title and interest under such Third Party Warranty to exercise such additional rights, and (c) Seller hereby appoints Buyer as attorney-in-fact coupled with an interest to exercise and enforce all such additional rights in the name of either Buyer or Seller. Nothing in this Section 3.7 will limit Seller's obligations to Buyer under ARTICLE IV.

Section 3.8 Access; Cooperation. Seller shall provide to Buyer such other information that is in the possession of Seller or its Affiliates or is reasonably available to Seller regarding the permitting, engineering, construction, or operations of Seller, its subcontractors or the Facilities, and other data concerning Seller, its subcontractors or the Facilities that Buyer may, from time to time, reasonably request in writing, subject to Seller's obligations of confidentiality to third parties with respect to such information. Seller shall not knowingly take any action or omit to take any action as would cause Buyer to violate any Legal Requirements, and to the extent that Seller has knowledge of any such existing or prospective violation take, or cause to be taken, commercially reasonable actions, to redress or mitigate any such violation, which action shall be at Seller's sole expense if Seller is obligated to perform such action as part of this Agreement, and otherwise shall be at Buyer's sole expense. For the avoidance of doubt, Seller shall not be excused from any indemnification obligations, claims for damages or Indemnifiable Losses suffered by Buyer to the extent caused by Seller's violation of Legal Requirements or Buyer's violation of Legal Requirements to the extent relating to, resulting from or arising out of or in connection with any act or omission by Seller, Seller Affiliate or any Seller Personnel in respect of Installation Services or any Operator Personnel in respect of Facility Services that Seller is obligated to perform on behalf of Buyer. Seller shall give to Buyer prompt written notice of any material disputes with Governmental Authorities. Seller shall furnish, or cause to be furnished, to Buyer copies of all material documents furnished to Seller by any Governmental Authority in respect of Buyer or any Phase 2 New System.

Section 3.9 Performance Standards. For the purpose of this Agreement, Seller shall perform under this Agreement in accordance and consistent with each of the following to the extent applicable to the sale of the Phase 2 New Systems and New BOF and the performance of the Installation Services (unless the context requires otherwise): (A) plans and specifications subject to Permits under Legal Requirements and applicable to each Phase 2 New System; (B) the manufacturer's recommendations with respect to all equipment and all maintenance and operating manuals or service agreements, whenever furnished or entered into, including any subsequent amendments or replacements thereof, issued by the manufacturer, provided they are consistent with generally accepted practices in the fuel cell industry; (C) the requirements of all applicable insurance policies; (D) preserving all rights to any incentive payments, warranties, indemnities or other rights or remedies, and enforcing or assisting with the enforcement of the applicable warranties, making or assisting in making all claims with respect to all insurance policies; (E) the Tariff, the PJM Market Rules, the DPL Agreements and the PJM Agreements; (F) all Legal Requirements and all Permits/Governmental Approvals; (G) any applicable provisions of the Site Leases; (H) Prudent Electrical Practices; (I) the relevant provisions of each Interconnection Agreement; (J) the Seller Corporate Safety Plan provided in Exhibit J (as updated by Seller from time to time, with a copy provided promptly to Buyer); (K) the Seller Subcontractor Quality Plan provided in Exhibit K (as updated by Seller from time to time, with a copy provided promptly to Buyer); and (L) all Environmental Requirements (collectively, the "Performance Standards"); provided, however, that meeting the Performance Standards shall not relieve Seller of its other obligations under this Agreement.

Section 3.10 Coordination of Relationship.

(a) Managers. Seller will appoint an individual to serve as its primary contact person with regard to this Agreement (the "Seller Manager"), and Buyer will appoint an individual to serve as its primary contact person with regard to this Agreement (the "Buyer Manager"). Seller's initial Seller Manager and Buyer's initial Buyer Manager are each set forth on Exhibit L. Each Party may, from time to time, designate another individual as a proposed replacement for its respective Manager by notice to the other Party.

(b) Manager Meetings. The Buyer Manager and the Seller Manager will serve as each Party's main contact to, and for, the other Party with regard to day-to-day matters affecting the Parties' relationship in relation to Installation Services. The Buyer Manager and the Seller Manager (or their designees) will meet, by phone or in person, as often as they feel necessary to monitor and manage such day-to-day activities. Such managers shall operate by consensus to the extent practicable but shall have no authority to amend or waive compliance with the terms and conditions of this Agreement, or to approve actions of the Parties that are inconsistent with this Agreement. Any such waivers or amendments shall be implemented only as described in Section 12.1 or Section 12.2, as the case may be. Seller will not be relieved of any obligations to perform in accordance with this Agreement by its performance or failure to perform pursuant to any direction verbally or in writing provided by the Buyer Manager. This Agreement may only be amended under Sections 12.1 or 12.2 by a written agreement executed by authorized officers of the Parties.

Section 3.11 Beginning of Construction Requirements. Seller shall perform on-site physical work with respect to the Phase 2 New Systems in each of the Red Lion Facility and the Brookside Facility after the Agreement Date and on or before December 31, 2019. Such physical work will constitute "physical work of a significant nature" within the meaning of IRS Notice 2018-59, 2018-59 IRB 196, and will cause construction of the facility to be considered to have begun, within the meaning of Section 48(a)(7) of the Code, after the Agreement Date and on or prior to December 31, 2019. On-site physical work undertaken after the Agreement Date and on or before December 31, 2019 will include, among other things, (i) delivery and installation of components of the Phase 2 New Systems, such as interconnecting module subcomponents such as power modules, fuel processing modules, inverter modules, telemetry cabinets, water distribution ancillary modules, electronic distribution ancillary modules, and other subcomponents together to integrate each 200-250 kilowatt Phase 2 New System, (ii) interconnecting each Phase 2 New System (or group of Phase 2 New Systems) to underground gas and water utilities, (iii) interconnecting each Phase 2 New System (or group of Phase 2 New Systems) to electrical interconnection points, (iv) performing pre-commissioning inspections of Bloom Systems and BOF, (v) performing commissioning inspections of Bloom Systems and BOF as set forth in Schedule 3.3(A)(II) hereto, (vi) performance testing, and (vii) if applicable, testing and troubleshooting (including replacement of parts, as needed).

ARTICLE IV.
WARRANTIES

Section 4.1 Pre-Commissioning Equipment Warranty; Manufacturer's Warranty.

(a) Subject to Section 4.2 and Section 11.5(a), Seller warrants to Buyer that, during the period commencing on the achievement of the Delivery Milestone and continuing until achievement of Commissioning for a Phase 2 New System (the "Pre-Commissioning Equipment Warranty Period"), (i) such Phase 2 New System shall conform to the Specifications for Phase 2 New Systems set forth on Exhibit A, and (ii) such Phase 2 New System and any associated New BOF shall be free from defects in design, materials and workmanship that would prevent such Phase 2 New System for achieving Commissioning (collectively, the "Pre-Commissioning Equipment Warranty").

(b) Subject to Section 4.2 and Section 11.5(a), Seller warrants to Buyer that, during the Manufacturer's Warranty Period, (i) each Phase 2 New System shall conform to the Specifications for Phase 2 New Systems set forth on Exhibit A, and (ii) each Phase 2 New System, any New BOF, and any Existing BOF that was reconfigured as part of the Installation Services shall be free from defects in design, materials and workmanship (collectively, the "Manufacturer's Warranty").

(c) Seller shall correct (including, in Seller's sole discretion, through replacement thereof), as promptly as reasonably practical (and in any case within thirty (30) days), at Seller's sole expense, all Phase 2 New Systems or BOF provided, or Installation Services performed, by it or its subcontractors under this Agreement which proves to be (i) in breach of the Pre-Commissioning Equipment Warranty during the Pre-Commissioning Equipment Warranty Period for such Phase 2 New System, or (ii) in breach of the Manufacturer's Warranty during the Manufacturer's Warranty Period. WITHOUT LIMITING (I) SELLER'S OBLIGATION TO INDEMNIFY BUYER PURSUANT TO SECTION 11.3(A) IN RESPECT OF A BREACH OF A SITE LICENSE OR INTERCONNECTION AGREEMENT ATTRIBUTABLE TO DEFECTIVE PHASE 2 NEW SYSTEMS, BOF, OR INSTALLATION SERVICES AS STATED ABOVE, AND/OR WITH RESPECT TO THIRD PARTY CLAIMS PURSUANT TO SECTION 11.3, AND/OR (II) ANY OTHER EXPRESS REMEDY SET FORTH IN THIS AGREEMENT THAT MAY BE AVAILABLE IN CONNECTION WITH A SELLER FAILURE TO TIMELY CORRECT DEFECTIVE PHASE 2 NEW SYSTEMS, BOF, OR INSTALLATION SERVICES (INCLUDING A SELLER OBLIGATION TO REMOVE OR REPURCHASE A DEFECTIVE PHASE 2 NEW SYSTEM, IF APPLICABLE), BUYER'S SOLE REMEDY FOR A BREACH OF THE PRE-COMMISSIONING EQUIPMENT WARRANTY SHALL BE THE CORRECTION OF DEFECTIVE PHASE 2 NEW SYSTEM PURSUANT TO THIS SECTION 4.1(C).

(d) The Pre-Commissioning Equipment Warranty and Manufacturer's Warranty is not transferable to any third person, including any Person who buys a Phase 2 New System from Buyer, without Seller's prior written consent (which shall not unreasonably be withheld).

(e) Any period of time in which the Pre-Commissioning Equipment Warranty or Manufacturer's Warranty is in breach for a Phase 2 New System shall not extend the Pre-Commissioning Equipment Warranty Period or Manufacturer's Warranty Period for such Phase 2 New System; provided that to the extent a Phase 2 New System is Placed in Service but thereafter is not capable of operation for any period in excess of ten (10) consecutive days due to the breach of Manufacturer's Warranty, the Manufacturer's Warranty shall be extended by all such periods in excess of ten (10) consecutive days.

Section 4.2 Exclusions. The Pre-Commissioning Equipment Warranty and Manufacturer's Warranty, as applicable, shall not cover any obligations on the part of Seller to the extent caused by or arising from (a) the Phase 2 New Systems or New BOF being affected by vandalism or other third-party's actions or omissions occurring after Commissioning (other than to the extent that Seller, Seller Affiliate, the Service Provider or a subcontractor thereof fails to properly protect the Phase 2 New Systems or New BOF and Seller was required to do so under the A&R MOMA); (b) any interruption in the supply of natural gas or interconnection services, or a failure of the interconnection services supplied to the applicable Facility to comply with Seller's specifications, in each case as confirmed and agreed to by DPL under the terms of the Gas Tariff and the Gas Supply Agreement (unless caused by Seller, Seller Affiliate, the Service Provider or a subcontractor thereof); (c) the removal of any safety device by Buyer or its Representatives (as opposed to removal by Seller, Seller Affiliate, the Service Provider or a subcontractor thereof); (d) any conditions caused by unforeseeable movement in the environment in which the Phase 2 New Systems are installed (provided that normal soil settlement, shifting, subsidence or cracking will not constitute 'unforeseeable movement'); (e) accidents, abuse, improper third party testing (unless caused by Seller, Seller Affiliate, the Service Provider or a subcontractor thereof) or Force Majeure Events; or (f) installation, operation, repair or modification of the Phase 2 New Systems or BOF by anyone other than Seller or Seller's authorized agents. SELLER SHALL HAVE NO OBLIGATION UNDER THE PRE-COMMISSIONING EQUIPMENT WARRANTY NOR THE MANUFACTURER'S WARRANTY AND MAKES NO REPRESENTATION AS TO PHASE 2 NEW SYSTEMS OR BOF WHICH HAVE BEEN OPENED OR MODIFIED BY ANYONE OTHER THAN SELLER, SELLER'S AFFILIATE, A SERVICE PROVIDER OR A SUBCONTRACTOR THEREOF, OR ANY OF SUCH PERSON'S REPRESENTATIVES, IN EACH CASE TO THE EXTENT OF ANY DAMAGE OR OTHER NEGATIVE CONSEQUENCE OF SUCH OPENING OR MODIFICATION.

Section 4.3 Disclaimers. EXCEPT FOR THE REPRESENTATIONS AND WARRANTIES SET FORTH IN THIS ARTICLE IV, ARTICLE VI, AND SECTION 9.6, THE PHASE 2 NEW SYSTEMS ARE TRANSFERRED "AS IS, WHERE IS," AND SELLER EXPRESSLY DISCLAIMS ANY REPRESENTATIONS OR WARRANTIES OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, AS TO LIABILITIES, OPERATIONS OF THE FACILITIES, VALUE OR QUALITY OF THE FACILITIES OR THE PROSPECTS (FINANCIAL AND OTHERWISE), RISKS AND OTHER INCIDENTS OF THE FACILITIES, AND SPECIFICALLY DISCLAIMS ANY REPRESENTATION OR WARRANTY OF MERCHANTABILITY, USAGE, SUITABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE WITH RESPECT TO THE FACILITIES, OR ANY PART THEREOF. NO PERSON IS AUTHORIZED TO MAKE ANY OTHER WARRANTY OR REPRESENTATION CONCERNING THE PERFORMANCE OF THE FACILITIES (PROVIDED, THAT THE FOREGOING DISCLAIMER SHALL NOT NEGATE OR DISCLAIM ANY REPRESENTATIONS OR WARRANTIES PROVIDED UNDER ANY OF THE OTHER TRANSACTION DOCUMENTS).

Section 4.4 Title. Title to all replacement items, parts, materials and equipment supplied under or pursuant to the Pre-Commissioning Equipment Warranty shall transfer to Buyer upon transfer of title of the affected Phase 2 New System or New BOF pursuant to Section 3.2. Title to all replacement items, parts, materials and equipment supplied under or pursuant to the Manufacturer's Warranty shall transfer to Buyer upon installation or inclusion in a Phase 2 New System or in the BOF for the applicable Facility. Upon replacement of an item or part as part of the Pre-Commissioning Equipment Warranty or Manufacturer's Warranty provided hereunder, Seller shall remove such item or part, shall take title to such removed item or part upon removal, and shall have the right and obligation to dispose of such replaced property in any lawful manner that it chooses in its sole discretion at the Seller's cost.

ARTICLE V.
RECORDS AND AUDITS

Section 5.1 Record-Keeping Documentation; Audit Rights.

(a) Seller shall ensure that records concerning Seller's Installation Services activities hereunder are properly created and maintained at all times in accordance with all Legal Requirements, including FERC requirements regarding record retention for Holding Companies in 18 C.F.R. Part 368 and any successor regulations to the extent applicable to Seller. Such records shall include the following:

(i) records and documentation in respect of each Phase 2 New System's satisfaction of each Milestone, including records and documentation regarding the Delivery of Phase 2 New Systems, the achievement of Commissioning, and the fact and date(s) such Phase 2 New System has achieved each of the four separate criteria set forth the definition of "Placed in Service";

(ii) any other records, reports, or other documentation reasonably requested by Buyer to support the representations set forth in Section 6.1(k) with respect to a Phase 2 New System. Seller agrees to promptly provide such documentation to Buyer; and

(iii) until the date of achievement of Commissioning of the final Phase 2 New System for the Project, a "Construction Report" delivered in connection with the Payment Notice corresponding to each invoice delivered pursuant to Section 2.4(a)(ii) and Section 2.4(a)(iii), specifying for each Phase 2 New System individually (A) the forecasted commencement of construction, Delivery Date, and date of Commissioning of such Phase 2 New System projected to be included in the Project, (B) the actual commencement of construction, Delivery Date and date of Commissioning of such Phase 2 New System included in the Project as of the date of such Construction Report, and (C) a summary narrative regarding the source of any delays in the achievement of any of the foregoing milestones as compared to the dates forecasted in the immediately prior Construction Report; and

(iv) any other records, reports, or other documentation reasonably requested by Buyer unless such records contain information that contains highly confidential information and/or trade secrets of Seller.

(b) All such records required to be created and maintained pursuant to Section 5.1(a) shall (i) be kept available at Seller's office and made available for Buyer's inspection upon request at all reasonable times, and (ii) be retained for the relevant retention period provided in 18 C.F.R. § 368.3 or any successor regulation as amended from time, to the extent applicable to Seller, or any longer period required under the Tariff, or by DPL or PJM. Any documentation prepared by Seller during the Term for the purposes of this Agreement shall be directly prepared for Buyer's benefit and immediately become Buyer's property. Any such documentation shall be stored by Seller on behalf of Buyer until its final delivery to Buyer. Seller may retain a copy of all records related to each Facility for future analysis.

(c) Buyer shall have the right no more than once during any calendar year and going back no more than two (2) calendar years preceding the calendar year in which an audit takes place, upon reasonable prior written notice, including using an independent public accounting firm reasonably acceptable to Seller, to examine such records during regular business hours in the location(s) where such records are maintained by Seller for the purposes of verifying Buyer's compliance with its obligations hereunder. Buyer shall pay its own cost and the costs of any third party consultants engaged by Buyer in connection with the audit unless such audit reveals that inaccuracies in Seller's records have resulted in an overpayment by Buyer of two and one-half percent or more (2.5%) than the amount that would have otherwise been payable by Buyer during the period being audited, in which case Seller shall pay all of Buyer's costs and the costs of any third party consultants engaged by Buyer in connection with such audit.

Section 5.2 Reports; Other Information. Without in any way limiting Seller's other reporting, notification, and other similar obligations under this Agreement, during the Term, Seller shall furnish to Buyer the following reports, notices, and other information regarding the Phase 2 New Systems and Installation Services (which may be effected by e-mail communication to the Buyer Manager or other appropriate Buyer Representative):

(a) Promptly upon Seller's knowledge of the occurrence of any damage to any Phase 2 New System or Site, notice of such damage in reasonable detail;

(b) Details of any event or circumstance which could reasonably be expected to prevent Buyer from being able to fully benefit from the Tariff, promptly upon either (i) Seller's receipt of any written notice or communication from DPL or any other Governmental Authority notifying Seller, including a copy of such notice or communication, or (ii) upon the Knowledge of the Seller Manager, any Vice President of Project Finance, or C-Level officer of Seller, or any individual listed on Schedule 5.2(b); and

(c) Seller will provide any information that Buyer may reasonably request in connection with any claim filed by Buyer under any insurance maintained with respect to the Facilities and any information such insurance providers may reasonably request in connection with such claim; provided, Seller is not obligated to provide highly confidential information and/or trade secrets, so long as it provides Buyer an adequate explanation of the highly confidential nature of such information.

ARTICLE VI.
REPRESENTATIONS AND WARRANTIES OF SELLER

Section 6.1 Representations and Warranties of Seller. Seller represents and warrants to Buyer as of the Agreement Date and as of each Purchase Date as follows:

(a) Incorporation; Qualification. Seller is a corporation duly incorporated, validly existing and in good standing under the laws of the State of Delaware and has all requisite corporate power and authority to own, lease, and operate its business as currently conducted. Seller is duly qualified to do business as a foreign corporation and is in good standing under the laws of each jurisdiction that its business, as currently being conducted, shall require it to be so qualified, except where the failure to be so qualified would not have a Material Adverse Effect on Seller or its ability to perform its obligations hereunder.

(b) Authority. Seller has full corporate power and authority to execute and deliver this Agreement and the other Transaction Documents to which it is a party and to consummate the transactions contemplated hereby and thereby. The execution and delivery by Seller of the Transaction Documents to which it is a party and the consummation by Seller of the transactions contemplated thereby have been duly and validly authorized by all necessary corporate action required on the part of Seller, and the Transaction Documents to which it is a party have been duly and validly executed and delivered by Seller. Each of the Transaction Documents to which Seller is a party and the [*] Agreement constitute the legal, valid and binding agreement of Seller, enforceable against Seller in accordance with its terms, except as enforcement may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally and by general principles of equity (regardless of whether considered in a proceeding in equity or at law).

(c) Consents and Approvals; No Violation. Neither the execution, delivery and performance of this Agreement nor the other Transaction Documents to which it is a party nor the consummation by Seller of the transactions contemplated hereby and thereby will (i) conflict with or result in any breach of any provision of the certificate of incorporation or bylaws of Seller, (ii) with or without the giving of notice or lapse of time or both, conflict with, result in any violation or breach of, constitute a default under, result in any right to accelerate, result in the creation of any Lien (other than Permitted Liens) on Seller's assets, or create any right of termination under the conditions or provisions of any note, bond, mortgage, indenture, any material agreement or other instrument or obligation to which Seller is a party or by which it, or any material part of its assets may be bound, in each case that would individually or in the aggregate result in a Material Adverse Effect on Seller or its ability to perform its obligations hereunder or (iii) constitute violations of any law, regulation, order, judgment or decree applicable to Seller, which violations, individually or in the aggregate, would result in a Material Adverse Effect on Seller or its ability to perform its obligations hereunder.

(d) Legal Proceedings. There are no pending or, to Seller's Knowledge, threatened claims, disputes, governmental investigations, suits, actions (including non-judicial real or personal property foreclosure actions), arbitrations, legal, administrative or other proceedings of any nature, domestic or foreign, criminal or civil, at law or in equity, against Seller that challenge the enforceability of this Agreement or any of the other Transaction Documents to which Seller is a party or the ability of Seller to consummate the transactions contemplated hereby or thereby, in each case, that could reasonably be expected to result in a Material Adverse Effect on Seller or its ability to perform its obligations hereunder.

(e) U.S. Person. Seller is not a "foreign person" within the meaning of Section 1445(b)(2) of the Code and has provided a Certificate of Non-Foreign Status in the form and substance required by Section 1445 of the Code and the regulations thereunder.

(f) Purchase Price of Phase 2 New System. The Purchase Price paid for each Phase 2 New System does not exceed an amount that is equal to the Fair Market Value of each Phase 2 New System, as determined on an arm's length basis.

(g) Title; Liens. As of each date title is required to pass to Buyer hereunder with respect to any assets comprising a Phase 2 New System, Seller has and will convey good and marketable title to such assets to be sold to Buyer on such date and all such assets are free and clear of all Liens other than Permitted Liens. Except to the extent arising by law, neither Seller nor any of its subcontractors have placed any Liens on the Sites or the Facilities other than Permitted Liens. To the extent that Seller has actual knowledge that any of its subcontractors has placed any Lien on a Phase 2 New System or Site, then Seller shall cause such Liens to be discharged, or shall provide a bond in an amount and from a surety acceptable to Buyer to protect against such Lien, in each case, within thirty (30) days after Seller is aware of the existence thereof. Seller shall indemnify Buyer against any such Lien claim, provided that if the applicable Site Lease requires additional or more stringent action, Seller shall also indemnify Buyer for the costs and expenses of such actions.

(h) Intellectual Property. No Phase 2 New System and no other product or service marketed, sold or provided (or proposed to be marketed, sold or provided) by Seller hereunder violates or will violate any license or infringes or will infringe any Intellectual Property rights of any other Person. Seller owns or has the right to use and to authorize Buyer to use all Intellectual Property and Software associated with the Phase 2 New Systems so as to grant the license rights and other rights granted by Seller to Buyer in respect of the Phase 2 New Systems. Seller has received no written communications alleging, and has no Knowledge of, any claim that Seller has violated, infringed or misappropriated, or by conducting its business, would violate, infringe or misappropriate, or that the Phase 2 New Systems violate, infringe or misappropriate, any of the patents, trademarks, service marks, tradenames, copyrights, trade secrets, mask works or other proprietary rights or processes of any other Person. No such claims or allegations are reasonably anticipated or foreseen by Seller.

(i) Consents and Approvals. Seller has received all material third party consents which are required as of such date for the consummation and performance of the transactions contemplated hereunder.

(j) Real Property. The real property referred to in each Site Lease is all the real property that is necessary for the construction, installation, operation and maintenance of the Facilities other than those real property interests that can be reasonably expected to be available on commercially reasonable terms as and to the extent required. Each Site has been leased to Buyer pursuant to the terms of the applicable Site Lease.

(k) Tax Representations.

(i) Each Phase 2 New System is a fuel cell power plant that has a Nameplate Capacity of at least 0.5 kilowatts of electricity using an electrochemical process and has an electricity-only generation efficiency greater than 30 percent. Each Facility will function independently of each other Facility in the Project to generate electricity for transmission and sale and is an integrated system comprised of a fuel cell stack assembly and associated balance of plant components that has all the necessary components to convert a fuel into electricity using electrochemical means.

(ii) As of Purchase Date for each Phase 2 New System, no federal, state, or local Tax credit (including the ITC) has been claimed with respect to any property that is part of such Phase 2 New System.

(iii) No application has been submitted for a grant provided under Section 1603 of the American Recovery and Reinvestment Tax Act of 2009, as amended by the Tax Relief, Unemployment Insurance Reauthorization and Job Creation Act of 2010, with respect to any property that is part of any Phase 2 New System.

(iv) No private letter ruling has been obtained for the transactions contemplated hereunder from the IRS.

(v) As of the Purchase Date of each Phase 2 New System, such Phase 2 New System was not Placed in Service and, specifically but without limitation, clauses (c) and (d) of the definition of the term "Placed in Service" have not been met with respect to such New System.

(vi) As of the Purchase Date, the cost of the Phase 2 New System that is energy property for purposes of Section 48 of the Code is accurately listed in the Base Case Model.

(vii) No Phase 2 New System is comprised of any property that (A) is "used predominately outside of the United States" within the meaning of Code Section 168(g), (B) is imported property of the kind described in Code Section 168(g)(6), (C) except due to the status of any member of Buyer (other than Seller or its Affiliate), is "tax-exempt use property" within the meaning of Code

Section 168(h), or (D) except due to the status of any member of Buyer (other than Seller or its Affiliate), is property described in Code Section 50(b).

(viii) Other than de minimis property, material or parts, each Facility consists of property, materials or parts not used by any Person prior to having been first placed in a state of readiness and availability for their specific design function as part of the Facility.

(ix) No portion of the basis of the Phase 2 New System is attributable to “qualified rehabilitation expenditures” within the meaning of Section 47(c)(2)(A) of the Code.

(x) No grants (for purposes of this paragraph, “grants” shall not include any credits, benefits, emissions reductions, offsets or allowances, howsoever entitled, attributable to the generation from the Facilities, and its respective avoided emission of pollutants) have been provided by the United States, a state, a political subdivision of a state, or any other Governmental Authority for use in constructing or financing any Phase 2 New System or with respect to which Seller is the beneficiary. No proceeds of any issue of state or local government obligations have been used to provide financing for any Phase 2 New System the interest on which is exempt from tax under Code Section 103. No subsidized energy financing (within the meaning of Code Section 45(b)(3)) has been provided, directly or indirectly, under a federal, state, or local program provided in connection with any Phase 2 New System.

(xi) Seller is not related to DPL within the meaning of Code Section 267 or Code Section 707.

(xii) Physical work undertaken on-site by Seller pursuant to this Agreement with respect to each of the Red Lion Facility and the Brookside Facility after the Agreement Date and on or prior to December 31, 2019 constitutes “physical work of a significant nature” within the meaning of IRS Notice 2018-59, 2018-59 IRB 196 and otherwise satisfies the requirements for beginning of construction as set forth in Section 48(a)(7) of the Code and IRS Notice 2018-59, 2018-59 IRB 196.

(xiii) The Phase 2 New Systems qualify as “energy property” within the meaning of Section 48 of the Code.

(l) Bankruptcy. No event of Bankruptcy has occurred with respect to Seller.

(m) [Reserved].

(n) Material Adverse Effect.

(i) As of the Agreement Date, no Material Adverse Effect has occurred with respect to Seller or, to the Knowledge of Seller, PJM, DPL, or any Site Landlord.

(ii) As of each Purchase Date, no Material Adverse Effect has occurred between the Agreement Date and the applicable Purchase Date (A) with respect to the applicable Facility in which the Phase 2 New System would be installed and Commissioned, (B) with respect to Seller, or (C) to the Knowledge of Seller, with respect to PJM, DPL, or the Site Landlord for the applicable Facility in which the Phase 2 New System would be installed and Commissioned.

(o) Governmental Approvals. Seller, as applicable on behalf of Buyer, has obtained all Governmental Approvals required as of Delivery Date to install and Commission the applicable Phase 2 New System(s) in compliance with Applicable Law. As of each of the dates each Phase 2 New System is Placed in Service and achieves Commissioning, Seller, as applicable on behalf of Buyer, has obtained all Governmental Approvals required for such operation of such Phase 2 New System and each of the Governmental Approvals obtained as of such date is validly issued, final and in full force and effect and is not subject to any current legal proceeding or to any unsatisfied condition. On each of such dates, Seller, as applicable on behalf of Buyer, is in compliance in all material respects with all applicable Governmental Approvals and has not received any written notice from a Governmental Authority of an actual or potential violation of any such Governmental Approval, and none of the persons referenced in Section 5.2(b)(ii) has received any other communication from a Governmental Authority of an actual or potential violation of any such Governmental Approval.

(p) Compliance. Seller has performed in all respects all obligations, and complied in all material respects with the agreements and covenants, required to be performed by or complied with by Seller hereunder.

(q) No Breaches. As of the Agreement Date, each Interconnection Agreement, Gas Supply Agreement, and Site Lease is a legal, valid, binding and enforceable obligation of Buyer and, to Seller's Knowledge, of each other party thereto, and each Interconnection Agreement, Gas Supply Agreement, and Site Lease is in full force and effect. To Seller's Knowledge, neither Buyer nor any other Person party thereto is in material breach or violation of any Interconnection Agreement, Gas Supply Agreement, or Site Lease, and no event has occurred, is pending or is threatened, which, after the giving of notice, with lapse of time, or otherwise, would constitute any such breach or default by Buyer or any other party thereto.

(r) Insurance. Seller has obtained the insurance described in Annex B, all such policies remain in full force and effect, and all insurance premiums that are due and payable have been paid in full with no premium overdue.

(s) QFCP-RC Tariff. During the term of this Agreement, the Portfolio shall not fail to receive full payment and service under the Tariff for any of the following reasons:

(i) Seller shall not be a Qualified Fuel Cell Provider throughout the original term of the Tariff due to any action or inaction of Operator in violation of this Agreement; or

(ii) Seller shall take any action in violation of the A&R MOMA or this Agreement which causes: (A) Buyer not to qualify (or to lose qualification) for service under the Tariff or (B) the Portfolio not to qualify (or to lose qualification) as a Qualified Fuel Cell Provider Project.

Section 6.2 Survival Period. All claims by Buyer hereunder relating to breaches of representations and warranties contained in ARTICLE VI with respect to a Phase 2 New System shall be forever barred unless the Seller is notified in writing within twelve (12) months following the date of achievement of Commissioning for such Phase 2 New System, except for breaches and warranties contained in (a) Section 6.1(a), Section 6.1(b), Section 6.1(c), Section 6.1(g), and Section 6.1(o), which shall survive indefinitely, and (b) Section 6.1(k) and Section 6.1(h), which will survive until six (6) months following the expiration of the applicable statute of limitations. For the avoidance of doubt, the Parties hereby agree and acknowledge that the foregoing survival periods are a contractual statute of limitations and any claims based upon a breach of representations and warranties in ARTICLE VI must be noticed to Seller or brought or filed prior to the expiration of such survival period.

ARTICLE VII.
REPRESENTATIONS AND WARRANTIES OF BUYER

Section 7.1 Representations and Warranties of Buyer. Buyer represents and warrants to Seller as of the Agreement Date and as of each Purchase Date, as follows.

(a) Organization. Buyer is a limited liability company duly formed, validly existing and in good standing under the laws of the State of Delaware and has all requisite limited liability company power and authority to own, lease, and operate its business as currently conducted.

(b) Authority. Buyer has full limited liability company power and authority to execute and deliver this Agreement and the other Transaction Documents to which it is a party and to consummate the transactions contemplated hereby and thereby. The execution and delivery by Buyer of this Agreement and the other Transaction Documents to which it is a party and the consummation by Buyer of the transactions contemplated hereby and thereby have been duly and validly authorized by all necessary corporate action required on the part of Buyer and the Transaction Documents to which Buyer is a party have been duly and validly executed and delivered by Buyer. Each of the Transaction Documents to which Buyer is a party constitutes the legal, valid and binding agreement of Buyer, enforceable against Buyer in accordance with its terms, except as enforcement may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally and by general principles of equity (regardless of whether considered in a proceeding in equity or at law).

(c) Consents and Approvals; No Violation. Neither the execution, delivery and performance of this Agreement nor the other Transaction Documents to which Buyer is a party nor the consummation by Buyer of the transactions contemplated hereby and thereby will (i) conflict with or result in any breach of any provision of the articles of formation of Buyer nor Buyer's limited liability company agreement, (ii) with or without the giving of notice or lapse of time or both, conflict with, result in any violation or breach of, constitute a default under, result in any right to accelerate, result in the creation of any Lien on Buyer's assets, or create any right of termination under the conditions or provisions of any note, bond, mortgage, indenture, material agreement or other instrument or obligation to which Buyer is a party or by which it, or any material part of its assets may be bound, in each case that would individually or in the aggregate result in a Material Adverse Effect on Buyer or its ability to perform its obligations hereunder or (iii) constitute violations of any law, regulation, order, judgment or decree applicable to Buyer, which violations, individually or in the aggregate, would result in a Material Adverse Effect on Buyer or its ability to perform its obligations hereunder.

(d) Legal Proceedings. There are no pending or, to Buyer's Knowledge, threatened claims, disputes, governmental investigations, suits, actions (including non-judicial real or personal property foreclosure actions), arbitrations, legal, administrative or other proceedings of any nature, domestic or foreign, criminal or civil, at law or in equity, by or against Buyer that challenge the enforceability of this Agreement or the other Transaction Documents to which Buyer is a party or the ability of Buyer to consummate the transactions contemplated hereby or thereby, in each case, that could reasonably be expected to result in a Material Adverse Effect on Buyer or its ability to perform its obligations hereunder.

(e) Consents and Approvals. Buyer has received all material third party consents which are required as of such date for the consummation and performance of the transactions contemplated hereunder.

(f) Bankruptcy. No event of Bankruptcy has occurred with respect to Buyer.

(g) No Other Representations. Buyer is not relying on any representations or warranties whatsoever, express, implied, at common law, statutory or otherwise, except for the representations or warranties expressly set out in the Transaction Documents.

Section 7.2 Survival Period. All claims by Seller hereunder relating to breaches of representations and warranties contained in ARTICLE VII with respect to a Phase 2 New System shall be forever barred unless the Seller is notified in writing within twelve (12) months following the date of achievement of Commissioning for such Phase 2 New System, except for breaches and warranties contained in Section 7.1(a), Section 7.1(b), Section 7.1(c), which shall survive indefinitely. For the avoidance of doubt, the Parties hereby agree and acknowledge that the foregoing survival periods are a contractual statute of limitations and any claims based upon a breach of representations and warranties in ARTICLE VII must be brought or filed prior to the expiration of such survival period.

ARTICLE VIII.
CONFIDENTIALITY

Section 8.1 Confidential Information. Subject to the other terms of this ARTICLE VIII each Party shall, and shall cause its Affiliates and its respective stockholders, members, subsidiaries and Representatives to, hold confidential the terms of this Agreement and all information it has obtained or obtains from the other Party in connection with this Agreement concerning Seller and Buyer and their respective assets, business, operations or prospects (the "Confidential Information"), including all materials and information furnished by Seller in performance of this Agreement, regardless of form conveyed or whether financial or technical in nature, including any trade secrets and proprietary know how and Software whether such information bears a marking indicating that they are proprietary or confidential or not; provided, however, that Confidential Information shall not include information that (i) is or becomes generally available to the public other than as a result of any breach of this ARTICLE VIII by a Party or any of its Representatives, (ii) is or becomes available to a Party or any of its Representatives on a non-confidential basis from a source other than the other Party or its Representatives, provided that such source was not and is not bound by any contractual, legal or fiduciary obligation of confidentiality with respect to such information or (iii) was or is independently developed or conceived by a Party or its Representatives without use of or reliance upon the Confidential Information of the other Party, as evidenced by sufficient written record.

Section 8.2 Restricted Access. Subject to Section 10.8:

(a) Buyer agrees that the Phase 2 New Systems themselves contain Seller's valuable trade secrets. Buyer agrees (i) to restrict the use of such information to matters relating to the Facilities, and such other purposes, if any, expressly provided herein, and (ii) to restrict access to such information as provided in Section 8.3(b).

(b) Seller's Confidential Information will not be reproduced without Seller's prior written consent, and following termination of this Agreement all copies of such written information will be returned to Seller upon written request (not to be made while materials are still of use to the operation of a Phase 2 New System and no Buyer Default has occurred and is continuing) or shall be certified by Buyer as having been destroyed, unless otherwise agreed by the Parties. Buyer's Confidential Information will not be reproduced by Seller without Buyer's prior written consent, and following termination of this Agreement all copies of such written information will be returned to Buyer upon written request or shall be certified by Seller as having been destroyed. Notwithstanding the foregoing, each Party and its Representatives may each retain archival copies of any Confidential Information to the extent required by law, regulation or professional standards or copies of Confidential Information created pursuant to the automatic backing-up of electronic files where the delivery or destruction of such files would cause undue hardship to the receiving Party, so long as any such archival or electronic file back-up copies are accessible only to legal or information technology personnel, provided that such Confidential Information will continue to be subject to the terms of this Agreement.

(c) Subject to ARTICLE IX, Section 8.2(a), and Section 8.2(b), the Phase 2 New Systems are offered for sale and are sold by Seller subject to the condition that such sale does not convey any license, expressly or by implication, to manufacture, reverse engineer, duplicate or otherwise copy or reproduce any part of the Facilities, documentation or Software without Seller's express advance written permission. Subject to ARTICLE IX hereof, Buyer agrees not to remove the covering of any Phase 2 New System, not to access the interior or to reverse engineer, or cause or knowingly allow any third party to open, access the interior or reverse engineer any Phase 2 New System or Software provided by Seller. Subject to ARTICLE IX hereof, and anything contemplated pursuant to this Agreement, only Seller or its Representatives may open or access the interior of a Phase 2 New System.

Section 8.3 Permitted Disclosures.

(a) Legally Compelled Disclosure. Confidential Information may be disclosed (i) as required or requested to be disclosed by a Party or any of its Affiliates or their respective stockholders, members, subsidiaries or Representatives as a result of any applicable Legal Requirement or rule or regulation of any stock exchange, the Financial Industry Regulatory Authority, Inc., the New York Department of Financial Services or other regulatory authority or self-regulatory authority having jurisdiction over such Party, (ii) as required or requested by the IRS, the Department of Justice or the Office of the Inspector General in connection with a Phase 2 New System, cash grant, or tax credits relating thereto, including in connection with a request for any private letter ruling, any determination letter or any audit, or (iii) as required under any Interconnection Agreement or any of the other Transaction Documents. If a Party becomes compelled by legal or administrative process to disclose any Confidential Information, such Party shall, to the extent permitted by Legal Requirements, provide the other Party with prompt notice of any such disclosure (other than any disclosure in connection with routine regulatory filings, reviews or audits, or requests for regulatory approvals in the ordinary course of the recipient's business, which, in each case, may be made without notice or restriction) so that the other Party may seek a protective order or other appropriate remedy with respect to the information required to be disclosed. If such protective order or other remedy is not obtained with respect to the information required to be disclosed, the first Party shall furnish only that portion of such information that it is advised by counsel is legally required to be furnished and shall exercise reasonable efforts, at the expense of the Party whose Confidential Information is being disclosed, to obtain reliable assurance that confidential treatment will be accorded such information, including, in the case of disclosures to the IRS described in clause (ii) above, to obtain reliable assurance that, to the maximum extent permitted by applicable Legal Requirements, such information will not be made available for public inspection pursuant to Section 6110 of the Code.

(b) Disclosure to Representatives. Notwithstanding the foregoing, and subject always to the restrictions in Section 8.2, a Party may disclose Confidential Information received by it (i) to its and its Affiliates' (x) actual or potential investors or financing parties, underwriters and insurers and its and their employees, consultants, legal counsel or agents who have a need to know such information and (y) auditors and advisers (including, without limitation, legal and financial advisers) who need to know such information in connection with the transactions contemplated hereby, or (ii) as required to be disclosed to rating agencies requesting such information; provided that such Party informs each such Person who has access to the Confidential Information of the confidential nature of such Confidential Information, the terms of this Agreement, and that such terms apply to them. The Parties shall use commercially reasonable efforts to ensure that each such Person complies with the terms of this Agreement and that any Confidential Information received by such Person is kept confidential.

(c) Securities Filings. A Party may file this Agreement as an exhibit to any relevant filing with the Securities Exchange Commission (or equivalent foreign agency) in accordance with Legal Requirements only after complying with the procedure set forth in this Section 8.3(c). In such event, the Party seeking such disclosure shall prepare a draft confidential treatment request and proposed redacted version of this Agreement to request confidential treatment for this Agreement, and the other Party agrees to promptly (and in any event, no less than fourteen (14) days after receipt of such confidential treatment request and proposed redactions) give its input in a reasonable manner in order to allow the Party seeking disclosure to file its request within the time lines prescribed by Legal Requirements. The Party seeking such disclosure shall exercise commercially reasonable efforts to obtain confidential treatment of the Agreement from the Securities Exchange Commission (or equivalent foreign agency) as represented by the redacted version reviewed by the other Party. Each Party shall bear its own costs in connection with such efforts. Either Party may, without the consent of the other Party, describe the transaction contemplated herein as required by Legal Requirements pursuant to the filing of a form 8-K, 10-K, 10-Q, or similar filing with the Securities and Exchange Commission.

(d) Other Permitted Disclosures. Nothing herein shall be construed as prohibiting a Party hereunder from using such Confidential Information in connection with (i) any claim against the other Party, (ii) any exercise by a Party hereunder of any of its rights hereunder, (iii) a financing or proposed financing by Seller or Buyer or their respective Affiliates, (iv) a disposition or proposed disposition by any direct or indirect Affiliate of Buyer of all or a portion of such Person's equity interests in Buyer, (v) a disposition or proposed disposition by Buyer of any Phase 2 New System, or (vi) any disclosure required to be made pursuant to the Tariff, an Interconnection Agreement, a Gas Supply Agreement, or a Site Lease, provided that, in the case of items (iii), (iv) and (v), the potential financing party or purchaser has entered into a confidentiality agreement with respect to Confidential Information on customary terms used in confidentiality agreements in connection with corporate financings or acquisitions before any such information may be disclosed and a copy of such confidentiality agreement has been provided to the non-disclosing party for informational purposes, which copy of such confidentiality agreement may contain redactions of confidential information relating to the potential financing source or purchaser. No disclosures of Confidential Information shall be made by Buyer in exercise of its rights under this Section 8.3(d) until Seller has first had the opportunity to exercise its right to take or purchase the Phase 2 New System in question, if applicable.

ARTICLE IX.
LICENSE AND OWNERSHIP; SOFTWARE

Section 9.1 IP License to Use. Subject to Section 9.2, Seller grants to Buyer a limited (as described herein), non-exclusive, royalty-free, perpetual (except as described in ARTICLE X hereof), irrevocable (except as described in ARTICLE X hereof), non-terminable (except as described in ARTICLE X hereof), non-transferable (except as described herein) license to use the Intellectual Property, including Seller's proprietary Software, contained in the Documentation and the Phase 2 New Systems purchased hereunder (collectively, "Seller's Intellectual Property") in conjunction with the purchase, use, operation, maintenance, repair and sale of the Phase 2 New Systems and in conjunction with each Phase 2 New System in accordance with the terms hereof, the Tariff, and each Interconnection Agreement (the "IP License"); provided, that (a) such license may be transferred or sub-licensed upon a transfer of a Phase 2 New System to any Person who acquires such Phase 2 New System, subject to Buyer's compliance with provisions of the A&R MOMA applicable to such transfer, (b) such license may be transferred or sub-licensed by Buyer to any third party Buyer is entitled to engage to maintain any Phase 2 New System pursuant to Section 8.2(c), (c) such license may be transferred by Buyer to any successor or assign of Buyer permitted pursuant to Section 12.4, and (d) in the event of a voluntary or involuntary Bankruptcy of Buyer, Seller hereby expressly consents to the assumption and assignment of the IP License by Buyer as necessary to allow Buyer's continued use of each Phase 2 New System and/or Facility in accordance with the terms hereof and, as applicable, the Tariff and each Interconnection Agreement. Seller shall retain all right, title and ownership of any and all Intellectual Property licensed by Seller hereunder. No right, title or interest in any such Intellectual Property is granted, transferred or otherwise conveyed to Buyer under this Agreement except as otherwise expressly set forth herein. Buyer shall not, except as otherwise provided herein, modify, network, rent, lease, loan, sell, distribute or create derivative works based upon Seller's Intellectual Property in whole or part, or cause or knowingly allow any third party to do so.

Section 9.2 Grant of Third Party Software License; Data Rights.

(a) Seller grants to Buyer a limited (as described herein), non-exclusive, royalty-free, perpetual (except as described in ARTICLE X hereof), irrevocable (except as described in ARTICLE X hereof), non-terminable (except as described in ARTICLE X hereof), non-transferable (except as described herein) license to use the third party Software (the "Software License"); provided, that (i) such license may be transferred or sub-licensed upon a transfer of a Phase 2 New System to any Person who acquires such Phase 2 New System, (ii) such license may be transferred or sub-licensed by Buyer to any third party Buyer is entitled to engage to maintain any Phase 2 New System pursuant to Section 8.2(c), and (iii) such license may be transferred by Buyer to any successor or assign of Buyer permitted pursuant to Section 12.4. No right, title or interest in any Software provided to Buyer (including all copyrights, patents, trade secrets or other intellectual or intangible property rights of any kind contained therein) is granted, transferred, or otherwise conveyed to Buyer under this Agreement except as expressly set forth herein. Buyer agrees not to reverse engineer or decompile the Software or otherwise use the Software for any purpose other than in connection with the use of the Facilities. Further, Buyer shall not modify, network, rent, lease, loan, sell, distribute or create derivative works based upon the Software in whole or part, or cause or knowingly allow any third party to do so.

(b) All data collected on the Facilities by Seller using the Software and data collected on the Facilities using Seller's internal proprietary Software are the sole property of Seller to be used by Seller in accordance with Legal Requirements, but may not be disclosed by Seller directly to any competitors of Buyer. Seller hereby grants to Buyer a limited, non-exclusive, irrevocable (except as set forth in ARTICLE X hereof), royalty-free license to use the data collected on the Facilities using such Software or Seller's internal proprietary software only for purposes of using such Facilities and administering the Transaction Documents or as required pursuant to the terms of the Tariff, any Site Lease or Interconnection Agreement, provided the provisions of ARTICLE VIII on confidentiality are maintained.

Section 9.3 Effect on Licenses. All rights and licenses granted under or pursuant to this Agreement by Seller are, and shall otherwise be deemed to be, for purposes of Section 365(n) of the U.S. Bankruptcy Code and of any similar provisions of applicable laws under any other jurisdiction (collectively, the "Bankruptcy Laws"), licenses of rights to "intellectual property" as defined under the Bankruptcy Laws. If a case is commenced by or against Seller under the Bankruptcy Laws (excluding a reorganization proceeding under Chapter 11 of the U.S. Bankruptcy Code if Seller is continuing to perform all of its obligations under this Agreement), Seller (in any capacity, including debtor-in-possession) and its successors and assigns (including a trustee under the Bankruptcy Laws) shall, as Buyer may elect in a written request, immediately upon such request:

(a) perform all of the obligations provided in this Agreement to be performed by Seller including, where applicable, providing to Buyer portions of such intellectual property (including embodiments thereof) held by Seller and such successors and assigns or otherwise available to them and to which Buyer is entitled to have access under this Agreement; and

(b) not interfere with the rights of Buyer under this Agreement, or the other Transaction Documents, to such intellectual property (including such embodiments), including any right to obtain such intellectual property (or such embodiments) from another entity, to the extent provided in the Bankruptcy Laws.

Section 9.4 No Software Warranty. Buyer acknowledges and agrees that the use of the Software is at Buyer's sole risk. The Software and related documentation are provided "AS IS" and without any warranty of any kind and Seller EXPRESSLY DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Notwithstanding the foregoing provision of this Section 9.4, nothing in this Section 9.4 shall limit, modify or otherwise excuse Seller's obligations with respect to the warranties of Seller provided under ARTICLE IV, ARTICLE VI or Section 9.6.

Section 9.5 IP Related Covenants. If Seller grants, bargains, sells, conveys, mortgages, assigns, pledges, warrants or transfers any Intellectual Property or Software that is required (a) for Seller or its Affiliates to perform their respective obligations under the Transaction Documents or (b) for the continued maintenance and operation of the Facilities without a material decrease in performance of the Facilities, Seller shall cause such act or transaction to be subject to the grant of the IP License and Software License under this Agreement.

Section 9.6 Representations and Warranties. Seller represents and warrants to Buyer as of the Agreement Date and as of each Commissioning Date as follows with respect to the Software and all other Intellectual Property that is (A) required (i) for Seller or its Affiliates to perform their respective obligations under this Agreement and each other Transaction Document, and (ii) for the continued operation of the Phase 2 New Systems in accordance with the A&R MOMA, the Tariff, and the Interconnection Agreements without a material decrease in performance of the Phase 2 New Systems, or (B) licensed, provided or otherwise made available by Seller to Buyer:

(a) Seller owns or has the right to use and to authorize Buyer to use all such Intellectual Property and Software;

(b) Seller and its Affiliates are not infringing on any Intellectual Property of any third party with respect to the actions described in subsection (A)(i) and (A)(ii) of Section 9.6 and the Phase 2 New Systems do not infringe on any Intellectual Property of any third party;

(c) [*];

(d) [*];

(e) the Software does not include, is free of, and does not contain or include any virus, time bombs, Trojan horses, worms, traps or other mechanisms which are designed to deny access to the Software by Buyer or to otherwise disable, erase, destroy, damage, alter or render meaningless, useless or ineffective the Software, or otherwise harm any Buyer data, programs or applications;

(f) the Software is not derived from, is not distributed with, and/or was not developed using any Open Source Code licensed under any terms that: (i) impose or could impose a requirement or condition that the Software, or any software or source code used or integrated therewith: (A) be disclosed or distributed in source code form; (B) be licensed for the purpose of making modifications or derivative works; or (C) be redistributable at no charge; or (ii) otherwise impose or could impose any other material limitation, restriction, or condition on the right or ability of Buyer to use or distribute the Software or any software or source code used or integrated therewith; and

(g) the Software will, for a period of one (1) year following installation, conform to the functional specifications set forth in the Documentation. Seller shall promptly repair or replace any Software or media that does not meet the foregoing warranty. The foregoing remedy is without prejudice to any rights, claims or remedies that Buyer may have either under this Agreement or otherwise at law or in equity.

ARTICLE X.
EVENTS OF DEFAULT AND TERMINATION

Section 10.1 Seller Default. The occurrence at any time of any of the following events shall constitute a "Seller Default":

(a) Failure to Pay. The failure of Seller to pay any undisputed amounts owing to Buyer on or before the day following the date on which such amounts are due and payable under the terms of this Agreement or the A&R MOMA and Seller's failure to cure each such failure within ten (10) Business Days after Seller receives written notice from Buyer of each such failure;

(b) Failure to Perform Other Obligations. Unless due to a Force Majeure Event, the failure of Seller to perform or cause to be performed any other material obligation required to be performed by Seller under this Agreement or the A&R MOMA, or the failure of any representation and warranty set forth herein or therein to be true and correct as and when made; provided, however, that if such failure by its nature can be cured, then Seller shall have a period of thirty (30) days after receipt of written notice of such failure to cure the same and a Seller Default shall not be deemed to exist during such period; provided, further, that if Seller commences to cure such failure during such period and is diligently and in good faith attempting to effect such cure, said period shall be extended for sixty (60) additional days; notwithstanding the foregoing, the cure period set forth above will in no event exceed (and will be deemed modified as necessary to match) the cure period applicable to any particular failure or breach under the Tariff or the applicable Interconnection Agreement, if any;

(c) Failure to Remedy Injunction. The failure of Seller to remedy any injunction that prohibits Buyer's use of any Phase 2 New System as contemplated by Section 11.1 within sixty (60) days of Seller's receipt of written notice of Buyer being enjoined therefrom; or

(d) Bankruptcy. If Seller is subject to a Bankruptcy.

Section 10.2 Buyer Default. The occurrence at any time of the following events with respect to Buyer shall constitute a "Buyer Default":

(a) Failure to Pay. The failure of Buyer to pay any undisputed amounts owing to Seller on or before the day following the date on which such amounts are due and payable under the terms of this Agreement and Buyer's failure to cure each such failure within ten (10) Business Days after Buyer receives written notice of each such failure;

(b) Failure to Perform Other Obligations. Unless due to a Force Majeure Event, the failure of Buyer to perform or cause to be performed any material obligation required to be performed by Buyer under this Agreement or the failure of any representation and warranty set forth herein to be true and correct as and when made; provided, however, that if such failure by its nature can be cured, then Buyer shall have a period of thirty (30) days after receipt of written notice of such failure to cure the same and a Buyer Default shall not be deemed to exist during such period; provided, further, that if Buyer commences to cure such failure during such period and is diligently and in good faith attempting to effect such cure, said period shall be extended for sixty (60) additional days; or

(c) Bankruptcy. If Buyer is subject to a Bankruptcy.

Section 10.3 Buyer's Remedies Upon Occurrence of a Seller Default. If a Seller Default has occurred under Section 10.1(d), Buyer may terminate this Agreement by written notice, and assert all rights and remedies available to Buyer under Legal Requirements subject to the limitations of liability set forth in Section 11.5. If a Seller Default has occurred under Section 10.1(a), Section 10.1(b) or Section 10.1(c), Buyer may terminate this Agreement only with respect to those Phase 2 New Systems for which such Seller Default has occurred by written notice, and (i) assert all rights and remedies available to Buyer under Legal Requirements with respect to those Phase 2 New Systems for which a Seller Default has occurred, subject to the limitations of liability set forth in Section 11.5, or (ii) require that Seller and, if so required, Seller shall repurchase the relevant Phase 2 New System in respect of which this Agreement is being terminated from Buyer on an AS IS basis by paying the Repurchase Amount in respect of any such Phase 2 New System, calculated as of the date of such payment, in which case Seller shall take title to such Phase 2 New System upon paying the Repurchase Amount, and such Phase 2 New System shall no longer constitute a portion of the Project. If a Phase 2 New System will be removed pursuant to this Section 10.3, Seller shall at its sole cost and expense remove the Phase 2 New System and any other ancillary equipment (including the concrete pad and any other improvements to the applicable Site to the extent required under the applicable Site Lease) from the applicable Site, restoring the relevant portion of the Site to its condition before the installation, including closing all utility connections and properly sealing any Site penetrations in the manner required by all Legal Requirements and the applicable Site Lease.

Section 10.4 Seller's Remedies Upon Occurrence of a Buyer Default. If a Buyer Default has occurred Seller may terminate this Agreement by written notice only with respect to those Phase 2 New Systems for which a Buyer Default has occurred and remains uncured, and assert all rights and remedies available to Seller under Legal Requirements with respect to those Phase 2 New Systems for which a Buyer Default has occurred, subject to the limitations of liability set forth in Section 11.5, including retaining any prior payments with respect to such Phase 2 New Systems and selling such Phase 2 New Systems to another buyer.

Section 10.5 Preservation of Rights. Termination of this Agreement shall not affect any rights or obligations as between the Parties which may have accrued prior to such termination or which expressly or by implication are intended to survive termination whether resulting from the event giving rise to termination or otherwise, including Section 3.6, Section 3.7, Section 3.8, ARTICLE V, ARTICLE VI, ARTICLE VII, ARTICLE VIII, ARTICLE IX, and ARTICLE XI, and ARTICLE XII. The list of the Knowledge persons referenced in Section 5.2(b)(ii), and any Seller or Seller Affiliate successor employees to such persons in such capacities, shall survive the termination or expiration of this Agreement for purposes of the A&R MOMA until the expiration or termination of the A&R MOMA.

Section 10.6 Force Majeure. If either Party is rendered wholly or partially unable to perform any of its obligations under this Agreement by reason of a Force Majeure Event, that Party (the "Claiming Party") will be excused from whatever performance is affected by the Force Majeure Event to the extent so affected; provided, however, that (a) the Claiming Party, within a reasonable time after the occurrence of such Force Majeure Event gives the other Party notice describing the particulars of the occurrence; (b) the suspension of performance shall be of no greater scope and of no longer duration than is reasonably required by the Force Majeure Event; (c) no liability of either Party for an event that arose before the occurrence of the Force Majeure Event shall be excused as a result of the Force Majeure Event; (d) the Claiming Party shall exercise commercially reasonable efforts to correct or cure the event or condition excusing performance and resume performance of all its obligations; and (e) when the Claiming Party is able to resume performance of its obligations under this Agreement, the Claiming Party shall promptly give the other Party notice to that effect and shall promptly resume performance.

Section 10.7 No Duplication of Claims; Cumulative Limitation of Liability Caps. Notwithstanding anything to the contrary in this Agreement, (a) the Parties acknowledge and agree that no claiming or indemnified party shall be entitled to a double recovery for the same monetary loss or damage under the provisions of this Agreement and the provisions of any other Transaction Document; (b) to the extent that all or any portion of the Pre-Commissioning Equipment Warranty, Manufacturer's Warranty or any other warranty, guarantee or indemnification provision set forth herein is duplicative of any warranty, guarantee or indemnification coverage provided under the A&R MOMA, the Parties acknowledge and agree that Buyer shall be entitled to pursue recovery for money damages in respect of a single event or circumstance, at its sole option, under either this Agreement or the A&R MOMA, as applicable, and that limitation of liability caps set forth in each such agreement are to be calculated on an aggregate basis taking into account all claims for indemnification, warranty or otherwise (if any) made under this Agreement or the A&R MOMA, and (c) if an "Indemnifiable Loss" or other amount paid for any event(s) or circumstance(s) under this Agreement or (to the extent relating to a Phase 2 New System) the A&R MOMA, as the case may be, would be taken into account for purposes of calculating the "Maximum Liability" under such agreement, then such amount will also be taken into account for purposes of calculating the "Maximum Liability" under the other such agreement. For the avoidance of doubt, the provisions of subsections (b) and (c) of this Section 10.7 shall not limit Seller's liability under any other Transaction Document or the Phase 1 CapEx Agreement with respect to any Phase 1 New System.

Section 10.1 Actions to Facilitate Continued Operations After a Buyer Termination. Notwithstanding anything else herein to the contrary, and without limitation of the rights set forth in this ARTICLE X hereof, if any Phase 2 New System is no longer covered by the A&R MOMA or another agreement between Buyer and Seller (or any Affiliate of Seller) regarding the operation and maintenance of such Facility as a result of the termination of the A&R MOMA with respect to such Phase 2 New System (A) in connection with a Seller Default or (B) in connection with the expiration of the Extended Warranty Period (as defined in the A&R MOMA), Buyer shall be entitled to maintain, or cause a third party to maintain, such Phase 2 New System (each such maintainer, a "Third Party Operator"), including replacing consumables and components as needed or desired, including, if applicable, electricity sales pursuant to the Tariff; provided that:

(a) No less than thirty (30) calendar days prior to the event of such termination pursuant to subsection (B) above, to the extent Buyer requires any maintenance services for such Phase 2 New System following such termination, Buyer shall notify Seller of such requirements in writing. If Seller desires to perform such maintenance services, Seller shall provide within five (5) Business Days to Buyer the material terms and conditions (including the scope of services offered, the price(s) quoted for such services, and the terms of any performance warranties to be provided in connection with such services) pursuant to which it is willing to provide such maintenance services for such Phase 2 New System, which shall be no less favorable to Buyer than Seller's standard rates, terms and warranties as of such date. If Buyer declines to engage Seller to perform such services, or the Parties are unable to execute appropriate documentation to reflect such services, Buyer may (subject to Section 10.8(b)) seek to engage a Third Party Operator to perform such services, provided that, prior to engaging any such Third Party Operator to maintain such Phase 2 New System, Buyer shall provide written notice to Seller of the material terms and conditions on which such third party has offered to provide such service (including (X) the scope of services offered, (Y) the price(s) quoted for such services, and (Z) the terms of any performance warranties to be provided in connection with such services). Seller shall have ten (10) Business Days to notify Buyer if Seller will agree to perform the applicable services for a price not to exceed the quoted amount and otherwise on terms no less favorable to Buyer than those included in the notice required hereunder. If Seller agrees to provide such services, the Parties will negotiate in good faith regarding appropriate documentation to reflect such services. If Seller declines to provide such services, Buyer may engage a Third Party Operator on terms no more favorable to such Third Party Operator than those provided in the notice to Seller.

(b) Without in any way limiting the provisions of the foregoing Section 10.8(a), Buyer shall in all events use commercially reasonable efforts to engage a Third Party Operator to provide such maintenance that is not a competitor of Seller or its Affiliates and is not in litigation or other material dispute with Seller.

ARTICLE XI.
INDEMNIFICATION

Section 11.1 IP Indemnity.

(a) Except as expressly limited below, Seller agrees to indemnify, defend and hold Buyer, its members and its permitted successors and assigns, and their Affiliates and their respective managers, officers, directors, employees and agents harmless from and against any and all Third Party Claims and Indemnifiable Losses (including in connection with obtaining any Intellectual Property necessary for continuation of completion, operation and maintenance of Phase 2 New Systems purchased by Buyer from Seller), arising from or in connection with any alleged infringement, conflict, violation, misappropriation or misuse of any patents, copyrights, trade secrets or other third party Intellectual Property rights by the Phase 2 New Systems purchased by Buyer from Seller (or the use, operation or maintenance thereof) or the exercise of the IP License or the Software License granted pursuant to Section 9.1 and Section 9.2 hereunder. Buyer shall give Seller prompt notice of any such claims. Seller shall be entitled to participate in, and, unless in the opinion of counsel for Seller a conflict of interest between the Parties may exist with respect to such claim, assume control of the defense of such claim with counsel reasonably acceptable to Buyer. Buyer authorizes Seller to settle or defend such claims in its sole discretion on Buyer's behalf, without imposing any monetary or other obligation or liability on Buyer and subject to Buyer's participation rights set forth in this Section 11.1 and further provided that any such settlement: (i) includes a full and complete release in favor of Buyer; and (ii) does not require any admission of fault or liability on the part of Buyer. Buyer shall assist Seller upon reasonable request by Seller and, at Seller's reasonable expense, in defending any such claim. If Seller does not assume the defense of such claim, or if a conflict precludes Seller from assuming the defense, then Seller shall reimburse Buyer on a monthly basis for Buyer's reasonable defense expenses of such claim through separate counsel of Buyer's choice reasonably acceptable to Seller. Even if Seller assumes the defense of such claim, Buyer may, at its sole option, participate in the defense, at Buyer's expense, without relieving Seller of any of its obligations hereunder. Should Buyer be enjoined from selling or using any Phase 2 New System as a result of such claim, or should Buyer reasonably and in good faith conclude that Buyer is likely to be so enjoined, Seller will, at its sole option and discretion, either (i) procure or otherwise obtain for Buyer the right to use or sell the Phase 2 New System in the form purchased by Buyer; (ii) modify the Phase 2 New System so that it becomes non-infringing but still substantially meets the original functional specifications of the Phase 2 New System (in which event, for the avoidance of doubt, all warranties hereunder shall continue to apply unmodified); (iii) upon return of the Phase 2 New System to Seller, as directed by Seller, provide to Buyer a non-infringing Phase 2 New System meeting the functional specifications of the Phase 2 New System, or (iv) when and if none of the first three options is reasonably available to Seller after having exercised good faith efforts to pursue such options, authorize the return of the Phase 2 New System to Seller and, upon receipt thereof, return to Buyer all monies paid by Buyer to Seller for the cost of the Phase 2 New Systems and BOF, net of any monies paid by Seller to Buyer pursuant to the Phase 2 New System Portfolio Output Warranty, Efficiency Guaranty and/or Output Guaranty to the extent such Seller payments are allocable to such Phase 2 New System; provided that Seller shall not elect the option in the preceding clause (i) without Buyer's written consent if such election could reasonably be expected to materially decrease Buyer's revenues or materially increase Buyer's operating expenses.

(b) THIS INDEMNITY SHALL NOT COVER ANY CLAIM:

(i) for Intellectual Property infringement, conflict, violation or misuse that would not have been caused but for any combination made by Buyer of any Phase 2 New System with any other product or products or modifications made by or on behalf of Buyer to any part of the Phase 2 New System, unless (A) such combination or modification is in accordance with Seller's specifications for the Phase 2 New System or is otherwise contemplated in the Documentation, (B) such combination or modification is made by or on behalf of or at the written request of Seller where Seller has requested the specific combination or modification giving rise to the claim by Buyer, or (C) such other product or products would not infringe the Intellectual Property rights of a third party but for the combination with any part of the Phase 2 New System; or

(ii) for infringement of any Intellectual Property rights arising in whole or in part from any aspect of the Phase 2 New System which was designed by or requested by Buyer on a custom basis (unless Seller knew or had reason to know that such design would cause such infringement).

Section 11.2 Indemnification of Seller by Buyer. Buyer shall indemnify, defend and hold harmless Seller, its officers, directors, employees, shareholders, Affiliates and agents (each, a "Seller Indemnitee") from and against any and all Indemnifiable Losses asserted against or suffered by any Seller Indemnitee arising out of a Third Party Claim (other than a claim for a Seller Indemnitee's breach of any contract to which a Seller Indemnitee is a party) and in any way relating to, resulting from or arising out of or in connection with any Third Party Claims against a Seller Indemnitee to the extent arising out of or in connection with (a) (1) the negligent or intentional acts or omissions of Buyer or its subcontractors, agents or employees or others under Buyer's control (excluding any act or omission by Seller, any Seller Indemnitee or any Seller Personnel), (2) breach by Buyer of its representations, warranties or obligations under this Agreement (except to the extent caused by any Seller Indemnitee or Seller Personnel), or (3) any breach of a Site Lease or Interconnection Agreement, except to the extent relating to, resulting from or arising out of or in connection with any act or omission by Seller, any Seller Indemnitee or any Seller Personnel, or (b) the operation of Phase 2 New Systems by any Person other than Seller or an Affiliate or subcontractor of Seller after such Phase 2 New Systems have been Purchased by Buyer pursuant to this Agreement (but subject to Seller's warranties, covenants and indemnities under this Agreement and any other Transaction Document to which Seller is a party); provided that Buyer shall have no obligation to indemnify Seller to the extent caused by or arising out of any (i) negligence, fraud or willful misconduct of any Seller Indemnitee or the breach by Seller or any Seller Indemnitee of its covenants, representations and warranties under this Agreement or in any Seller's Certificate of Commissioning or (ii) operation of Bloom Systems by a party outside of Buyer's control or direction (including any Seller Personnel) or by a party taking such action despite Buyer's reasonable efforts to prevent the same.

Section 11.3 Indemnification of Buyer by Seller.

(a) Seller shall indemnify, defend and hold harmless Buyer, its members, managers, officers, directors, employees, Affiliates and agents (each, a "Buyer Indemnitee") from and against any and all Indemnifiable Losses (other than Indemnifiable Losses addressed in Section 11.1) asserted against or suffered by any Buyer Indemnitee arising out of a Third Party Claim, and in any way relating to, resulting from or arising out of or in connection with any Third Party Claims against a Buyer Indemnitee to the extent arising out of or in connection with (i) the negligent or intentional acts or omissions of Seller or any Seller Personnel (other than matters addressed separately in Section 11.1, which shall be governed by the terms thereof), (ii) a breach by Seller of its representations, warranties or obligations under this Agreement or in any Seller's Certificate of Commissioning, or any breach of a Site Lease or Interconnection Agreement, to the extent relating to, resulting from or arising out of or in connection with any act or omission by Seller or any Seller Personnel, (iii) any alleged violation by Seller of Environmental Requirements resulting in claims, penalties, fines, or other enforcement actions or (iv) any injury, death, or damage to property caused by a defect in a Phase 2 New System;

provided that, Seller shall have no obligation to indemnify Buyer to the extent caused by or arising out of (x) any negligence, fraud or willful misconduct of a Buyer Indemnitee, except to the extent caused by any Seller Personnel, (y) the breach by Buyer or any Buyer Indemnitee of its covenants, representations and warranties under this Agreement or any Site Lease or Interconnection Agreement, except to the extent such a breach is caused by Seller's (or any Seller Personnel's) breach of this Agreement (including any failure to perform obligations on behalf of Buyer in accordance with the terms of this Agreement), or (z) the inability of Buyer to ultimately utilize any tax benefits solely as a result of insufficient taxable income or tax liability.

(b) Except as otherwise set forth in this Agreement, in the event that Buyer incurs any liability, cost, loss or expense to a Site Landlord (including relating to a breach of a Site Lease) in relation to the repurchase by or return to Seller of any Phase 2 New System under this Agreement, Seller shall indemnify and hold Buyer harmless for any such liability, cost, loss or expense incurred by Buyer.

(c) Seller acknowledges and agrees that each Site Landlord is an intended third party beneficiary of Seller's indemnification obligations in favor of the Buyer Indemnitees and that Buyer may, with Seller's reasonable consent following cooperative discussions between the Parties regarding the least disruptive manner of resolving the applicable Site Landlord claim, elect to assign to a Site Landlord the right to seek indemnification directly from Seller in the event that Buyer owes to such Site Landlord any indemnification obligations arising out of or in connection with any breach of a Site Lease arising out of any actions or inactions of Seller under this Agreement that give rise to an indemnification obligation of Seller in favor of any Buyer Indemnitee.

Section 11.1 Indemnification Procedure. Except as otherwise provided in Section 11.1, if any indemnifiable claim is brought against a Party (the "Indemnified Party"), then the other Party (the "Indemnifying Party") shall be entitled to participate in, and, unless in the reasonable opinion of counsel for the Indemnifying Party a conflict of interest between the Parties may exist with respect to such claim, assume the defense of such claim, with counsel reasonably acceptable to the Indemnifying Party. If the Indemnifying Party does not assume the defense of the Indemnified Party or if a conflict precludes the Indemnifying Party from assuming the defense, then the Indemnifying Party shall reimburse the Indemnified Party on a monthly basis for the Indemnified Party's reasonable defense expenses through separate counsel of the Indemnified Party's choice. Even if the Indemnifying Party assumes the defense of the Indemnified Party with acceptable counsel, the Indemnifying Party, at its sole option, may participate in the defense, at its own expense, with counsel of its own choice without relieving the Indemnifying Party of any of its obligations hereunder.

Section 11.2 Limitation of Liability.

(a) Notwithstanding anything to the contrary in this Agreement, in no event shall a Party be liable to the other Party for an amount in excess of the Maximum Liability unless and to the extent such liability is the result of (A) fraud, willful default, willful misconduct, or gross negligence of a Party or that Party's employees, agents, subcontractors (except that for the purposes of this provision, Seller and any applicable Seller Personnel will not be deemed to be employees, agents or subcontractors of Buyer), (B) a Third Party Claim, (C) a claim of Seller against Buyer for Buyer's failure to pay the Purchase Price for any Facility (which amounts shall not be included in calculating Buyer's Maximum Liability), (D) a claim with respect to injury to or death of any individual, (E) Seller's abandonment to the extent constituting a repudiation of this Agreement in respect of all or any part of the Facilities, (F) events or circumstances in respect of which insurance proceeds are available or that would have been available but for a failure by Seller to maintain, or comply with the terms of, insurance that it is required to obtain and maintain under this Agreement, and any amounts so received will not be included when calculating Seller's Maximum Liability, (G) a claim of Buyer against Seller for Seller's breach of a Fundamental Representation, or (H) a claim brought pursuant to Section 11.1. Subject always to the Maximum Liability limitations set forth in the preceding sentence, except for damages or amounts specifically provided for in this Agreement, including liquidated damages, or in connection with the indemnification for damages awarded to a third party under a Third Party Claim, damages hereunder are limited to direct damages, and in no event shall a Party be liable to the other Party, and the Parties hereby waive claims, for indirect, punitive, special or consequential damages or loss of profits; provided, however, that the loss of profits language set forth in this Section 11.5(a) shall not be interpreted to exclude from Indemnifiable Losses (X) any losses arising as a result of the loss or recapture of any ITC or (Y) recovery for any losses merely because such losses would result in a reduction in the profits of Buyer, Assured Guaranty Municipal Corp., SP Diamond State Class B Holdings, LLC, or any or all of such Persons. Notwithstanding anything to the contrary set forth herein, in no event shall the limitation of liability set forth above as it pertains to Seller limit Seller's obligations to Buyer for any payments owed by Seller to Buyer regarding (i) the Repurchase Amount in respect of any Phase 2 New Systems, or (ii) Indemnifiable Losses arising from the loss or recapture of any ITC. Any amounts paid or payable by Seller to Buyer as described in the preceding sentence will not be included when calculating Seller's Maximum Liability.

(b) Each Party hereby agrees that any claim for damages against the other Party under this ARTICLE XI shall be reduced to the extent of any related insurance proceeds actually received by such claiming Party.

Section 11.3 Survival. The Parties' respective rights and obligations under this ARTICLE XI shall survive any total or partial termination of this Agreement.

Section 11.4 After-Tax Basis. All tax-related indemnity payments pursuant to this ARTICLE XI which are taxable to the recipient shall be made on a grossed-up, after-tax basis, assuming for this purpose that all such indemnity payments are taxable at the highest applicable marginal rate in effect each year under Code Section 11(b)(1).

ARTICLE XII.
MISCELLANEOUS PROVISIONS

Section 12.1 Amendment and Modification. This Agreement may be amended, modified or supplemented only by written agreement of Buyer and Seller.

Section 12.2 Waiver of Compliance; Consents. Except as otherwise provided in this Agreement, any failure of any of the Parties to comply with any obligation, covenant, agreement or condition herein may be waived by the Party entitled to the benefits thereof only by a written instrument signed by the Party granting such waiver, but any such waiver of such obligation, covenant, agreement or condition shall not operate as a waiver of, or estoppel with respect to, any subsequent failure to comply therewith.

Section 12.3 Notices. All notices, provisions of Documentation, reports, certifications, or other documentation, and other communications hereunder shall be in writing and shall be deemed given when received if delivered personally or by facsimile transmission with completed transmission acknowledgment or by electronic mail, or when delivered if mailed by overnight delivery via a nationally recognized courier or registered or certified first class mail (return receipt requested), postage prepaid, to the recipient Party at its below address (or at such other address or facsimile number for a Party as shall be specified by like notice; provided, however, that notices of a change of address shall be effective only upon receipt thereof and that any notice provided by electronic mail will be followed promptly by another form of notice consistent with this Section 12.3 and will be effective when such follow-up notice is deemed effective):

To Seller:	Bloom Energy Corporation 4353 N. 1st Street San Jose, CA 95134 Attention: [*]Email: [*] and to: Bloom Energy Corporation 4353 N. 1st Street San Jose, CA 95134 Attention: General Counsel
To Buyer:	Diamond State Generation Partners, LLC c/o SP Diamond State Class B Holdings, LLC 30 Ivan Allen Jr. Blvd. Atlanta, GA 30308 Attention: General Counsel and Corporate Secretary with a copy to (which copy shall not constitute notice): Smith, Anderson, Blount, Dorsett, Mitchell & Jernigan, L.L.P. 150 Fayetteville Street, Suite 2300 Raleigh, NC 27601 Attention: [*] Telephone: [*] Email: [*] with a copy to (which copy shall not constitute notice): Assured Guaranty Municipal Corp. 1633 Broadway New York, New York 10019 Attention: General Counsel Email: [*]

Section 12.4 Assignment.

(a) This Agreement and all of the provisions hereof shall be binding upon and inure to the benefit of the Parties and their respective successors and permitted assigns (including by operation of law), but neither this Agreement nor any of the rights, interests or obligations hereunder shall be assigned by any Party without the prior written consent of the other Party (to be granted in the other Party's sole discretion), provided that (i) Buyer may assign its indemnification rights to each Site Landlord as set forth in Section 11.3(c) upon notice to Seller, (ii) Buyer may assign all of its right, title and interest in and to this Agreement to an Affiliate wholly owned (directly or indirectly) by either Investor without the prior consent of Seller (provided that such assignee Affiliate shall assign this Agreement back to the Buyer at any future date that such assignee is no longer an Affiliate of the Buyer), (iii) Buyer may make such an assignment without Seller's consent to a successor to substantially all of Buyer's business, whether in a merger, sale of stock, sale of membership interests, sale of assets or other transaction (other than a transaction with an entity that is a competitor of Seller or its Affiliates, unless consented to under the provisions of Section 12.4(b)), and (iv) Seller shall be entitled to subcontract any of its obligations under this Agreement without consent (except as set forth in Section 12.14) or to assign its obligations under this Agreement to an Affiliate under common ownership with Seller, provided further that (X) such assignment or subcontracting shall not excuse Seller from the obligation to competently perform any subcontracted or assigned obligations or any of its other obligations under the Agreement and (Y) nothing in this Agreement shall be deemed to require the consent of any Party with respect to any change in control, merger or sale of all or substantially all of the assets of either Investor or Seller. Any purported assignment or delegation in violation of this Section shall be null and void.

(b) In the event of an assignment by Buyer or other transaction described in clause (iii) of Section 12.4(a), Buyer shall notify Seller of the identity of the proposed assignee or successor in writing, and Seller shall have the right to consent to such assignment or transaction in the event that Seller reasonably believes such proposed assignee to be a competitor of Seller. Seller shall notify Buyer of its determination within ten (10) Business Days of receipt of notice from Buyer hereunder. If Seller notifies Buyer that it has determined that the proposed assignee is a competitor of Seller and that Seller is electing to withhold consent, then Buyer shall be prohibited from consummating the proposed transaction unless it has been finally determined that such proposed assignee is not a competitor of Seller.

(c) Any disputes regarding Seller's determination of a proposed assignee as a competitor to Seller shall be resolved as follows:

(i) Buyer will promptly provide written notification of the dispute to Seller within five (5) Business Days after notice by Seller that it has determined the proposed assignee to be a competitor and that it is withholding its consent. Thereafter, a meeting shall be held promptly between the Parties, attended by Seller's Chief Financial Officer and Buyer's Chief Financial Officer, to attempt in good faith to negotiate a resolution of the dispute, *provided,* that either Party may elect to escalate the dispute to the Parties' respective Chief Executive Officer at any time.

(ii) If the Parties are not successful in resolving a dispute within ten (10) Business Days of the meeting called for above, the dispute shall be submitted, within ten (10) Business Days thereafter, to a mediator with energy industry experience. The Parties shall cooperate with and provide such documents, information and other assistance as is requested by the mediator to assist in efforts to resolve the dispute. The costs of the mediator shall be borne equally by the Parties.

(iii) If efforts to mediate are not successful within thirty (30) days of submitting the dispute to the mediator, both Parties will retain all legal remedies available to them.

Section 12.5 Dispute Resolution; Service of Process.

(a) Except as provided in Section 12.4(c), in the event a dispute, controversy or claim arises hereunder, including any claim whether in contract, tort (including negligence), strict product liability or otherwise, the aggrieved Party will promptly provide written notification of the dispute to the other Party within ten (10) days after such dispute arises. Thereafter, a meeting shall be held promptly between the Parties, attended by Representatives of the Parties with decision-making authority regarding the dispute, to attempt in good faith to negotiate a resolution of the dispute. If the Parties are not successful in resolving a dispute within twenty-one (21) days of such meeting, then, subject to the limitations on remedies set forth in Section 10.3 and Section 10.4 and ARTICLE XI, either Party may pursue whatever rights it has available under this Agreement, at law or in equity in accordance with Section 12.6 herein.

(b) In the event of any dispute arising out of or relating to this Agreement, each Party hereby consents to service of process made to the addressees set forth in Section 12.3 herein either by overnight delivery by a nationally recognized courier or by certified first class mail, return receipt requested, and hereby acknowledges that service by such means shall constitute valid and lawful service of process against the Party being served.

Section 12.6 Governing Law, Jurisdiction, Venue. THIS AGREEMENT SHALL BE GOVERNED BY AND INTERPRETED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT GIVING EFFECT TO ANY CONFLICTS OF LAW OR OTHER PRINCIPLES THEREOF THAT WOULD RESULT IN THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION (OTHER THAN SECTION 5-1401 OF THE NEW YORK GENERAL OBLIGATIONS LAW). THE PARTIES HEREBY IRREVOCABLY SUBMIT TO THE NON-EXCLUSIVE JURISDICTION OF THE COURTS OF THE STATE OF NEW YORK LOCATED IN NEW YORK COUNTY AND OF THE UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF NEW YORK WITH RESPECT TO ANY DISPUTE ARISING OUT OF OR RELATING TO THIS AGREEMENT. EACH PARTY IRREVOCABLY AND UNCONDITIONALLY WAIVES TRIAL BY JURY IN ANY ACTION, SUIT OR PROCEEDING RELATING TO ANY SUCH DISPUTE AND FOR ANY COUNTERCLAIM WITH RESPECT THERETO.

Section 12.7 Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Signatures delivered by facsimile, portable document format or other electronic means (including services such as DocuSign) will be considered original signatures, and each Party shall thereafter promptly deliver original signatures to the other Party.

Section 12.8 Interpretation. The article, section and schedule headings contained in this Agreement are solely for the purpose of reference, are not part of the agreement of the Parties and shall not in any way affect the meaning or interpretation of this Agreement.

Section 12.9 Entire Agreement. This Agreement, the other Transaction Documents, the [*], and the exhibits, schedules, documents, certificates and instruments referred to therein, embody the entire agreement and understanding of the Parties in respect of the transactions contemplated by this Agreement. Each Party acknowledges that, in agreeing to enter into this Agreement, it has not relied on any representation, warranty, collateral contract or other assurance (except those in this Agreement or any other agreement entered into on the date of this Agreement between the Parties) made by or on behalf of any other Party at any time before the signature of this Agreement. Each Party waives all rights and remedies which, but for the immediately preceding sentence, might otherwise be available to it in respect of any such representation, warranty, collateral contract or other assurance.

Section 12.10 Construction of Agreement. The terms and provisions of this Agreement represent the results of negotiations between Buyer and Seller, each of which has been represented by counsel of its own choosing, and neither of which has acted under duress or compulsion, whether legal, economic or otherwise. Accordingly, the terms and provisions of this Agreement shall be interpreted and construed in accordance with their usual and customary meanings, and Buyer and Seller hereby waive the application in connection with the interpretation and construction of this Agreement of any rule of law to the effect that ambiguous or conflicting terms or provisions contained in this Agreement shall be interpreted or construed against the Party whose attorney prepared the executed draft or any earlier draft of this Agreement.

Section 12.11 Severability. If any term or other provision of this Agreement is invalid, illegal or incapable of being enforced by any rule of law or public policy, all other conditions and provisions of this Agreement shall nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated hereby is not affected in any manner materially adverse to any Party.

Section 12.12 Further Assurances. Each Party agrees to execute and deliver such additional documents and instruments and to perform such additional acts as may be necessary or appropriate to effectuate, carry out and perform all of the terms, provisions, and conditions of this Agreement and the transactions contemplated by this Agreement.

Section 12.13 Independent Contractor. Seller shall perform the Installation Services and act at all times as an independent contractor, and shall be solely responsible for the means, methods, techniques, sequences, and procedures employed for execution and completion of the Installation Services. Nothing in this Agreement shall be interpreted or applied so as to make the relationship of any of the Parties that of partners, joint venturers or anything other than the relationship of customer and independent contractor. Notwithstanding anything to the contrary herein, including Seller’s obligation to perform on behalf of Buyer certain of Buyer’s obligations under the Tariff, Interconnection Agreements, and Site Leases, neither Seller nor any of its employees, agents, subcontractors or Representatives shall be considered an employee, agent, subcontractor or Representative of, nor under the control of, Buyer under this Agreement. Seller shall at all times maintain supervision, direction and control over its employees, agents, subcontractors and Representatives as is consistent with and necessary to preserve its independent contractor status, and Seller shall be responsible to Buyer for the acts and omissions of each such employee or subcontractor.

Section 12.14 Service Providers. Seller may appoint one or more unrelated third party(ies), who is appropriately qualified, licensed, and financially responsible, to perform Installations Services throughout the Term. Seller shall submit such appointment of any Major Service Provider to Buyer for its prior written approval, which approval shall not be unreasonably withheld or delayed. No such appointment nor the approval thereof by Buyer, however, shall relieve Seller of any liability, obligation, or responsibility resulting from a breach of this Agreement. "Major Service Provider" means any Service Provider that Seller proposes to engage to perform any Installations Services for which the aggregate compensation to such Service Provider in respect of Installation Services is expected to be greater than ten percent (10%) of Seller's budgeted amounts for all Installation Services for all the Phase 2 New Systems pursuant to this Agreement. The Parties agree that each of the Major Service Providers set forth on Schedule 12.14 hereof are approved for all purposes by Buyer as of the Agreement Date. Each subcontractor (of any tier, Service Providers, Major Service Providers, and Service Technicians) must be a reputable, qualified firm with an established record of successful performance in its trade, and shall obtain and maintain such insurance coverages having such terms as set forth in Annex B to the extent applicable to the work to be performed by such subcontractor. Seller shall not be relieved from its obligation to provide any services hereunder if a subcontractor agrees to provide any or all of such services. No subcontractor is intended to be or will be deemed a third-party beneficiary of this Agreement. Nothing contained herein shall create any contractual relationship between any subcontractor and Buyer or obligate Buyer to pay or cause the payment of any amounts to any subcontractor, including any payment due to any third party. Seller shall not permit any subcontractor to assert any Lien against any Phase 2 New System or Bloom System, or attach any Lien other than a Permitted Lien. None of Seller's employees, subcontractors or any such subcontractor's employees will be or will be considered to be employees of Buyer. To the extent that any Site Landlord has the right to request removal of any Seller or subcontractor personnel under a Site Lease, Seller shall cooperate with Buyer in complying with the terms and conditions of such Site Lease including by, upon written notification by Buyer that the performance, conduct or behavior of any Person employed by Seller or one of its subcontractors is unacceptable to the applicable Site Landlord, promptly stopping such Person from performing any obligations hereunder and/or removing such Person from the applicable Site. Additionally, Buyer may bring to Seller's attention any concerns regarding the performance, conduct or behavior of any Person employed by Seller or one of its subcontractors, which concerns Seller shall consider in good faith and thereafter take such action as Seller deems appropriate under the circumstances. Seller will be fully responsible for the payment of all wages, salaries, benefits and other compensation to its employees and for payment of any Taxes due because of its work hereunder.

Section 12.15 Rights to Deliverables. Buyer agrees that Seller shall, except as expressly set forth herein, retain all rights, title and interest, including Intellectual Property rights, in any Training Materials provided to Buyer in connection with the services performed hereunder. "Training Materials" means any and all materials, documentation, notebooks, forms, diagrams, manuals and other written materials and tangible objects, describing how to operate and maintain the Facilities or perform any of the Installation Services and/or Facility Services (if applicable), including any corrections, improvements and enhancements which are delivered by Seller to Buyer, but excluding any Documentation or other data and reports delivered to Buyer in respect of any Facilities.

Section 12.16 Limitation on Export. Buyer agrees that it will not export, re-export, resell, ship or divert directly or indirectly any Facility or any part thereof in any form or technical data or Software furnished hereunder to any country prohibited by the United States Government or any other Governmental Authority, or for which an export license or other Governmental Approval is required, without first obtaining such license or approval.

Section 12.17 Time of Essence. Time is of the essence with respect to all matters contained in this Agreement.

Section 12.18 No Rights in Third Parties. Except as otherwise specified herein, (a) nothing in this Agreement nor any action taken hereunder shall be construed to create any duty, liability or standard of care to any Person that is not a Party, (b) no Person that is not a Party shall have any rights or interest, direct or indirect, in this Agreement or the services to be provided hereunder and (c) this Agreement is intended solely for the benefit of the Parties, and the Parties expressly disclaim any intent to create any rights in any third party as a third-party beneficiary to this Agreement or the services to be provided hereunder.

Section 12.19 No Modification or Alteration of DSGP Operating Agreement or Phase 1 CapEx Agreement. Notwithstanding anything to the contrary herein and for the avoidance of doubt, (a) nothing in this Agreement shall affect or modify the rights or obligations of the members of Buyer under the DSGP Operating Agreement or of Buyer or Seller under the Phase 1 CapEx Agreement, and (b) no Buyer Manager shall have authority to take any action or agree to take any action that would violate the DSGP Operating Agreement or that would require the consent or approval of any member or the managing member of Buyer under the DSGP Operating Agreement (unless such consent or approval is first obtained).

[remainder of page intentionally left blank]

IN WITNESS WHEREOF, Buyer and Seller have caused this Fuel Cell System Supply and Installation Agreement to be signed by their respective duly authorized officers as of the Agreement Date.

BUYER:	**SELLER:**
DIAMOND STATE GENERATION PARTNERS, LLC a Delaware limited liability company	**BLOOM ENERGY CORPORATION** a Delaware corporation
By: ____________________________	By: ____________________________
Name:	Name:
Title:	Title:

<u>Annex A</u>

Conceptual Design

Annex B

Insurance

Insurance. At all times during the Term, without cost to Buyer, Seller shall maintain in force and effect the following insurance with insurance companies rated "A-" or better, with a minimum size rating of "X" by AM Best's Insurance Guide and Key Ratings (or an equivalent rating by another nationally recognized insurance rating agency of similar standing if AM Best's Insurance Guide and Key Ratings shall no longer be published) or other companies reasonably satisfactory to Buyer, which insurance shall not be subject to cancellation, termination or other material adverse changes unless the insurer delivers to Buyer written notice of the cancellation, termination or change at least thirty (30) days in advance of the effective date of the cancellation, termination or material adverse change or if notice from the insurer to Buyer of material adverse change is not available on commercially reasonable terms then Seller shall provide Buyer with such notice as soon as reasonably possible after becoming aware of such change:

(a) Worker's Compensation Insurance as required by the laws of the state in which Operator's employees are manufacturing Phase 2 New Systems or performing Installation Services;

(b) Employer's liability insurance with limits at policy inception not less than [*] per occurrence;

(c) Commercial General Liability Insurance, including bodily injury and property damage liability (arising from premises, operations, contractual liability endorsements, products liability, or completed operations) with limits not less than [*] per occurrence and [*] annual aggregate limit at policy inception;

(d) If there is exposure, automobile liability insurance in accordance with prudent industry practice with a limit of not less than [*], combined single limit per occurrence;

(e) Umbrella liability insurance acting in excess of underlying employer's liability, commercial general liability and automobile liability policies with limits not less than [*] per occurrence, except that any subcontractors shall be required to maintain such insurance with limits of not less than [*];

(f) Professional errors and omission insurance with a limit of not less than [*] per occurrence;

(g) Environmental/pollution liability insurance with a limit of not less than [*] per claim;

(h) Builder's Risk/Installation Coverage for each Phase 2 New System, with replacement costs and a delay in startup component (for avoidance of doubt, this requirement is only applicable, with respect to each Phase 2 New System, until the date of Commissioning of such Phase 2 New System); and

(i) Marine Cargo - Transit coverage (including air, land and ocean cargo, as applicable) on an "all-risk" basis and a "warehouse to warehouse" basis with a per occurrence limit equal to not less than [*]% of the value including transit and insurance of such shipment involving the Facility at all times for which the Seller bears or has accepted risk of loss or has responsibility for providing insurance. Coverage shall include loading, unloading and temporary storage (as applicable). Coverage shall be maintained in accordance with prudent industry practice in all regards with per occurrence deductibles of not more than $50,000 for physical damage and other terms and conditions acceptable to the Buyer. For avoidance of doubt, (i) this requirement is only applicable during installation and is not required to be maintained with respect to any Phase 2 New System after the date of Commissioning of such Phase 2 New System, and (ii) this requirement shall not apply to any subcontractor except those engaged to transport materials owned by Seller during such transit.

Seller shall cause Buyer to be included as additional insured to all insurance policies required in accordance with the provisions of this Agreement except for worker's compensation. The required insurance must be written as a primary policy not contributing to or in excess of any policies carried by Buyer, and each must contain a waiver of subrogation in favor of Buyer.

Additionally, Seller shall procure and maintain any insurance coverages (if any) with respect to commercial general liability and excess liability required to be carried by Buyer's contractors and service providers pursuant to a Site Lease pursuant to policies that comply with all requirements set forth in such Site Lease.

<u>Additional Insurance</u>. To the extent that a Material Contract (as defined in the ECCA) requires Seller to maintain additional insurance coverage, higher limits or any other insurance requirement because of Seller's undertakings pursuant to this Agreement ("Required Insurance"), Seller shall obtain and maintain the Required Insurance for as long as required under such Material Contract.

Seller shall provide Buyer with evidence of compliance with these insurance requirements when requested by Buyer from time to time on a reasonable basis.

Exhibit A

Specifications for Phase 2 New Systems

PHASE 2 NEW SYSTEM SPECIFICATIONS

System Capacity: 250kW or 200kW
Electrical Connection: 480 V, 3-phase, 60 Hz

Fuels: Natural Gas
Input Fuel Pressure: 10-18 psig (15 psig nominal)
Water: None during normal operation following Commissioning
NOx: < 0.01 lbs/MWh
SO2: 0.0002 lbs/MWh
CO: <0.05 lbs/MWh
VOCs: < 0.02 lbs/MWh

Weight: 13.6 tons for 250kW and 12.2 tons for 200kW
Dimensions (variable layouts): 14'9" x 8'9" x 7' or 29'6" x 4'5" x 7'5"

Temperature Range: -20° to 45° C
Humidity: 0% to 100%

Location: Outdoor
Noise: < 70 dBA @ 6 feet

BLOOM SYSTEM METER SPECIFICATIONS

Voltage: +/- 1.0%
Current: +/- 1.5%
Power: +/- 2.0%
Bloom System Meter specifications reflect nominal ratings and 25º C ambient

MASS FLOW CONTROLLER SPECIFICATIONS

Fuel Scale Range (N_2): 250SLM
Accuracy: +/- 1.0% S.P (>/= 35% F.S.); +/- 0.35% (<35% F.S.)
Linearity: +/- 0.5% F.S.
Repeatability: +/- 0.2% F.S.
Response Time: </= 2sec
Temperature Range: -20° to 70° C

Form of Bill of Sale

Bloomenergy™

BILL OF SALE

This BILL OF SALE, dated as of __________ __, 20_ is made by BLOOM ENERGY CORPORATION, a Delaware corporation ("**Seller**"), to DIAMOND STATE GENERATION PARTNERS, LLC, a Delaware limited liability company ("**Buyer**"), and is delivered pursuant to the Fuel Cell System Supply and Installation Agreement, dated as of December 23, 2019 (as amended, amended and restated, supplemented or otherwise modified from time to time, the "**CapEx Agreement**"), between Seller and Buyer, in connection with the transfer of the assets described on Exhibit A attached hereto (the "**Purchased System**").

Seller hereby assigns, conveys, sells, delivers, sets over and transfers to Buyer, for the consideration, and on the terms and conditions, set forth in the CapEx Agreement, all of Seller's rights, title and interest in, under and to the Purchased System, and Buyer hereby accepts such assignment.

This Bill of Sale shall inure to the benefit of and be binding upon the parties hereto and their respective successors and assigns.

This Bill of Sale shall be governed by, and construed in accordance with, the laws of the State of New York.

This Bill of Sale may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Signatures delivered by facsimile, portable document format or other electronic means (including services such as DocuSign) will be considered original signatures.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties hereto have caused this Bill of Sale to be signed by their respective duly authorized officers as of the date first written above.

SELLER:

BLOOM ENERGY CORPORATION

By: ___________________________
Name:
Title:

BUYER:

DIAMOND STATE GENERATION PARTNERS, LLC

By: ___________________________
Name:
Title:

Attachment A to Bill of Sale

Purchased Systems

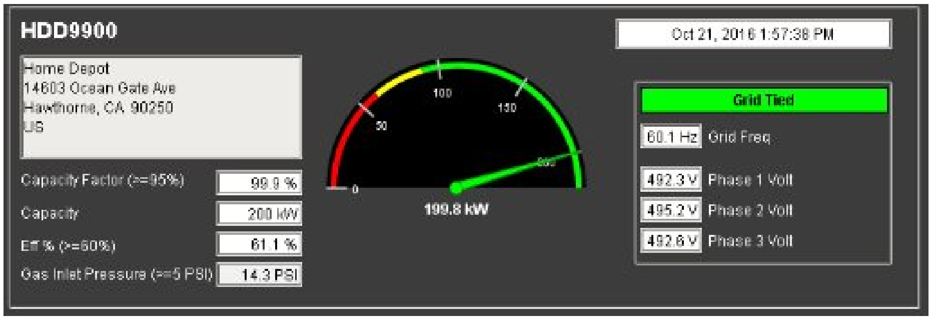
Exhibit C

Seller Deliverables

The Parties acknowledge that Seller has provided a detailed commissioning plan within the seven (7) days preceding the Agreement Date.

Seller shall submit the items listed below prior to and as a condition of the Commissioning of each Phase 2 New System, all in form and substance reasonably acceptable to Buyer:

1. Example screenshot to be delivered by Seller, with details on sample shown below:



2. Seller's properly completed Commissioning checklist in Excel format and in the form Seller previously delivered to Buyer via email.

3. Seller's current site plan and layout drawing showing the location and "Site ID" of each Phase 2 New System at its installed location within the Facility.

Seller shall submit the items listed below on or before sixty (60) days following the Commissioning of the final Phase 2 New System to achieve such milestone hereunder at each Facility, all in form and substance reasonably acceptable to Buyer:

1. Final OSHA 300Log (not required to be organized by Site)
2. Final Incident Reports (to include First Aid logs, Final Root Cause Analysis Reports, and Final Near Miss Reports)
3. Quality Documentation for Construction activities (if applicable)

4. Permitting documentation (if applicable)
5. An as-built package reflecting all Phase 2 New System installation details in AutoCAD.

Exhibit D

Form of Payment Notice

To: **DIAMOND STATE GENERATION PARTNERS, LLC ("Buyer")**

This Payment Notice, dated ________, 20_, is given pursuant to Section 2.5(c) of the Fuel Cell System Supply and Installation Agreement between the BLOOM ENERGY CORPORATION ("**Seller**") and Buyer dated December 23, 2019 (as amended, amended and restated, supplemented or otherwise modified from time to time, the "**CapEx Agreement**"). Terms defined in the CapEx Agreement have the same meaning where used in this Payment Notice.

Seller hereby notifies Buyer that, in connection with the Invoice Due Date occurring on ___________, 20__, Buyer shall be obligated to make Purchase Price payments to Bloom for all invoices issued pursuant to [Section 2.4(a)(ii)][Section 2.4(a)(iii)] of the CapEx Agreement in the aggregate amount of $__________.

The Purchase Price to be paid by Buyer on the above-mentioned Invoice Due Date is comprised of the Purchase Price payments in connection with the Commissioning of Phase 2 New Systems with aggregate System Capacity of ___kW, which amount represents the remainder of the Purchase Price for such Phase 2 New Systems not previously paid by Buyer.

Included with this Payment Notice is the applicable Seller's Certificate of Commissioning evidencing the achievement of all of the Commissioning Milestones achieved by the Phase 2 New Systems referenced above.

Seller hereby certifies that each of the representations and warranties of Seller in the CapEx Agreement is true and correct in all respects as of the date of this Payment Notice.

This Payment Notice may be relied upon by Buyer.

Signed for and on behalf of BLOOM ENERGY CORPORATION

By: ___________________________

Name: ___________________________

Title: ___________________________

<u>Exhibit E</u>

Form of Purchase Order

Exhibit F

Intentionally Omitted

Exhibit G

Form of Seller's Certificate of Delivery Milestone Completion

To: **DIAMOND STATE GENERATION PARTNERS, LLC ("Buyer")**

This Certificate is given pursuant to paragraph (d) of the definition of Delivery Milestone in the Fuel Cell System Supply and Installation Agreement between the BLOOM ENERGY CORPORATION ("**Seller**") and Buyer dated December 23, 2019 (as amended, amended and restated, supplemented or otherwise modified from time to time, the "**CapEx Agreement**"). Terms defined in the CapEx Agreement have the same meaning where used in this Certificate.

This certificate is provided in respect of the Phase 2 New Systems set forth on Attachment 1 hereto.

Seller hereby certifies, in respect of each such Phase 2 New System:

(a) such Phase 2 New System has been Delivered; and

(b) such Phase 2 New System has been placed upon such concrete pad and is available for installation, startup, and Commissioning.

Signed for and on behalf of BLOOM ENERGY CORPORATION

By: ……………………………………………………………

Name:…………………………………………………………..

Title:………………………………………………………………….

Attachment 1 to Seller's Certificate of Delivery Milestone Completion

Serial Number	Project	System Capacity	Delivery Date

Exhibit H

Form of Seller's Certificate of Commissioning

To: **DIAMOND STATE GENERATION PARTNERS, LLC ("Buyer")**

This Certificate is given pursuant to paragraph (d) of the definition of Commissioning in the Fuel Cell System Supply and Installation Agreement between the BLOOM ENERGY CORPORATION ("**Seller**") and Buyer dated December 23, 2019 (as amended, amended and restated, supplemented or otherwise modified from time to time, the "**CapEx Agreement**"). Terms defined in the CapEx Agreement have the same meaning where used in this Certificate.

This certificate is provided in respect of the Phase 2 New Systems set forth on Attachment 1 hereto.

Seller hereby certifies, in respect of each such Phase 2 New System:

(a) such Phase 2 New System has been installed at the applicable Facility specified in the Purchase Order, and has been Placed in Service; and

(b) such Phase 2 New System (A) has been installed in the applicable Facility, and (B) is producing power at one hundred percent (100%) of such Phase 2 New System's System Capacity.

Signed for and on behalf of BLOOM ENERGY CORPORATION

By: ……………………………………………………………

Name:……………………………………………………………..

Title:…………………………………………………………….

Attachment 1 to Seller's Certificate of Commissioning

Serial Number	Project	System Capacity	Delivery Date	Commissioning Date

(i)

<u>Exhibit I</u>

Forms of Conditional Lien Waiver and Final Lien Waiver

Exhibit J

Seller Corporate Safety Plan

At all times during the Term, Seller shall maintain at Seller's corporate headquarters and adhere to Seller's written corporate safety programs, which shall include the following programs:

- Contractor Environmental Health & Safety Program
- Injury and Illness Prevention Program
- Heat Illness Prevention Program
- Emergency Action and Fire Prevention Plan
- Hazard Communication Program
- Corporate Electrical Standard – Specific Electrical Safe Work Practices
- Electrical Safety Awareness
- Lockout/Tagout
- Fall Protection Program (Working at Heights)
- Ladder Safety Program
- Powered Industrial Trucks (PIT)
- Hoist Safety Program
- Personal Protective Equipment (PPE)
- Respiratory Protection Program
- Hearing Conservation Program
- Hand and/or Powered Tools Safety Program
- Hot Work Process
- First Aid / CPR Program

(the foregoing, collectively, the "Seller Corporate Safety Plan").

Exhibit K

Subcontractor Quality Plan

Seller will adhere to the following standards and processes as applicable when engaging subcontractors for performance under this Agreement.

- General contractors will be subject to the terms and conditions set forth in The American Institute of Architects Document A107 – 2007 as amended in certain cases
- General contractors are required to complete a Bloom Energy Contractor Qualification Training Program
- General contractor superintendents and foremen must be certified and qualified by Seller to be on site
- Standard safety protocols will be observed at all times:
  - Site superintendents are OSHA30 certified
  - Seller superintendents ensure general contractors follow all local and state OSHA and owner requirements
  - Confirmation of "Injury and Illness Prevention Program"
  - Seller included in the ISN program – 3rd party safety evaluation
- A project superintendent assigned by Seller will review subcontractor work according to a standard site verification check list
- Contractors will submit Contractor Quality Guarantees for each site providing written verification of points of assurance including torques per site, Megger testing and line flushing
- Prestart verification conducted for all sites to review and confirm the quality of subcontractor work
- Prior to Commissioning, Seller conducts an "OK to Start" meeting during which subcontractor quality of work is reviewed and confirmed as resolved
- All incidents are logged in a database and reviewed on an ongoing basis by Seller quality management as well as at the OK to Start meeting
- Quarterly business reviews conducted with general contractors to formally review incident data and mitigate process and workmanship issues.

<u>Exhibit L</u>

Parties' Managers

Seller: [*]

Buyer: [*]

<u>Exhibit M</u>

Form of Independent Engineer's Certificate

SCHEDULE 3.3(A)(II)

COMMISSIONING PROCEDURES

Seller will perform the following activities in connection with the commissioning of each Phase 2 New System, in accordance with the installation manuals provided for such Phase 2 New System and the applicable Site Lease to the extent necessary to cause such Phase 2 New System to achieve Commissioning:

- [*]

SCHEDULE 5.2(B)

SECTION 5.2(B) KNOWLEDGE PARTIES

[*]

SCHEDULE 12.14

APPROVED MAJOR SERVICE PROVIDERS

[*]

[*]

[*]

Exhibit 10.34

Redacted Exhibit: This Exhibit contains certain identified information that has been excluded because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed. Redacted information is identified by [*],

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

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SECOND AMENDED AND RESTATED ADMINISTRATIVE SERVICES AGREEMENT

THIS SECOND AMENDED AND RESTATED ADMINISTRATIVE SERVICES AGREEMENT (the "Agreement") is made as of December 23, 2019 (the "Effective Date"), by and among DIAMOND STATE GENERATION PARTNERS, LLC, a Delaware limited liability company (the "Project Company"), and BLOOM ENERGY CORPORATION, a Delaware corporation (the "Administrator"). The Project Company and the Administrator are each referred to herein individually as a "Party" and collectively as the "Parties".

PRELIMINARY STATEMENTS

The Project Company, the Administrator and Holdings entered into that certain Administrative Services Agreement, dated as of April 13, 2012, as amended and restated as of June 14, 2019 ("the First A&R ASA").

The Project Company desires to delegate day-to-day management of the Project Company to the Administrator and the Project Company and the Administrator now wish to amend and restate the First A&R ASA in accordance with the terms and conditions of this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants and agreements herein, the Parties, intending to be legally bound, agree to amend and restate in its entirety the First A&R ASA as follows:

ARTICLE 1

DEFINITIONS AND USAGE

1.1 Definitions. Unless the context requires otherwise or this Agreement expressly provides otherwise, capitalized terms used in this Agreement have the following meanings and capitalized terms not defined in this Agreement have the meanings given to such terms in Annex I to the Project Company LLC Agreement:"Accounting Firm" means any of Deloitte Touche Tohmatsu, Ernst & Young, KPMG International, PricewaterhouseCoopers or any nationally-recognized Affiliate thereof, chosen by the Partnership Representative or otherwise approved by Class Majority Vote.

"Administrator" is defined in the Preamble.

"Administration Fee" is defined in Section 5.1(a).

"Agreement" is defined in the Preamble.

"Bloom System" or "Bloom Systems" is defined in the Phase 2 CapEx Agreement.

"BOF" is defined in the Phase 2 CapEx Agreement.

"Confidential Information" is defined in Section 12.9.

"Documentation" means all written invoices, receipts, billing statements, payment notices, wire receipt and payment notifications, bank statements and other similar written evidence of (i) amounts payable by the Project Company to any Person and (ii) amounts received or receivable by the Project Company from any Person, in each case in connection with the Project Company or the Project.

"DPL" means Delmarva Power & Light Company, an investor owned utility company regulated by the DPSC.

"DPL Agreements" means the service applications between the Project Company and DPL with respect to the REPS Act and the Tariffs, whereby DPL shall (a) serve as the agent for collection of amounts due from the Project Company (if any) and for disbursement of amounts due to the Project Company under the QFCP-RC Tariff and (b) sell to the Project Company natural gas under the Gas Tariff.

"DPSC" means the Delaware Public Service Commission.

"ECCA" means the Equity Capital Contribution Agreement with respect to the Project Company, dated as of the Effective Date, by and among Assured Guaranty Municipal Corp., SP Diamond State Class B Holdings, LLC, Diamond State Generation Holdings, LLC, the Project Company and Administrator.

“Effective Date” is defined in the Recitals.

"Emergency Expenditure" means an expense with respect to the Project Company or the Project which is incurred, in the reasonable judgment of the Administrator, to avoid or to mitigate a risk of physical injury to any Person or property, or a violation of law and with respect to which there is not a reasonable opportunity to convene a meeting of the Members in order to obtain prior approval of the expense.

"Event of Default" is defined in Section 9.1.

"Existing BOF" is defined in the Phase 2 CapEx Agreement.

"Facility" means the Bloom Systems and the BOF at a Site.

"First A&R ASA" is defined in the Preliminary Statements.

"Gas Tariff" means DPL's Service Classification "LVG-QFCP-RC" filed for gas service applicable to REPS Qualified Fuel Cell Provider Projects and approved by DPSC in Order no. 8062 dated October 18, 2011, as adopted and supplemented by DPSC's Findings, Opinion and Order No. 8079, dated December 1, 2011.

"Interconnection Agreement" is defined in the MOMA.

"kW" means kilowatt.

"Losses" is defined in Section 10.1(a).

“Managing Member” is defined in the Project Company LLC Agreement.

"MOMA" means the Second Amended and Restated Master Operations and Maintenance Agreement, dated as of the Effective Date, between the Project Company and the Administrator, as such agreement may be amended, supplemented, or replaced from time to time.

"New BOF" is defined in the Phase 2 CapEx Agreement.

"Nonreimbursable Services" shall consist of the following services to be provided with respect to the Project Company and the Facilities:

(a) supervision and monitoring of the Service Providers and Seller,

(a) upon request of the Managing Member, the provision of guidance and advice on interpreting the Base Case Model for purposes of budgeting,

(b) overall coordination of the day-to-day operation of the Project and the Project Company (including the overall coordination of the performance of the Services),

(c) reporting to and communication with the Managing Member regarding matters subject to the supervision of the Administrator under this Agreement,

(d) preparation and submittal of (i) Documentation necessary to perform the obligations hereunder and (ii) Documentation, and, in the case of an Emergency Expenditure, oral notification, necessary in order to remit funds of the Project Company for payment of the Project Company's expenses,

(e) preparation and submittal of capital contribution draw requests for the Project Company, as contemplated by the Project Company LLC Agreement, interacting and communicating with, and submitting reports to, DPL on behalf of the Project Company in connection with or as required under the DPL Agreements, the PJM Agreements, the Interconnection Agreement, and the Tariffs, including without limitation monthly "Actual Heat Rate" (as defined in the QFCP-RC Tariff) performance, all data necessary for DPL to submit to the DPSC the monthly QFCP-RC Tariff pursuant to QFCP-RC Tariff Section F. and the invoice required under QFCP-RC Tariff Section H.2.,

(f) causing the insurance and related obligations required under Section 8.4 of the Project Company LLC Agreement to be obtained and maintained, solely with respect to the Bloom Systems and the Existing BOF,

(g) using commercially reasonable efforts to cause the Project Company to discharge its obligation to comply with the QFCP-RC Tariff and performing other ancillary services required for compliance with the PJM Market Rules, the DPL Agreements, and the PJM Agreements, and

(h) interacting and communicating, on behalf of the Project Company, with DPL and with PJM under the PJM Agreements.

"Nonreimbursable Transition Services" shall consist of the following services to be provided with respect to the Project Company and the Facilities:

(a) bookkeeping and record keeping,

(b) preparation and submittal of Documentation, and, in the case of an Emergency Expenditure, oral notification, necessary in order to remit funds of the Project Company for payment of the Project Company's expenses,

(c) depositing funds into the accounts maintained on behalf of the Project Company pursuant to Section 3.1(k) hereof,

(d) payment of the Project Company's expenses,

(e) the making of distributions in accordance with the provisions hereof and the Project Company LLC Agreement,

(f) preparation and submittal of capital contribution draw requests, as contemplated by the Project Company LLC Agreement,

(g) preparation and submittal of purchase orders and other work on behalf of the Project Company in connection with ordering Bloom Systems under the under the Phase 1 CapEx Agreement and Phase 2 CapEx Agreement,

(h) receiving and accepting, on behalf of the Project Company, title to and all incidents of ownership of those Bloom Systems,

(i) preparation and delivery to the Project Company of (i) subject to receipt of all required information from the Project Company’s members, draft tax returns and any revisions received from the Project Company, provided that the Project

Company will file all tax returns, (ii) a trial balance on a monthly basis, (iii) all invoices and bank account statements applicable to the Project Company, posted by the Administrator on a sharepoint site made available by the Project Company, (iv) a spreadsheet by the twentieth (20th) day after every Accounting Period, by the twentieth (20th) day after the end of every calendar quarter, and by the twentieth (20th) day after every calendar year, all in a format reasonably acceptable to the Project Company showing the information needed to facilitate Managing Member's accurate creation of GAAP financial statements, which include a balance sheet and an income statement for the Project Company, for the previous month,

(j) prepare and provide to the Project Company by the twentieth (20th) day after every month the Revenue and Expense Statement as set forth under the Project Company LLC Agreement, and

(k) causing the insurance and related obligations required under Section 8.4 of the Project Company LLC Agreement to be obtained and maintained, solely with respect to the New BOF.

"Operator" means Bloom Energy Corporation, in its capacity as operator under the MOMA, and its permitted successors and assigns.

"Party" or "Parties" is defined in the Preamble.

"Permits" is defined in the Phase 2 CapEx Agreement.

"Phase 1 CapEx Agreement" means that certain Fuel Cell System Supply and Installation Agreement dated as of June 14, 2019 by and between Seller and the Project Company.

"Phase 1 New Systems" is defined in the MOMA.

"Phase 2 CapEx Agreement" means that certain Fuel Cell System Supply and Installation Agreement, dated as of the Effective Date, by and between Seller and the Project Company.

"Phase 2 New Systems" is defined in the MOMA.

"PJM" means PJM Interconnection, LLC, a regional transmission organization.

"PJM Agreements" is defined in the QFCP-RC Tariff.

"Project" means as to any time of determination (a) all Phase 1 New Systems purchased and owned by Project Company pursuant to the Phase 1 CapEx Agreement, (b) all Phase 2 New Systems purchased and owned by Project Company pursuant to the Phase 2 CapEx Agreement, and (c) all BOF owned by Project Company at such time.

"Project Company" is defined in the Preamble.

"Project Company LLC Agreement" means the Fourth Amended and Restated Limited Liability Company Agreement of the Project Company, dated as of the Effective Date, as such agreement may be amended, supplemented, or replaced from time to time.

"QFCP-RC Tariff" means DPL's Service Classification "QFCP-RC" for REPS Qualified Fuel Cell Provider Projects as approved by DPSC in Order no. 8062 dated October 18, 2011, as adopted and supplemented by DPSC's Findings, Opinion and Order No. 8079, dated December 1, 2011.

"REPS Act" means the Renewable Energy Portfolio Standards Act, as amended by S.B. 124, enacted July 10, 2011 (Title 26, Chap. 1, section 351 et seq. of the Code of the State of Delaware).

"Seller" means Bloom Energy Corporation, in its capacity as seller under the Phase 1 CapEx Agreement and the Phase 2 CapEx Agreement.

"Service Provider" means each third party hired by the Project Company to perform fiscal, administrative or other services for the Project Company, including the Operator.

"Services" means the responsibilities of the Administrator under Article 2 and Article 3.

"Site" is defined in the Phase 2 CapEx Agreement.

"Tariffs" means the QFCP-RC Tariff and the Gas Tariff, and any replacement tariff for either such tariff that may be entered into from time to time.

"Term" is defined in Section 8.1.

"Transition Period" shall mean the period beginning on the Effective Date until the Transition Period Termination Date.

"Transition Period Termination Date" shall mean with respect to the relevant Nonreimbursable Transition Service or other Service set forth in Section 3.1, the date upon which the Project Company provides written notice to the Administrator of its desire to terminate such Service.

ARTICLE 2

RESPONSIBILITIES

2.1 Administrator's Responsibilities. During the Term, the Administrator shall perform the Nonreimbursable Services and the following Services for and on behalf of the Project Company:Supervise and monitor, in accordance with the Prudent Operator Standard, the Service Providers with respect to their performance of services for the Project Company, including maintenance, diagnostic, warranty and remedial obligations thereof (including performance by the Operator of its obligations under the MOMA);

(a) (i) Supervise and monitor (and with respect to such activities that are not required to be performed by the Operator under the MOMA, causing to be performed) day-to-day operations, maintenance and repair activities with respect to the Facilities, including planned and unplanned maintenance and repairs to the Facilities, (ii) coordinate all such activities (including, without limitation, outages, unavailability, etc.) with those of the Operator, the Seller, DPL, PJM, the Delaware Department of

Natural Resources and Environmental Control and the Environmental Protection Agency as applicable and reasonably taking into account in such coordination, to the extent provided, such advice or recommendations provided by the Managing Member or any of its members, and (iii) only with the Project Company's express written consent, represent the Project Company in local community relations (including assisting in the coordination of public statements regarding the Project Company); provided, however, that the Administrator shall not be permitted to hire any employees on behalf of the Project Company;

(b) At the principal office of the Administrator, maintain and permit access thereof to the Project Company and any Member during normal business hours to all records related to the production and sale of Energy, Capacity and other Products (as such terms are defined in the QFCP-RC Tariff) from the Project;

(c) Perform on behalf of the Project Company all reporting and other routine management responsibilities reasonably believed by the Administrator to be required under the QFCP-RC Tariff, the PJM Market Rules, the DPL Agreements, the PJM Agreements, the Material Contracts and other agreements to which the Project Company is a party, including the Material Contracts and other agreements listed on Schedule 2.1(d) (which schedule shall be updated by Administrator when necessary), including, but only with the Project Company's express written consent, representing the Project Company in ordinary course business matters with third parties arising thereunder;

(d) Advise the Project Company to engage Service Providers as reasonably believed by the Administrator to be necessary or desirable, or as instructed by the Managing Member of the Project Company, to represent or perform services for the Project Company which are not being performed by the Operator under the MOMA;

(e) Represent the Project Company in matters with governmental authorities relating to all Permits required to be obtained under the MOMA, and with the Project Company's express written consent (but only for non-routine matters), prepare and submit, or cause to be prepared and submitted, all filings and notices of any nature which are required to be made by the Project Company under the terms of any Permits held by the Project Company or any laws, regulations or ordinances applicable to the Project Company or the Facilities or as required under the Project Company LLC Agreement;

(f) Perform under this Agreement in accordance and consistent with all Legal Requirements, Permits, and Governmental Approvals (all as defined in the MOMA);

(g) (i) Give prompt written notice to each Member of the Project Company of any litigation, disputes with governmental authorities, or force majeure events under the Material Contracts and losses suffered by the Project and notice of cancellation, termination or other material change in the insurance provided pursuant to the MOMA, in each case, promptly after learning of the same, (ii) furnish to each

Member of the Project Company, as applicable, or direct a Service Provider to so furnish, copies of all documents furnished to the Project Company or the Administrator by any governmental authority or furnished to any governmental authority by the Project Company, and (iii) provide documents relating to Material Contracts or the Administrator's responsibilities hereunder reasonably requested by any Member;

(h) Notify each Member of the Project Company promptly upon, but in any event within five (5) Business Days of, obtaining actual knowledge of any (i) notice of default delivered by a party to a Material Contract to the Project Company or the Administrator or (ii) default by a party to a Material Contract (other than the Project Company, the Administrator or any Affiliate thereof) under such Material Contract, in the case of either (i) or (ii), which default could reasonably be expected to cause material harm to the Project Company;

(i) Upon the reasonable request of the Managing Member, (i) except as to Administrator’s trade secrets or information that Administrator reasonably deems as highly confidential to Administrator, disclose any information for any matter regarding the Services provided by the Administrator to the Project Company during the Transition Period and (ii) take any commercially reasonable actions in support of the Managing Member for such matter; and

(j) Perform such other administrative tasks related to and consistent with the scope of the Services described herein and in the Project Company LLC Agreement, as the Managing Member of the Project Company may reasonably request from time to time; provided, however that in the event that the performance of such tasks that are not explicitly set forth in this Agreement increases the costs borne by the Administrator more than five percent (5%) of the aggregate Administrative Fee for a calendar year, the Administrator shall have the right to require the Project Company to engage in a renegotiation of the fees and expenses paid to the Administrator hereunder for such calendar year; provided further, however, that the Administrator shall continue to perform such other administrative tasks while such negotiation is ongoing.

2.2 Existence. The Administrator shall maintain in full effect its existence, rights and franchises as a corporation under the laws of the State of Delaware and obtaining and preserving its qualification to do business in each jurisdiction in which such qualification is or will be necessary to protect the validity and enforceability of this Agreement.

ARTICLE 3

TRANSITIONAL RESPONSIBILITIES

3.1 Administrator's Transitional Responsibilities. Until the Project Company provides written notice to the Administrator of its desire to terminate an applicable Nonreimbursable Transition Service or any other Service set forth in this Section 3.1, in addition to the Services provided pursuant to Article 2 above, the Administrator shall perform the Nonreimbursable Transition Services and the following Services for and on behalf of the Project Company:

(a) Supervise and monitor, in accordance with the Prudent Operator Standard, the Service Providers with respect to their performance of services for the Project Company in relation to the Phase 1 New Systems and the Phase 2 New Systems, including maintenance, diagnostic, warranty and remedial obligations thereof (including performance by the Operator of its obligations under the MOMA);

(b) Supervise and monitor, in accordance with the Prudent Operator Standard, the Seller with respect to its sale and installation of the Phase 1 New Systems and Phase 2 New Systems under the Phase 1 CapEx Agreement and Phase 2 CapEx Agreement, as applicable, including warranty and remedial obligations thereof;

(c) Where necessary or desirable, taking of such actions as are necessary to enforce each Service Provider's or Seller's compliance with its obligations to the Project Company and subject to any approval requirements as provided in the Project Company LLC Agreement, hiring, firing and/or replacing any Service Provider;

(d) Prepare and promptly pay, or cause to be paid, on behalf of the Project Company, all expenses incurred by the Project Company or that are due and payable under Material Contracts to which the Project Company is a party and all other contracts to which the Project Company is party, and promptly notify the Project Company of the same;

(e) Handle all interactions with purchasers with regards to the sale of Energy, Capacity and other Products by the Project Company in accordance with the QFCP-RC Tariff (and as such terms are defined in the QFCP-RC Tariff); provided that nothing herein shall imply any duty of the Administrator under any circumstances to expend its own funds in payment of the expenses of the Project Company;

(f) Prepare and promptly pay, on behalf of the Project Company, any amounts required to be paid by the Project Company under the Material Contracts to which the Project Company is a party and notify the Project Company of the same; provided that nothing herein shall imply any duty of the Administrator under any circumstances to expend its own funds in payment of the expenses of the Project Company;

(g) In accordance with and subject to the provisions of the Project Company LLC Agreement, maintain complete and accurate financial books and records of the operations of the Project Company on an accrual basis in accordance with prudent business practices and GAAP and make such books and records available for inspection and copying during normal business hours on its premises, upon reasonable prior notice, by any Member of the Project Company, any designee of a lender to a Member of the Project Company, or any other Person authorized by the Managing Member of the Project Company to inspect or copy such books and records, subject to appropriate confidentiality safeguards;

(h) In accordance with and subject to the provisions of the Project Company LLC Agreement, maintain at the Project Company's principal office and permit access thereof to the Project Company and any Member during normal business hours (i) true and full information regarding the status of the financial condition of the Project Company, including any financial statements that are available, until the statute of limitations expires on any IRS audit of the Project Company for the tax year to which such information and financial statements relate; (ii) minutes of the proceedings of the Members; (iii) promptly after becoming available, copies of the federal, state, and local income tax returns of the Project Company for each year (including information to support any grant application claim); (iv) a current list of the name and last known business, residence or mailing address of each Member of the Project Company and the Administrator; (v) a copy of the Project Company LLC Agreement, the Project Company's Certificate of Formation, and all amendments thereto, together with executed copies of any written powers of attorney pursuant to which the Project Company LLC Agreement, the Project Company's Certificate of Formation, and all amendments thereto have been executed and copies of written consents of Members; (vi) true and full information regarding the amount of cash and a description and statement of the agreed value of any other property and services contributed by each Member, and the date upon which each became a Member; (vii) copies of records that would enable a Member to determine the Member's relative shares of the Project Company's distributions and the Member's relative voting rights; and (viii) records and documents needed for the completion of annual Project performance reports (including information regarding annual energy production) and recapture certification;

(i) Perform on behalf of the Project Company all routine administrative services reasonably required in connection with maintaining the Project Company's existence and operations, such as the filing of limited liability company reports;

(j) (x) Provide such readily available information to the Members as they may reasonably request from time to time and (y) subject to site rules established by the Project Company, provide access as reasonably requested for the Members and their personnel and accompanied guests to the Facilities;

(k) Maintain, in the name and for the exclusive benefit of the Project Company, accounts at one or more banks or other financial institutions for the deposit of all funds received by the Project Company during the Transition Period, and invest such funds in accordance with the investment provisions of the Project Company LLC Agreement; provided, that nothing herein shall imply any guarantee or undertaking by the Administrator with respect to the collection of amounts due to the Project Company or any return on such investments;

(l) Promptly inform the Members of any proposed action or decision that arises which constitutes a Major Decision under the Project Company LLC Agreement and not take or permit any such action or decision without the prior required consent of the

Members by Class Majority Vote in accordance with the Project Company LLC Agreement;

(m) In accordance with and subject to the provisions of the Project Company LLC Agreement, if so instructed by the Managing Member, (i) direct the defense of any claims made by the IRS to the extent that such claims relate to the adjustment of the Project Company items, (ii) promptly deliver to each Member a copy of all notices, communications, reports and writings received from the IRS relating to or potentially resulting in an adjustment of the Project Company items, (iii) promptly advise each Member of the substance of any conversations with the IRS in connection therewith and keep the Members advised of all developments with respect to any proposed adjustments that come to its attention; (iv) provide each Member with a draft copy of any correspondence or filing to be submitted by the Project Company in connection with any administrative or judicial proceedings relating to the determination of the Project Company items reasonably in advance of such submission; (v) incorporate all reasonable changes or comments to such correspondence or filing requested by any Member; (vi) provide each Member with a final copy of correspondence or filing; and (vii) provide each Member with notice reasonably in advance of any meetings or conferences with respect to any administrative or judicial proceedings relating to the determination of the Project Company items (including any meetings or conferences with counsel or advisors to the Project Company with respect to such proceedings);

(n) Prepare (or cause to be prepared) financial statements required to be prepared pursuant to the Project Company LLC Agreement, as applicable, within the time periods specified therein;

(o) Make distributions out of Company Distributable Cash as provided under the relevant provisions of the Project Company LLC Agreement;

(p) At the Project Company's sole expense, cause the Project Company to obtain and maintain insurance meeting the requirements of all coverage to be maintained on behalf of the Project Company, the Project and the Material Contracts and as otherwise authorized or directed by the Managing Member;

(q) Notify the Members promptly of the receipt of any communication as to any deficiencies in the Project Company's accounting practices from the Accounting Firm, or of the resignation of an Accounting Firm;

(r) Maintain a register of membership interests of the Project Company and record therein any (i) transfers of membership interests made in accordance with the terms of the Project Company LLC Agreement and (ii) security interests of a secured party pursuant to any security interest permitted under the Project Company LLC Agreement;

(s) Prepare equity contribution notices (and accompanying documentation) in accordance with the ECCA, and deliver them to the Managing Member and each Member of the Project Company; and

(t) Prepare and submit draft purchase orders for the Project Company's approval and perform other work on behalf of the Project Company in connection with preparing to order Bloom Systems under the Phase 2 CapEx Agreement.

ARTICLE 4

STANDARD OF PERFORMANCE

4.1 Standard of Performance. The Administrator shall perform the Nonreimbursable Services, the Nonreimbursable Transition Services and the Services in accordance with applicable law and the Prudent Operator Standard; provided that the Administrator shall be deemed to have satisfied its duties in respect of any specific matter or circumstance requiring interpretation, application, or enforcement of Material Contracts, by relying conclusively on the advice of qualified legal counsel and/or qualified industry consultants engaged to advise the Project Company with respect to such matter or circumstance; and provided, further, that it shall not be a breach of the Prudent Operator Standard and the Administrator shall not be responsible hereunder for the gross negligence or willful misconduct of, or breach of contract by, any Service Provider engaged by the Administrator pursuant to a contract that requires such Service Provider to perform its duties in accordance with the Prudent Operator Standard and if such Person is sufficiently qualified to perform such duties and the Administrator is diligent in its oversight of such Persons; provided that (i) the immediately foregoing proviso shall not be applicable to any agreement with the Administrator or an Affiliate of the Administrator (and if such an agreement shall be with the Administrator or an Affiliate of the Administrator, then the Administrator shall continue to be bound by the Prudent Operator Standard), (ii) the Administrator shall be obligated to administer the agreements to which the Project Company is a party in accordance with their respective terms, and (iii) the Administrator shall be obligated to enforce the Material Contracts in accordance with their respective terms upon the gross negligence, willful misconduct or breach of contract of the counterparty to any such Material Contract following consultation with the Project Company. It is understood and agreed by the Project Company and the Administrator that the Administrator is not guaranteeing or undertaking, in its capacity as Administrator, to procure any financial or other outcome with respect to the Project, or providing any guarantees relating to the performance of the Project.

4.2 No Liability. The Administrator shall have no liability under this Agreement for (a) failure to take actions which it is not obligated to take pursuant to this Agreement and as to which it has requested the consent of the Managing Member (and/or the applicable Members where consent of any Members other than or in addition to the Managing Member is required under the Project Company LLC Agreement) for the Administrator to perform such actions if such consent is not timely given, (b) actions taken at the direction of the Managing Member in accordance with the terms of the Project Company LLC Agreement (and/or the applicable Members where consent of any Members other than or in addition to the Managing Member is required under the Project Company LLC Agreement), or (c) failure to take actions requiring the expenditure of Project

Company funds if such funds are not available (for reasons other than a failure of the Administrator to provide, or cause a third party to provide, the Nonreimbursable Services, Nonreimbursable Transition Services or Services, as applicable, in accordance with this Agreement).

ARTICLE 5

COMPENSATION AND PAYMENT

5.1 Administration Fee; Expenses.

(a) The annual administration fee owed by the Project Company to the Administrator for the Services shall be an amount equal to $[*]/kW per year based on the aggregate System Capacity of the Project, as increased not more than once per year based on the increase in the U.S. Consumer Price Index since the Effective Date or most recent inflation adjustment (the "Administration Fee"), due in monthly installments based on the System Capacity of the Project as of the first day of the applicable month (pro-rated, if applicable, for the first month after the execution of this Agreement). The Parties acknowledge that the Administration Fee is a fair price, negotiated at arms-length, for the Services.

(b) If the Administrator engages any third party to perform any Nonreimbursable Services or Nonreimbursable Transition Services, it shall be responsible for paying any fees and expenses of such third party and shall not be able to seek reimbursement therefor.

5.2 Billing and Payment. (i) Within fifteen (15) days following the Administrator's submission of an invoice to the Managing Member reflecting any expenses due and payable by the Project Company (and including invoices and other material identifying and substantiating, in reasonable detail, the nature of such expenses and the basis for reimbursement thereof), and (ii) the monthly portion of the Administration Fee due and payable by the Project Company (and including invoices and other material identifying and substantiating, in reasonable detail, the nature of such costs and the basis for reimbursement):

(a) The Managing Member shall approve such payment to the Administrator of the (i) expenses and (ii) the portion of the Administration Fee specified in such invoice, less any portion of such expenses and Administration Fee that is disputed in good faith by a Member; and

(b) The Parties shall attempt to resolve any such disputed portion in accordance with Article 7 hereof and any amount owed hereunder which remains unpaid more than ten days after the date such amount is due and payable under this Agreement shall accrue interest at the lesser of a monthly rate of one and five-tenths percent (1.5%) or the highest rate permissible by law, with such interest beginning to accrue from the first (1st) day after such amount became due and payable.

5.3 Records. The Administrator shall retain copies of invoices submitted by it under Section 5.2, and of any third party invoices or similar documentation contained or reflected therein, for a minimum period of three (3) years or such longer period as required by applicable law. Records maintained by the Administrator pursuant to this Section 5.3 shall be the property of the Project Company and shall not be destroyed, unless the Project Company shall have consented to such destruction in writing or declined in writing to accept possession of the records after the Administrator has advised the Project Company, as applicable, that the records will be destroyed.

ARTICLE 6

DELAYS

6.1 Conditions. If the Administrator becomes aware of any event or circumstance that could prevent its performance of any of its obligations hereunder, the Administrator shall give prompt notice thereof to the Managing Member.

6.2 Mitigation of Delay. The Administrator shall attempt in good faith to minimize any such delay in performance of its obligations hereunder, provided, however, that the Administrator shall not be obligated to undertake or perform any actions which are prohibited by contract or any applicable law or that would expose the Administrator to any material risk of liability or to any expense for which the Administrator is entitled to reimbursement or indemnification hereunder and which is not reasonably expected to be promptly reimbursed or indemnified hereunder.

ARTICLE 7

DISPUTE RESOLUTION

7.1 Procedure.

(a) The Parties shall attempt, in good faith, to resolve or cure all disputes, controversies or claims relating to this Agreement by mutual agreement in accordance with this Article 7 before initiating any legal action or attempting to enforce any rights or remedies hereunder (including termination), at law or in equity (regardless of whether this Article 7 is referenced in the provision of this Agreement which is the basis for any such dispute).

(b) If a Party believes that a dispute, controversy or claim under this Agreement has arisen, such Party shall within ten (10) days after such dispute, controversy or claim arises, give notice thereof to the other affected Party and the Managing Member, with respect to disputes involving the Project Company, which notice shall describe in reasonable detail the basis and specifics of the dispute, controversy or claim. A meeting or conference call shall be held promptly, and in no case later than five (5) days following delivery of such notice, attended by representatives of the Parties with decision- making authority regarding the dispute, controversy or claim to attempt in good faith to negotiate a resolution.

(c) If, within twenty-one (21) days following the meeting required pursuant to Section 7.1(b), the Parties are unable to resolve the dispute, any Party may pursue whatever rights it has available under this Agreement, at law or in equity.

ARTICLE 8

COMMENCEMENT AND TERMINATION

8.1 Term. Except as otherwise provided in this Agreement, this Agreement shall commence on the date hereof and remain in full force and effect until the date that the Warranty Period under the MOMA for all Systems expires or is terminated (the "Term"); provided, however that the Parties may agree to extend the Term to such later date as the Parties may mutually agree to in writing. In connection with the expiration of the Term or any termination pursuant to Section 8.3, the Administrator shall cooperate with all reasonable requests of the Project Company in connection with the transition of Services performed by Administrator (including the transferring of the records in Administrator's possession) to the entity selected by the Project Company to undertake the Services.

8.2 [Reserved].

8.3 Early Termination. This Agreement may not be terminated prior to the end of the Term except:

(a) by the mutual agreement of the Parties; or

(b) pursuant to Section 9.2 or 9.3.

8.4 Replacement of Agreement. Notwithstanding anything to the contrary in this Agreement, in the event of the early termination of this Agreement pursuant to Section 8.3 hereof, the Administrator agrees to use its best efforts and cooperate with the Project Company to facilitate the Project Company entering into a new agreement with a third party administrator governing administrative services to be provided to the Project Company on terms substantially similar to the terms of this Agreement.

ARTICLE 9

DEFAULT

9.1 Event of Default. Each of the following events shall be an event of default ("Event of Default") under this Agreement regardless of the pendency of any bankruptcy, reorganization, receivership, insolvency or other proceeding which has or might have the effect of preventing such Party from complying with the terms of this Agreement:

(a) Failure by a Party hereto to make any payment required to be made hereunder, if such failure shall continue for twenty (20) days after written notice thereof has been given to the non-paying Party; or

(b) If there shall occur (i) any failure by the Administrator to comply in any material respect with any term, provision or covenant of this Agreement (other than a failure addressed by another paragraph of this Section 9.1), or (ii) a gross dereliction by the Administrator of its duties under this Agreement, and such failure or act described in clause (i) or (ii) continues for thirty (30) days after receipt by the Administrator of written notice of such breach; or

(c) Failure by the Project Company to comply in any material respect with any term, provision or covenant of this Agreement (other than a failure addressed by another paragraph of this Section 9.1), and such failure continues for thirty (30) days after receipt by the Project Company of written notice of such breach.

9.2 Bankruptcy. Subject to the rights or remedies it may have, any Party shall have the right to terminate this Agreement, effective immediately, if, at any time, any other Party (or, in the case of the Administrator, any Person that Controls the Administrator) shall file a voluntary petition in bankruptcy, or shall be adjudicated bankrupt or insolvent, or shall file any petition or answer seeking any reorganization, arrangement, composition, readjustment, liquidation, dissolution or similar relief under any present or future statute or law relating to bankruptcy, insolvency, or other relief for debtors, whether federal or state, or shall seek, consent to, or acquiesce in the appointment of any trustee, receiver, conservator or liquidator of such Party or of all or any substantial part of its properties, or a court of competent jurisdiction shall enter an order, judgment or decree approving a petition filed against such Party seeking any reorganization, arrangement, composition, readjustment, liquidation, dissolution or similar relief under any present or future statute or law relating to bankruptcy, insolvency or other relief for debtors, whether federal or state, and such Party shall consent to or acquiesce in the entry of such order, judgment or decree, or the same shall remain unvacated and unstayed for an aggregate of sixty (60) days from the date or entry thereof, or any trustee, receiver, conservator or liquidator of such Party or of all or any substantial part of its properties shall be appointed without the consent of or acquiescence of such Party and such appointment shall remain unvacated and unstayed for an aggregate of sixty (60) days. The terms "acquiesce" and "acquiescence", as used herein, include, but are not limited to, the failure to file a petition or motion to vacate or discharge any order, judgment or decree providing for such appointment within the time specified by law.

9.3 Remedies. If an Event of Default occurs and is continuing hereunder, then this Agreement may be terminated immediately by the non-defaulting Party, without obligation to or recourse by the defaulting Party; provided, however, that nonpayment by the Project Company shall not result in termination of this Agreement by the Administrator and the Administrator shall continue performing hereunder. If a termination pursuant to Section 9.2 or this Section 9.3 occurs, the terminating Party shall have all rights and remedies allowed at law or in equity, subject however, to the specific limitations of liability set forth in Article 10 and the proviso set forth in the immediately preceding sentence.

ARTICLE 10

INDEMNIFICATION AND LIMITATION OF DAMAGES

10.1 Indemnification.

(a) To the extent not prohibited by law, subject to the specific limitations of liability set forth in this Article 10, the Project Company shall indemnify and hold harmless the

Administrator, its officers, directors, employees, and Affiliates, from and against all losses, claims, demands, damages, costs, expenses of any nature (including, but not limited to, reasonable attorneys' fees and disbursements) or liabilities (or actions, suits or proceedings including any inquiry or investigation or claims in respect thereof), judgments, fines, settlements and other amounts arising from any and all claims, demands, actions, suits or proceedings, whether civil, criminal, administrative, arbitral or investigative (collectively, "Losses") which are being incurred in its capacity as the Administrator and are resulting from or arising out of the Administrator's performance of its obligations hereunder with respect to the Project Company; provided, however, that the Administrator shall not have the right to be so indemnified for Losses arising out of or relating to the negligence or willful misconduct of the Administrator or any of its officers, directors, employees, Affiliates or subcontractors, or a breach of its or their obligations under this Agreement (for the purposes of this Section 10.1(a), the Administrator shall not be deemed to be an "Affiliate" of the Project Company).

(b) To the extent not prohibited by law, subject to the specific limitations of liability set forth in this Article 10, the Administrator shall indemnify and hold harmless the Project Company, its officers, directors, employees and Affiliates from and against all Losses resulting from or arising out of the Administrator's performance of any of its obligations hereunder or the Administrator's negligence or willful misconduct in the performance of such obligations; provided, however, that the Project Company shall not have the right to be so indemnified for Losses arising out of or relating to the gross negligence or willful misconduct of the Project Company or a material breach of the Project Company's obligations under this Agreement unless such gross negligence, willful misconduct or material breach is as a result of any actions or omissions of the Administrator or any of its officers, directors, employees, Affiliates or subcontractors (for the purposes of this Section 10.1(b), the Administrator shall not be deemed to be an "Affiliate" of the Project Company).

(c) Each Party hereby agrees that any claim for damages against the other Party under this Article 10 shall be reduced to the extent of any related insurance proceeds actually received by such claiming Party.

10.2 Exclusion of Consequential Damages. Except as to damages that are the result of gross negligence, fraud or willful misconduct of the Administrator or any action or inaction by Administrator in its performance of its obligations hereunder that results in loss of QFCP-RC Tariff service, neither the Administrator, in such capacity, nor the Project Company, nor any of their officers, members, employees or Affiliates shall be liable under this Agreement for punitive, consequential, special, indirect or exemplary damages of any nature including, but not limited to, damages for lost profits or revenues or the loss or use of such profits or revenues, loss by reason of plant shutdown or inability to operate at rated capacity, increased operating expenses of plant or equipment, increased costs of purchasing or providing equipment, materials, labor, services, costs of replacement power or capital, debt service fees or penalties, inventory or use charges, damages to reputation, damages for lost opportunities, or claims of any of the customers, members or affiliates of the Project Company, regardless of whether said claim is based upon contract, warranty, tort (including negligence and strict liability) or other theory of law.

10.3 Aggregate Liability. The aggregate liability of either Party under this Agreement shall be limited to the amount of Administration Fees actually paid to the Administrator; provided that such limitation of liability shall not apply to any liability that is the result of the applicable Party's gross negligence, fraud or willful misconduct or (as to the Administrator) any action or inaction by Administrator in its performance of its obligations hereunder that results in loss of QFCP-RC Tariff service.

10.4 [Reserved].

10.5 Insurance. At all times during the Term without cost to the Project Company, the Administrator shall maintain in force the following insurance, which insurance shall not be subject to cancellation, termination or other material adverse changes unless the insurer delivers to the Project Company written notice of the cancellation, termination or change at least thirty (30) days in advance of the effective date of the cancellation, termination or material adverse change:

(a) Worker's Compensation Insurance as required by the laws of the state where the Administrator's facilities are located;

(b) Employer's liability insurance with limits not less than One Million Dollars ($1,000,000); and

(c) Commercial General Liability Insurance, including bodily injury and property damage liability including premises operations, contractual liability endorsements, products liability and completed operations with limits not less than Five Million Dollars ($5,000,000).

The Administrator shall cause the Project Company (and such additional parties as the Project Company may designate in writing) to be named as additional insured(s) of the foregoing insurance policies all of which must be written as a primary policy, not contributing to or in excess of any policies carried by the Project Company, and each of the above policies shall contain a waiver of subrogation endorsement, in form and substance reasonably satisfactory to the Project Company, in favor of the Project Company.

ARTICLE 11

REPRESENTATIONS AND WARRANTIES

11.1 Representations and Warranties. Each Party hereto represents and warrants, as of the date hereof, as follows:

(a) it is a limited liability company or a corporation, as applicable, duly organized, validly existing and in good standing under the laws of the jurisdiction of its formation;

(b) it has taken all necessary action to authorize the execution and delivery of this Agreement and the performance of its obligations hereunder;

(c) this Agreement constitutes its legal, valid and binding obligation enforceable against it in accordance with its terms except as such enforceability may be limited by (i) applicable bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights and the enforcement of debtors' obligations generally, and (ii) general principles of equity, regardless of whether enforcement is pursuant to a proceeding in equity or at law;

(d) the execution, delivery and performance of this Agreement do not violate (i) its constituent documents, (ii) any contract to which it is a party or to which any of its properties are subject, or (iii) any law, rule, regulation, order, writ, judgment, injunction, decree or determination to which it is subject or by which its properties are bound;

(e) no consent, authorization, approval or other action by, and no notice to or filing with, any governmental authority or any other Person is required for the due execution, delivery or performance of, or its ability to perform its obligations under, this Agreement by such Party; and

(f) there is no action, suit or proceeding at law or in equity or by or before any governmental authority, arbitral tribunal or other body now pending or threatened against or affecting it or its property, which would reasonably be expected to have a material adverse effect on the transactions contemplated by this Agreement.

ARTICLE 12

MISCELLANEOUS

12.1 Assignment.

(a) The Administrator may not assign its rights and obligations under this Agreement to any third party unless the prior written consent of the Project Company has been obtained; provided, that the Administrator shall be entitled to subcontract any of its obligations under this Agreement without consent or to assign its obligations under this Agreement to an Affiliate under common ownership with the Administrator, provided further that such assignment shall not excuse the Administrator from the obligation to competently perform any assigned obligations or any of its other obligations under the Agreement.

(b) The Project Company may not assign its rights and obligations under this Agreement to any third party without the prior written consent of the Administrator.

12.2 Authorization. Notwithstanding anything to the contrary in this Agreement (including in Article 10), the Administrator shall not be obligated to, and shall not (t) create any obligation or make any representation on behalf of the Project Company, (u) take any non-routine actions on behalf of the Project Company that are not expressly provided for in this Agreement, (v) take any other action that the Project Company directs the Administrator not to take on its behalf, (w) take any action that would in and of itself constitute or result in a violation or breach of the covenants, agreements, or obligations of the Project Company under any document or agreement, (x) execute any document, agreement, or instrument in the name of the Project Company, (y) have possession of any assets of the Project Company, or (z) dispose of any assets of the Project Company, whether by sale, pledge, or otherwise.

12.3 Governing Law; Jurisdiction and Venue. THIS AGREEMENT SHALL BE GOVERNED BY AND INTERPRETED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK WITHOUT REGARD TO CONFLICTS OF LAW PRINCIPLES (OTHER THAN SECTION 5-1401 OF THE NEW YORK GENERAL OBLIGATIONS LAW). THE PARTIES HEREBY IRREVOCABLY SUBMIT TO THE EXCLUSIVE JURISDICTION OF ANY STATE OR FEDERAL COURT IN NEW YORK COUNTY, NEW YORK WITH RESPECT TO ANY ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS AGREEMENT. EACH PARTY IRREVOCABLY AND UNCONDITIONALLY WAIVES TRIAL BY JURY IN ANY ACTION, SUIT OR PROCEEDING RELATING TO A DISPUTE AND FOR ANY COUNTERCLAIM WITH RESPECT THERETO.

12.4 Independent Contractor. Nothing contained in this Agreement and no action taken by any Party to this Agreement shall be (a) deemed to constitute any Party or any of such Party's employees, agents or representatives to be an employee, agent or representative of the other Party hereto; (b) deemed to create any company, partnership, joint venture, association or syndicate among or between the Parties; or (c) deemed to confer on any Party any expressed or implied right, power or authority to enter into any agreement or commitment, express or implied, or to incur any obligation or liability on behalf of the other Party.

12.5 Notice. All notices, requests, consents, demands and other communications (collectively "notices") required or permitted to be given under this Agreement shall be in writing signed by the Party giving such notice and shall be given to the other Party at its address or fax number set forth in this Section 12.5 or at such other address or fax number as such Party may hereafter specify by notice to the other Party and shall be either delivered personally or sent by fax or registered or certified mail, return receipt requested, postage prepaid, or by a nationally recognized overnight courier service. A notice shall be deemed to have been given (a) when successfully transmitted if given by fax or by electronic mail or (b) when delivered, if given by any other means.

Notices shall be sent to the following addresses:

To the Administrator:

Bloom Energy Corporation
4353 N. 1st Street
San Jose, CA 95134
Attn: Scott Reynolds
Telephone: (408) [*]
Fax: (408) [*]
Email: [*]

To the Project Company:

Diamond State Generation Partners, LLC
4353 N. 1st Street
San Jose, CA 95134
Attn: Vice President

with a copy to:

SP Diamond State Class B Holdings, LLC
c/o Southern Power Company
30 Ivan Allen Jr. Blvd., NW
Bin SC 1108
Atlanta, GA 30308
Attention: Adam Houston, Assistant Comptroller
E-mail: [*]
Telephone: (404) [*]

and:

all of the Members (as defined in the Project Company LLC Agreement), at their respective addresses as set forth in the Project Company LLC Agreement.

12.6 Usage. This Agreement shall be governed by the following rules of usage:

(a) a reference in this Agreement to a Person includes, unless the context otherwise requires, such Person's permitted assignees; (b) a reference in this Agreement to a law, license, or permit includes any amendment, modification or replacement to such law, license or permit;

(a) accounting terms used in this Agreement shall have the meanings assigned to them by GAAP; (d) a reference in this Agreement to an article, section, exhibit, schedule or appendix is to an article, section, exhibit, schedule or appendix of this Agreement unless otherwise stated;

(b) a reference in this Agreement to any document, instrument or agreement shall be deemed to include all appendices, exhibits, schedules and other attachments thereto and all documents, instruments or agreements issued or executed in substitution thereof, and shall mean such document, instrument or agreement, or replacement thereof, as amended, modified and supplemented from time to time in accordance with its terms and as the same is in effect at any given time;

(c) unless otherwise specified, the words "hereof," "herein" and "hereunder" and words or similar import when used in this Agreement shall refer to this Agreement as a whole and not to any particular provision of this Agreement; and

(d) the words "include" and "including" and words of similar import used in this Agreement are not limiting and shall be construed to be followed by the words "without limitation", whether or not they are in fact followed by such words.

12.7 Entire Agreement. This Agreement (including all appendices and exhibits thereto) constitutes the entire agreement and understanding of the Parties with respect to the subject matter hereof and supersedes all prior written and oral agreements and understandings with respect to such subject matter.

12.8 Amendment. Neither this Agreement nor any of the terms hereof may be terminated, amended, supplemented, waived or modified orally, but only by a document in writing signed by all Parties. To the extent that this Agreement must be modified in order to maintain service under the Tariffs, the Parties shall exercise their best efforts to amend the Agreement to continue such service.

12.9 Confidential Information. Except as required by applicable law, no Party hereto shall, without the prior written consent of the other Party hereto, disclose the terms of this Agreement and all information it has obtained or obtains from the other Party in connection with this Agreement concerning the Administrator and the Project Company and their respective assets, business, operations or prospects (the “Confidential Information”), including all materials and information furnished by the Administrator in performance of this Agreement, regardless of form conveyed or whether financial or technical in nature, including any trade secrets and proprietary know how and Software (as defined in the MOMA) whether such information bears a marking indicating that they are proprietary or confidential or not, to any third parties, other than to consultants, attorneys, lenders, prospective lenders, investors, prospective investors or to employees all of whom are reasonably believed to need the information to assist such disclosing Party with the exercise or performance of any rights and obligations provided to, or imposed upon, such Party in the document provided (it being agreed and understood that all such third parties to whom Confidential Information is disclosed by the disclosing Party shall be informed by the disclosing Party of the confidential nature of the Confidential Information prior to any disclosure); provided, however, that Confidential Information shall not include (a) the fact that the Parties have entered into this Agreement, (b) the nature of the transactions contemplated by this Agreement, (c) the Project Company’s capital expenditures or financing plans related to the transactions contemplated by this Agreement, or (d) information that (i) is or becomes generally available to the public other than as a result of any fault, act or omission by a Party or any of its Representatives (as defined in the MOMA), (ii) is or becomes available to a Party or any of its Representatives (as defined in the MOMA) on a non-confidential basis from a source other than the other Party or its Representatives (as defined in the MOMA), provided that such source was not and is not bound by any contractual, legal or fiduciary obligation of confidentiality with respect to such information or (iii) was or is independently developed or conceived by a Party or its Representatives (as defined in the MOMA) without use of or reliance upon the Confidential Information of the other Party, as evidenced by sufficient written record. Each Party shall take all reasonable, necessary and appropriate measures to keep the Confidential Information confidential. In the event that a Party is legally requested or required to disclose any Confidential Information, such Party shall, to the extent practicable without violation of applicable legal requirements, promptly notify the other Party of such requests or requirement prior to disclosure so that the other Party may, at its expense, seek an appropriate protective order and/or waive compliance with the terms of this Agreement. Confidential Information may be disclosed on the same terms and conditions as set forth in Section 9.3 of the MOMA.

12.10 Third Party Beneficiaries. Except as otherwise expressly stated herein, this Agreement is intended to be solely for the benefit of the Parties hereto and their permitted assignees and is not intended to and shall not confer any rights or benefits to the general public or any other third party not a signatory thereto; provided, however, that the Members of the Project Company are intended beneficiaries of this Agreement with direct rights to enforce the provisions hereof (subject to all the limitations hereof applicable to the Project Company, including Article 9 and Article 10 hereof).

12.11 Discharge of Obligations. With respect to any duties or obligations discharged hereunder by the Administrator, the Administrator may discharge such duties or obligations through the personnel of an Affiliate of the Administrator; provided that, notwithstanding the foregoing, the Administrator shall remain fully liable hereunder for such discharged duties and obligations.

12.12 Severability. Any provision of this Agreement that shall be held to be invalid or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such invalidity or unenforceability without invalidating the remaining provisions hereof and any such prohibition or unenforceability in any jurisdiction shall not invalidate or render unenforceable such provision in any other jurisdiction. The Parties shall negotiate in good faith a replacement provision or provisions that are valid and enforceable and that as closely as possible correspond to the spirit and purpose of the invalid or unenforceable provisions and this Agreement as a whole.

12.13 Binding Effect. The terms of this Agreement shall be binding upon, and inure to the benefit of, the Parties hereto and their successors and permitted assigns.

12.14 Right of Offset. The Project Company at its sole respective option is hereby authorized to setoff any amounts owed to the Project Company under this Agreement against any amounts owed by the Project Company to the Administrator under this Agreement. The rights provided by this paragraph are in addition to and not in limitation of any other right or remedy (including any right to set-off, counterclaim, or otherwise withhold payment) to which the Project Company may be entitled (whether by operation of law, contract, or otherwise).

12.15 No Liens. To the extent that the Administrator has actual knowledge that any of its subcontractors has placed any Lien on a Facility or a Site, then the Administrator shall promptly cause such Liens to be removed or bonded over in a manner reasonably satisfactory to the Project Company.

12.16 No Modification or Alteration of MOMA or Project Company LLC Agreement. Notwithstanding the foregoing and for the avoidance of doubt, (a) nothing in this Agreement shall affect or modify the rights or obligations of the Operator or the Owner under the MOMA or the rights and obligations of the Members under the Project Company LLC Agreement, and (b) any Service that is also a required service or deliverable of Operator under the MOMA or either of the Members in its capacity as a member of the Project Company LLC Agreement shall be governed by and deemed performed or delivered under the MOMA or the Project Company LLC Agreement, as applicable, and not this Agreement.

[REMAINDER OF PAGE LEFT BLANK INTENTIONALLY]

IN WITNESS WHEREOF, the Parties hereto have executed or caused to be executed, this Second Amended and Restated Administrative Services Agreement on the date first set forth above.

BLOOM ENERGY CORPORATION,
a Delaware corporation

By: ______________________
Name:
Title:

[Signature Page to Second Amended and Restated Administrative Services Agreement]

IN WITNESS WHEREOF, the Parties hereto have executed or caused to be executed, this Second Amended and Restated Administrative Services Agreement on the date first set forth above.

DIAMOND STATE GENERATION PARTNERS, LLC,
a Delaware limited liability company.

By: **Diamond State Generation Holdings, LLC**
Its: **Manager**

By: ______________________________
Name:
Title:

[Signature Page to Second Amended and Restated Administrative Services Agreement]

<u>Schedule 2.1(d)</u>

Material Contracts

Phase 1 CapEx Agreement

Phase 2 CapEx Agreement

MOMA

Interconnection Agreements

Gas Supply Agreements (as defined in the MOMA)

Site Leases (as defined in the MOMA)

Energy Management Services Agreement between the Project Company and White Pine Energy Consulting, LLC dated March 2, 2012

Exhibit 10.35

Redacted Exhibit: This Exhibit contains certain identified information that has been excluded because it is both (i) not material and (ii) would be competitively harmed if publicly disclosed. Redacted information is identified by [*].

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

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EQUITY CAPITAL CONTRIBUTION AGREEMENT

This Equity Capital Contribution Agreement (this "Agreement") is made and entered into as of December 23, 2019 (the "Effective Date") by and among Diamond State Generation Holdings, LLC, a Delaware limited liability company ("DSGH"), SP Diamond State Class B Holdings, LLC, a Delaware limited liability company ("Southern"), Assured Guaranty Municipal Corp., a New York insurance company ("AGM"), Diamond State Generation Partners, LLC, a Delaware limited liability company (the "Company"), and Bloom Energy Corporation, a Delaware corporation ("Bloom", and collectively with DSGH, Southern, AGM and the Company, the "Parties").

Preliminary Statements

WHEREAS, as of the Effective Date, Bloom owns, indirectly, one hundred percent (100%) of the issued and outstanding membership interests in DSGH;

WHEREAS, as of the Effective Date, DSGH owns one hundred percent (100%) of the issued and outstanding Class A Membership Interests in the Company and Southern owns one hundred percent (100%) of the issued and outstanding Class B Membership Interests in the Company;

WHEREAS, the Company currently owns a 17.7 MW solid oxide fuel cell generation project composed of Systems purchased pursuant to the Phase 1 CapEx Agreement (such Systems, the "Phase 1 New Systems" and, together with the related BOF and its ownership in the Shared Assets and intangible rights and obligations in connection with all of the foregoing, the "Phase 1 New Project");

WHEREAS, subject to the terms and conditions of the Phase 2 CapEx Agreement, Bloom intends to sell the Phase 2 New Systems to be operated in accordance with the Tariffs and the REPS Act (collectively, the Phase 2 New Systems together with the related New BOF, its ownership in the Shared Assets and intangible rights and obligations in connection with all of the foregoing, the "Phase 2 New Project") to the Company and the Company intends to purchase such Phase 2 New Systems from Bloom;

WHEREAS, subject to the terms and conditions herein, on the Effective Date AGM will make an Initial Funding to the Company and the Company will issue Class C Membership Interests to AGM; and

WHEREAS, subject to the terms and conditions herein, on each Subsequent Funding Date, AGM will make an additional Capital Contribution to the Company in order to finance the purchase of the Phase 2 New Systems pursuant to the Phase 2 CapEx Agreement;

NOW, THEREFORE, in consideration of the respective representations, warranties, covenants, agreements, and conditions in this Agreement, and other good and valuable consideration, the sufficiency of which is hereby acknowledged, the parties to this Agreement agree as follows:

Article 1
DEFINED TERMS

1.1 Defined Terms Capitalized terms not otherwise defined in this Agreement have the meanings given such terms in Annex I.

ARTICLE 2
CAPITAL CONTRIBUTIONS; LETTER OF CREDIT; MEMBERSHIP INTERESTS

2.1 Initial Funding and Issuance of Class C Membership Interests

(a) Issuance of Membership Interests. Subject to the terms and conditions in this Agreement, at the Closing, (i) AGM will make its initial funding ("Initial Funding") to the Company as provided in Section 2.2(a) and will commit under this Agreement to make two further Capital Contributions and (ii) in exchange, the Company will issue to AGM the Class C Membership Interests in the Company.

2.2 Capital Contributions; Letter of Credit

(a) Initial Funding. On the Effective Date, (i) AGM will make a Capital Contribution in immediately available funds for the Deposit (as defined in the Phase 2 CapEx Agreement) payment under the Phase 2 CapEx Agreement, in an amount of $[*] (the "Initial Contribution"), as set forth in the flow of funds memorandum attached hereto as Exhibit A and prepared in connection with the Effective Date and in accordance with Section 2.4 below ("Initial Flow of Funds Memorandum") and (ii) the Company will use the Initial Contribution in accordance with the Initial Flow of Funds Memorandum and will take such actions as are contemplated under the Transaction Documents and Project Documents on such date.

(b) Subsequent Fundings. Simultaneously with Bloom's delivery of each Payment Notice (as defined in and pursuant to Section 2.5 of the Phase 2 CapEx Agreement) to the Company, the Company will provide AGM with a notice of required funding in the form attached to this Agreement as Exhibit B (a "Funding Notice"), which shall include (i) a copy of such Payment Notice and (ii) a request for a capital contribution from AGM to the Company equal to the amount set forth in such Payment Notice (a "Contribution"). AGM will make a Capital Contribution on each Invoice Due Date (as defined in the Phase 2 CapEx Agreement) set forth in the applicable Funding Notice (a "Subsequent Funding Date"), in immediately available funds, in an amount equal to the Contribution set forth in the applicable Funding Notice (the "Subsequent Funding"); provided that in no event shall the amount of the aggregate Contributions plus the Initial Contribution exceed the Maximum Commitment. The Company will use any Contribution in accordance with a flow of funds memo prepared by the Company and will take such actions as are contemplated under the Transaction Documents and Project Documents on such Subsequent Funding Date.

(c) All Capital Contributions made pursuant to Sections 2.2(a) and 2.2(b) shall be used by the Company to pay the corresponding amounts to Bloom as they become due and payable pursuant to the terms of the Phase 2 CapEx Agreement.

(d) Letter of Credit.

(i) On the Effective Date, Bloom, Southern and DSGH shall cause the Letter of Credit to be amended to provide for the Company as beneficiary thereunder in the stated amount of $[*].

(ii) Within five (5) Business Days following the Effective Date, Bloom and DSGH shall cause the Letter of Credit to be amended to increase the stated amount to $[*].

(iii) Within thirty (30) calendar days following the Effective Date, Southern shall return the $[*]M Letter of Credit (the "Southern Tax Indemnity LC") to the Issuing Bank and Bloom and DSGH shall simultaneously cause the Letter of Credit to be amended to increase the stated amount to $[*]; *provided*, that until the Southern Tax Indemnity LC has been returned and the stated amount of the Letter of Credit has been increased to $[*], Southern will not draw any amounts under the Letter of Credit in accordance with Section 8.6 of the LLCA for any claim under Section 7.1(d) of the Southern ECCA.

(iv) Bloom and DSGH shall cause the Letter of Credit to be maintained in accordance with the LLC Agreement.

2.3 Closing

The Closing will take place concurrent with the mutual execution and delivery of this Agreement by the Parties which execution shall be deemed to confirm that all of the conditions in Section 5.2 and Section 5.3 have either been satisfied or waived by the Party entitled to the benefit of such conditions. Each of the documents to be delivered pursuant to Section 2.2(d), Section 5.2 and Section 5.3 shall be deemed to be delivered simultaneously, and no such document shall be of any force or effect until all such documents are delivered and this Agreement is executed and delivered by all of the Parties.

2.4 Funding Mechanics

(a) The Parties acknowledge that, other than as agreed to by the Parties, after the Effective Date there will be only two Funding Dates. In no event will any Funding Date occur later than the Funding Termination Date other than as agreed to by AGM. An executed Funding Notice shall be provided to AGM in accordance with Section 2.2(b) prior to each Subsequent Funding Date; provided, that no Funding Notice shall be required for the Capital Contribution to occur on the Effective Date.

(b) On the Effective Date and each Subsequent Funding Date, AGM will transfer its Funding Payments by wire transfer of immediately available funds to the following account (or to such other account as the Company may from time to time advise it in writing):

Holder Name: Diamond State Generation Partners, LLC

Bank Name: Deutsche Bank Trust Company Americas
Account Number: [*]
ABA Number: [*]
Account Name: [*]
FFC: [*]
Re: Diamond State Generation
Attn: [*]

ARTICLE 3
REPRESENTATIONS AND WARRANTIES

3.1 Representations and Warranties of Bloom with Respect to the Company

Bloom represents and warrants to AGM as of the Effective Date and each Subsequent Funding Date (or such other date as may be set forth below) as follows, with respect to (but not on behalf of) the Company:

(a) Organization, Good Standing, Etc. The Company is a limited liability company duly formed, validly existing and in good standing under the laws of the State of Delaware. The Company has the limited liability company power and authority to own, lease and operate its properties and to carry on its business as being conducted on the date hereof in each jurisdiction where the character of its property or nature of its activities makes such a qualification necessary. As of the Effective Date, Bloom has provided AGM with true and correct copies of the Company's organizational documents.

(b) Authority. The Company has the limited liability company power and authority to enter into this Agreement and the other Transaction Documents and Project Documents to which the Company is a party, to perform its obligations hereunder and thereunder, and to consummate the transactions contemplated hereby or thereby. The execution and delivery by the Company of this Agreement and each other Transaction Documents and Project Document to which the Company is a party, and the consummation by each of them of the transactions contemplated hereunder and thereunder, have been duly authorized by all necessary limited liability company action required on its part. The Company has duly executed and delivered each Transaction Document and Project Document to which the Company is a party. This Agreement (assuming due authorization, execution and delivery by AGM, Southern and Bloom) constitutes, and upon execution and delivery by the Company of the other Transaction Documents and Project Documents to which the Company is a party, the Transaction Documents and Project Documents will constitute, the valid and binding obligations of the Company, enforceable against it in all material respects in accordance with their respective terms, subject as to enforceability to applicable bankruptcy, insolvency, reorganization, moratorium and similar laws affecting enforcement of creditors' rights and remedies generally and to general principles of equity (regardless of whether enforcement is sought in a proceeding at law or in equity).

(c) No Conflicts. The execution and delivery by the Company of this Agreement and the other Transaction Documents and Project Documents to which the Company is a party do not, and the performance by the Company of its obligations hereunder and thereunder will not,

(i) violate or require any filing or notice (that has not been filed or made) under any Applicable Law applicable to the Company, (ii) conflict with, or cause a breach of, or require consent under any provision in the certificate of formation, limited liability company agreement or other organizational document of the Company or any Material Contract to which the Company is a party.

(d) Absence of Litigation. Except as set forth on Schedule 3.1(d), the Company is not subject to any pending or, to the Knowledge of Bloom, threatened injunction, judgment, order, decree, ruling or charge, any pending action, litigation, suit, proceeding or investigation before or by any court, arbitrator or other Governmental Authority or before any arbitrator which would reasonably be expected to have a material adverse effect on the Company's ability to perform its obligations under the Transaction Documents or Project Documents to which the Company is a party. Neither Bloom nor the Company has received a notice of any change to either the REPS Act or the Tariffs and, to the Knowledge of Bloom, there has been no change enacted, or change proposed, by the Delaware Public Service Commission or any member of the Delaware legislature to the REPS Act or the Tariffs.

(e) Ownership. Immediately prior to the Closing and before giving effect to the transactions contemplated by this Agreement, DSGH owns of record and beneficially one hundred percent (100%) of the Class A Membership Interests of the Company and, to the Knowledge of Bloom, Southern owns of record and beneficially one hundred percent (100%) of the Class B Membership Interests of the Company. There are no outstanding options, warrants, calls, puts, convertible securities or other contracts of any nature obligating the Company to issue, deliver or sell membership interests or other securities in the Company except as provided herein or as provided under the LLC Agreement or Permitted Encumbrances. The Company has no subsidiaries. Except as provided in this Agreement and the other Transaction Documents, no Person has or will have a right to acquire an ownership interest in the Phase 1 New Systems or the Phase 2 New Systems or the Project (excluding Energy and RECs) owned or to be acquired by the Company. The Company is not a party to or otherwise subject to any legal, regulatory, or contractual restriction (other than as set forth herein or in the LLC Agreement) restricting the ability of the Company to pay dividends or make similar distributions to the Company or other holders of its respective equity interests.

(f) Valid Interests. Upon execution and delivery by Southern, DSGH and AGM of the LLC Agreement and, if not the same day, on the Effective Date, the Class C Membership Interests will constitute membership interests in the Company, and are being issued free and clear of any Liens except for obligations imposed on members of the Company under the LLC Agreement.

(g) Taxes.

(i) All Tax Returns required to have been filed by or with respect to the Company and its assets and operations have been timely filed, and each such Tax Return correctly and completely reflects, in all material respects, Liabilities for Taxes and all other material information required to be reported thereon. All Taxes owed by the Company (whether or not shown on any Tax Return) have been timely paid except to the extent such Taxes are not yet due.

(ii) There is no action or audit currently proposed in writing, threatened in writing or pending against, or with respect to, the Company in respect of any Taxes. The Company has not extended the time within which to file any Tax Return which has not yet been filed. No written claim has ever been received from a Taxing Authority in a jurisdiction where the Company does not file Tax Returns that the Company is or may be subject to taxation by that jurisdiction or that it must file Tax Returns in such jurisdiction. There are no Liens on any of the assets or properties of the Company with respect to Taxes other than Permitted Liens.

(iii) The Company has withheld and timely paid all material Taxes required to have been withheld and paid by it.

(iv) The Company has not entered into any material Contract with a Taxing Authority with respect to Taxes.

(v) The Company is not a party to, a beneficiary of, or subject to any Tax allocation or sharing agreement.

(vi) The Company has been since inception until June 14, 2019 classified as "disregarded as an entity separate from its owner," within the meaning of Treasury regulation section 301.7701-3(a) for United States federal income Tax purposes and since June 14, 2019 and continues to be classified as a partnership for United States federal income Tax purposes.

(vii) The Company is not a foreign person within the meaning of Section 1445(f)(3) of the Code. The Company has not been a United States real property holding corporation within the meaning of Section 897(c)(2) of the Code during the applicable period specified in Section 897(c)(1)(A)(ii) of the Code.

(viii) No portion of the Phase 2 New Systems was placed in service within the meaning of Section 48 of the Code prior to the Effective Date.

(ix) Physical work undertaken on-site pursuant to the Phase 2 CapEx Agreement with respect to each of the Red Lion Facility and the Brookside Facility after the effective date of the Phase 2 CapEx Agreement and on or prior to December 31, 2019 constitutes "physical work of a significant nature" within the meaning of IRS Notice 2018-59, 2018-59 IRB 196 and otherwise satisfies the requirements for beginning of construction as set forth in Section 48(a)(7) of the Code and IRS Notice 2018-59, 2018-59 IRB 196.

(h) Financial Statements; No Undisclosed Liabilities; No Indebtedness; No Material Adverse Effect. Bloom has provided to AGM the audited consolidated financial statements of DSGH (including the consolidated balance sheet and the related consolidated statements of operations, members' equity and cash flows) as of and for the period ended December 31, 2018 (the "Financial Statements"). The Financial Statements (i) have been prepared from the books and records of DSGH in accordance with GAAP (except as may be stated therein or in the notes thereto and (ii) present fairly in all material respects the financial condition and results of operations of DSGH, for the periods set forth therein. The Company has no Liabilities except Liabilities in the Ordinary Course of Business or incurred in connection with the transactions contemplated by this Agreement (none of which is a Liability for breach of contract, breach of warranty, tort or infringement or a claim or lawsuit or an environmental liability). The Company has no Indebtedness other than the deferred purchase price for the Phase 2 New Systems under the Phase 2 CapEx Agreement. No events that, individually or in the aggregate, have had or reasonably would be expected to have a Material Adverse Effect with respect to the Project or the Company have occurred and are continuing.

(i) Compliance with Laws.

(i) As of the date of this Agreement, other than Environmental Laws (which are addressed in Section 3.1(k)) and other than Tax matters (which are addressed in Section 3.1(g)), the Company is in compliance in all material respects with all Applicable Laws, and neither Bloom nor the Company has received written notice from a Governmental Authority of an actual or potential violation of any Applicable Laws.

(ii) As of the Effective Date and each Subsequent Funding Date, other than Environmental Laws (which are addressed in Section 3.1(k)) and other than Tax matters (which are addressed in Section 3.1(g)), the Company is in compliance with all Applicable Laws other than such non-compliance that would not reasonably be expected to have a Material Adverse Effect, and neither Bloom nor the Company has received written notice from a Governmental Authority of an actual or potential violation of any Applicable Laws.

(j) Governmental Approvals and Filings. No Governmental Approval from or filing with or notice to any Governmental Authority is required to be obtained or made by Bloom or the Company for the execution, delivery and performance by Bloom or the Company of any Transaction Document or Project Document to which it is a party or the consummation of the transactions contemplated therein, other than (i) filings or approvals as set forth on Schedule 3.1(j) and (ii) any other Governmental Approval or filings that have been obtained or are ministerial in nature or can reasonably be expected to be obtained or made in the ordinary course on commercially reasonable terms and conditions when needed, and each such Governmental Approval that has been obtained and remains necessary is in full force and effect.

(k) Environmental Matters.

(i) As of the Effective Date, other than as set forth on Schedule 3.1(k), the Company is and at all times has been in compliance with all Environmental Laws, and (ii) neither Bloom nor the Company has received written notice from any Governmental Authority of an actual or potential violation of, or liability under, any Environmental Laws.

(ii) As of the Effective Date and each Subsequent Funding Date, (i) the Company is and at all times has been in compliance with all Environmental Laws, other than any failures to comply that would not reasonably be expected to have a Material Adverse Effect, and (ii) other than as set forth on Schedule 3.1(k), neither Bloom nor the Company has received written notice related to the Project from any Governmental Authority of an actual or potential violation of, or liability under, any Environmental Laws.

(iii) To the Knowledge of Bloom, the Project is not located on premises where Hazardous Substances have been Released in violation of Environmental Laws.

(iv) Bloom has made available to AGM complete copies of any and all material reports, site assessments, audits, and studies concerning environmental conditions, prepared by or on behalf of, or otherwise in the possession or control of the Bloom, the Company or its Affiliates specifically concerning the Projects.

(l) Governmental Authorizations. Schedule 3.1(l) sets forth all material Government Approvals necessary for the construction, operation, ownership and maintenance of the Systems owned or to be acquired by the Company. There are no other Government Approvals necessary other than those that are ministerial in nature or can reasonably be expected to be obtained on commercially reasonable terms and conditions when needed. As of the Effective Date, Bloom has provided AGM with true and correct copies of the Governmental Approvals set forth on Schedule 3.1(l).

(m) Insurance. Schedule 3.1(m) lists all of the insurance maintained by, or for the benefit of, the Company, all of which is valid and in full force and effect. Neither Bloom nor the Company has taken any action that has rendered such insurance unenforceable.

(n) Real Property. The Company owns no fee simple real property. Schedule 3.1(n) lists all Site Leases and easements or rights of way for transmission lines from the Site Leases to the Interconnection Point (or Delivery Point (as defined in the QFCP-RC Tariff)), as applicable, with the PJM Grid and identifies any material reciprocal easement or operating agreements relating thereto. The Company has good and valid title to the leasehold estates in each Site, in each case free and clear of all Liens, except Permitted Liens. The Company has peaceful and undisturbed possession under all the Site Leases, such leases are valid and in full force and effect and binding and enforceable in accordance with their respective terms; and there is not, under any of such leases, any existing default, event of default or event which with notice or lapse of time or both would constitute a default. Except as set forth on Schedule 3.1(n), none of the rights of the Company under any of the Site Leases will be subject to termination or modification as a result of the consummation of the transactions contemplated by this Agreement.

(o) Personal Property. As of the Effective Date and prior to giving effect to the transactions contemplated by the Phase 2 CapEx Agreement, the Company does not own any material personal property other than the Phase 1 New Systems and the type of assets which the Company is expected to own or possess in order to perform under the Transaction Documents. As of each Subsequent Funding Date, the Company does not own any material personal property other than the Phase 1 New Systems and the Phase 2 New Systems and the type of assets which the Company is expected to own or possess in order to perform under the Transaction Documents.

(p) Liens. All assets owned by the Company are free and clear of all Liens, other than Permitted Liens.

(q) Material Contracts.

(i) Schedule 3.1(q) lists all Material Contracts (other than the Transaction Documents) to which the Company is a party and each such Material Contract, and each Transaction Document, has not been amended, terminated or otherwise modified except as set forth on such schedule. Each Material Contract, and each Transaction Document, is in full force and effect and is binding on the Company or its Affiliates and, to Bloom's Knowledge, on any counterparties thereto other than Bloom, the Company or their Affiliates, except as enforceability may be limited by applicable bankruptcy and similar laws affecting the enforcement of creditors' rights and general equitable principles. Except as shown on Schedule 3.1(q), none of the Company or its Affiliates or, to Bloom's Knowledge, any counterparties thereto are in default respect under any Material Contract or any Transaction Document. As of the Effective Date, Bloom has provided AGM with true and correct copies of all Material Contracts to which the Company is a party.

(ii) The Company does not have any payment or performance obligations under the Southern ECCA, the Repurchase Agreement (as defined in the Southern ECCA) and the Phase 1 CapEx Agreement (other than contingent indemnification obligations).

(r) QFCP- RC Tariff Notices. Neither Bloom nor the Company has received any written notice from any Governmental Agency challenging or questioning the validity of the QFCP-RC Tariff.

(s) Employee Matters. The Company does not have any employees nor has the Company maintained, sponsored, administered or participated in any employee benefit plan or arrangement, including any employee benefit plan subject to ERISA.

(t) Affiliate Transactions. Except for the Transaction Documents and Project Documents listed on Schedule 3.1(t), there are no existing contracts, agreements, understandings, or commercial relationships between the Company, on the one hand, and Bloom, DSGH, Southern or any of their respective Affiliates, on the other hand. The Company does not have any outstanding debt to an Affiliate thereof.

(u) PUHCA. The Company is, and will continue to be following commencement of the generation of electric energy for sale by the Phase 2 New Systems, an Exempt Wholesale Generator and is not subject to regulation under PUHCA, except with respect to regulation relating to maintaining its Exempt Wholesale Generator status and any regulation as an "affiliate" or a "subsidiary company" of a "holding company" (as such terms are defined under PUHCA). The Company is not, and will not be, a "holding company" under PUHCA.

(v) FPA. The Company is subject to regulation as a "public utility" under Section 20(e) the FPA and has MBR Authority.

(w) State Utility Regulation. The Company is not subject to regulation as a "retail electricity supplier," an "electric supplier" or a "public utility" under the laws of the State of Delaware.

(x) Acknowledgement. Bloom and the Company acknowledge that, except with respect to the representations and warranties expressly made by AGM in this Agreement and the other Transaction Documents, AGM has not made any representations or warranties, either express or implied, under this Agreement or any of the other Transaction Documents or otherwise, nor have Bloom or the Company relied on any representation or warranty not expressly made in this Agreement or the other Transaction Documents.

(y) Disclosure. None of the statements, documents, certificates or other items prepared or supplied by the Company, Bloom, or any of their Affiliates with respect to the transactions contemplated hereby, taken as a whole, contains an untrue statement of a material fact or omits to state a material fact necessary to make the statements contained therein not misleading in light of the circumstances under which such statements were made.

(z) Related Company. The Company is not related to DPL within the meaning of Code Section 267 or Code Section 707.

3.2 Additional Representations and Warranties of Bloom and DSGH

Bloom and DSGH represent and warrant to AGM as of the date hereof as follows:

(a) Organization, Good Standing, Etc. Bloom is a corporation duly formed, validly existing and in good standing under the laws of the State of Delaware. DSGH is a limited liability company duly formed, validly existing and in good standing under the laws of the State of Delaware. Bloom has the corporate power and authority to own, lease and operate its properties and to carry on its business as being conducted on the date hereof in each jurisdiction where the character of its property or nature of its activities makes such a qualification necessary. DSGH has the limited liability company power and authority to own, lease and operate its properties and to carry on its business as being conducted on the date hereof in each jurisdiction where the character of its property or nature of its activities makes such a qualification necessary. Bloom and DSGH have provided AGM with true and correct copies of their respective organizational documents.

(b) Authority. Each of Bloom and DSGH has the corporate or limited liability company power and authority to enter into the Transaction Documents and Project Documents to which it is a party, to perform its obligations thereunder, and to consummate the transactions contemplated thereby. The execution and delivery by Bloom and DSGH of each Transaction Document and Project Document to which it is a party, and the consummation by Bloom of the transactions contemplated thereunder, have been duly authorized by all necessary corporate action required on its part. Each of Bloom and DSGH has duly executed and delivered each Transaction Document and Project Document to which it is a party. This Agreement (assuming due authorization, execution and delivery by AGM and Southern) constitutes, and upon execution and delivery by each of Bloom and DSGH of the other Transaction Documents and Project Documents to which it is a party, the Transaction Documents and Project Documents will constitute, the valid and binding obligations of Bloom or DSGH, as applicable, enforceable against it in all material respects in accordance with their respective terms, subject as to enforceability to applicable bankruptcy, insolvency, reorganization, moratorium and similar laws affecting enforcement of creditors' rights and remedies generally and to general principles of equity (regardless of whether enforcement is sought in a proceeding at law or in equity).

(c) No Conflicts. The execution and delivery by each of Bloom and DSGH of this Agreement and the other Transaction Documents and Project Documents to which it is a party do not, and the performance by Bloom and DSGH of its obligations hereunder and thereunder will not, (i) violate or require any filing or notice (that has not been filed or made) under any Applicable Law applicable to Bloom or DSGH, (ii) conflict with, or cause a breach of, or require consent or notice under any provision in the certificate of incorporation, bylaws or other organizational document of Bloom or DSGH or any material contract to which Bloom or DSGH is a party.

(d) Absence of Litigation. Neither Bloom nor DSGH is subject to any pending or, to the Knowledge of Bloom, threatened injunction, judgment, order, decree, ruling or charge, any pending action, litigation, suit, proceeding or investigation before or by any court, arbitrator or other Governmental Authority or before any arbitrator which would reasonably be expected to have a material adverse effect on such party's ability to perform its obligations under the Transaction Documents to which it is a party. Neither Bloom nor DGSH has received a notice of any change to either the REPS Act or the Tariffs and, to the Knowledge of Bloom and DSGH, there has been no change enacted, or change proposed, by the Delaware Public Service Commission or any member of the Delaware legislature to the REPS Act or the Tariffs.

(e) Governmental Approvals and Filings. No Governmental Approval of or filing with any Governmental Authority is required to be obtained or made by Bloom or DSGH for the execution, delivery and performance by Bloom or DSGH of any Transaction Document or Project Document to which it is a party or the consummation of the transactions contemplated therein, other than (i) filings or approvals as set forth on Schedule 3.2(e) and (ii) any other Governmental Approval or filings that have been obtained or are ministerial in nature or can reasonably be expected to be obtained or made in the ordinary course on commercially reasonable terms and conditions when needed, and each such Governmental Approval that has been obtained and remains necessary is in full force and effect.

(f) Intellectual Property. Bloom has full legal title and ownership or right to use, the patents, patent rights, other patent applications, Governmental Authorizations, licenses, trade secrets, trademarks, trademark rights, service marks, trade names or trade name rights or franchises, domain names, copyrights, inventions and intellectual property rights (the "IP Rights") necessary to conduct its Systems-related business as now operated and the business proposed to be operated in connection with the Transaction Documents and those Project Documents to which Bloom is a party. Bloom has no reason to believe, and none of Bloom or any of its Affiliates has received any notice (which is material to Bloom's or its Affiliates' ability to perform their obligations under the Transaction Documents and those Project Documents to which Bloom is a party) that the conduct of its Systems-related business as now operated and the business proposed to be operated in connection with the Transaction Documents and those Project Documents to which Bloom is a party conflicts with, violates, infringes upon or misappropriates, or will conflict with, infringe upon or misappropriate, the valid IP Rights of any other Person.

(g) Disclosure. None of the statements, documents, certificates or other items prepared or supplied by Bloom or any of its Affiliates with respect to the transactions contemplated hereby, taken as a whole, contains an untrue statement of a material fact or omits to state a material fact necessary to make the statements contained therein not misleading in light of the circumstances under which such statements were made.

(h) Systems. As of the date on which a Phase 2 New System is delivered to the Company under the Phase 2 CapEx Agreement, none of the following activities has been completed with respect to such Phase 2 New System: (i) completion of critical tests necessary for proper operation of such System, (ii) synchronization of such System onto the electric distribution and transmission system of the relevant utility, and (iii) the commencement of daily operation of such System.

(i) Acknowledgement. Bloom and DSGH acknowledge that, except with respect to the representations and warranties expressly made by AGM in this Agreement and the other Transaction Documents, AGM has not made any representations or warranties, either express or implied, under this Agreement or any of the other Transaction Documents or otherwise, nor has Bloom or DSGH relied on any representation or warranty not expressly made in this Agreement or the other Transaction Documents.

3.3 [Reserved]

3.4 Representations and Warranties of Southern

Southern represents and warrants to AGM as of the date hereof (except as specifically noted below) as follows:

(a) Organization, Good Standing, Etc. Southern is a limited liability company duly formed, validly existing and in good standing under the laws of the State of Delaware. Southern has the limited liability company power and authority to own, lease and operate its properties and to carry on its business as being conducted on the date hereof in each jurisdiction where the character of its property or nature of its activities makes such a qualification necessary. Southern has provided AGM with true and correct copies of its organizational documents.

(b) Authority. Southern has the limited liability company power and authority to enter into the Transaction Documents to which it is a party, to perform its obligations under such agreements, and to consummate the transactions contemplated therein. The execution and delivery by Southern of each Transaction Document to which it is a party, and the consummation by it of the transactions contemplated thereunder, have been duly authorized by all necessary company action. Each such Transaction Document has been duly executed and delivered by Southern. This

Agreement (assuming due authorization, execution and delivery by Bloom, AGM and the Company) constitutes, and upon execution and delivery by Southern of the other Transaction Documents to which it is a party, the Transaction Documents will constitute, the valid and binding obligations of Southern, enforceable against it in accordance with their respective terms, subject as to enforceability to applicable bankruptcy, insolvency, reorganization, moratorium and similar laws affecting enforcement of creditors' rights and remedies generally and to general principles of equity (regardless of whether enforcement is sought in a proceeding at law or in equity).

(c) No Conflicts. The execution and delivery by Southern of the Transaction Documents to which it is a party do not, and the performance by it of its obligations under such agreements will not, (i) violate any Applicable Law, or require any filing or notice (that has not been filed or made) under any Applicable Law applicable to Southern, (ii) conflict with or cause a breach of any provision in the charter, bylaws or other organizational document of Southern, (iii) cause a breach of, constitute a default under, cause the acceleration of, create in any party the right to accelerate, terminate, modify or cancel, or require any authorization, consent, waiver or approval under any contract, license, instrument, decree, judgment or other arrangement to which Southern is a party or under which it is bound or to which any of its assets is subject (or result in the imposition of a Lien upon any such assets), except, in the case of clause (i) and (iii) of this Section 3.4(c), for any that would not reasonably be expected to have a material adverse effect on the ability of Southern to execute and deliver and perform its obligations under the Transaction Documents to which it is a party.

(d) Absence of Litigation. Southern is not subject to any outstanding injunction, judgment, order, decree, ruling or charge or, to Southern's Knowledge, is not threatened with being made a party to any action, suit, proceeding, hearing or investigation of, in, or before any Governmental Authority or before any arbitrator that would adversely affect its ability to complete the transactions contemplated in the Transaction Documents to which it is a party.

(e) Acknowledgement. Except with respect to the representations and warranties expressly made by Bloom, DSGH, AGM, the Company or any of their Affiliates in this Agreement and the other Transaction Documents, Southern acknowledges that none of Bloom, DSGH, AGM, the Company or their Affiliates has made any representations or warranties, either express or implied, under this Agreement or any of the other Transaction Documents or otherwise, nor has Southern relied on any representation or warranty not expressly made in this Agreement or the other Transaction Documents.

(f) Utility Regulation. Southern (a) is not a "public utility" under Section 201(e) of the FPA, and (b) is a "holding company" under PUHCA solely with respect to its ownership of the Company and is not (and will continue not to be following commencement of the generation of electric energy for sale by the Phase 2 New Systems) subject to, or is exempt from pursuant to 18 C.F.R. § 366.3(a), regulation under PUHCA (not including any regulation as an "affiliate" or a "subsidiary company" of a "holding company," as such terms are defined under PUHCA).

(g) Related Company. Southern is not related to DPL within the meaning of Code Section 267 or Code Section 707.

(h) Binding Effect. Each Transaction Document to which Southern is a party is binding on Southern and, to Southern's Knowledge, on any counterparties thereto, except as enforceability may be limited by applicable bankruptcy and similar laws affecting the enforcement of creditors' rights and general equitable principles. None of Southern or, to Southern's Knowledge, counterparties thereto are in default respect under any Transaction Document to which Southern is a party.

3.5 Representations and Warranties of AGM

AGM represents and warrants to Bloom, Southern, and the Company as of the date hereof (except as specifically noted below) as follows:

(a) Organization, Good Standing, Etc. It is a stock insurance company duly incorporated, validly existing and in good standing under the laws of the State of New York, and has the power and authority to own, lease and operate its properties and to carry on its business as being conducted on the date hereof in each jurisdiction where the character of its property or nature of its activities makes such a qualification necessary.

(b) Authority. It has the power and authority to enter into the Transaction Documents to which it is a party, to perform its obligations under such agreements, and to consummate the transactions contemplated therein. The execution and delivery by it of each Transaction Document to which it is a party, and the consummation by it of the transactions contemplated thereunder, have been duly authorized by all necessary company action. Each such Transaction Document has been duly executed and delivered by it. This Agreement (assuming due authorization, execution and delivery by Bloom, DSGH, Southern and the Company) constitutes, and upon execution and delivery by AGM, DSGH, Southern and the Company of the other Transaction Documents to which it is a party, the Transaction Documents will constitute, the valid and binding obligations of AGM, enforceable against it in accordance with their respective terms, subject as to enforceability to applicable bankruptcy, insolvency, reorganization, moratorium and similar laws affecting enforcement of creditors' rights and remedies generally and to general principles of equity (regardless of whether enforcement is sought in a proceeding at law or in equity).

(c) No Conflicts. The execution and delivery by AGM of the Transaction Documents to which it is a party do not, and the performance by it of its obligations under such agreements will not, (i) violate any Applicable Law, (ii) conflict with or cause a breach of any provision in the charter, bylaws or other organizational document of AGM, (iii) cause a breach of, constitute a default under, cause the acceleration of, create in any party the right to accelerate, terminate, modify or cancel, or require any authorization, consent, waiver or approval under any contract, license, instrument, decree, judgment or other arrangement to which AGM is a party or under which it is bound or to which any of its assets is subject (or result in the imposition of a Lien upon any such assets), except (in the case of clause (i) and (iii) of this Section 3.4(c)) for any that would not reasonably be expected to have a material adverse effect on the ability of AGM to execute and deliver and perform its obligations under the Transaction Documents to which it is a party.

(d) Absence of Litigation. It is not subject to any outstanding injunction, judgment, order, decree, ruling or charge or, to AGM's Knowledge, is not threatened with being made a party to any action, suit, proceeding, hearing or investigation of, in, or before any Governmental Authority or before any arbitrator that would adversely affect its ability to complete the transactions contemplated in the Transaction Documents to which it is a party.

(e) Accredited Investor. It is an “Accredited Investor” as such term is defined in Regulation D under the Securities Act. It has had a reasonable opportunity to ask questions of and receive answers from Bloom, Southern and their Affiliates concerning Southern, the Class C Membership Interests and the Company. AGM understands that the Class C Membership Interests have not been registered under the Securities Act in reliance on an exemption therefrom, and that the Company is under no obligation to register such membership interests. AGM will not sell, hypothecate or otherwise transfer such membership interests without registering or qualifying them under the Securities Act and applicable state securities laws or any other Applicable Laws unless the transfer is exempted from registration or qualification under such laws. AGM is acquiring the Class C Membership Interests for its own account and not for the account of any other Person and not with a view to distribution or resale to others.

(f) Information and Investment Intent. AGM recognizes that investment in the Class C Membership Interests involves substantial risks. It acknowledges that any financial projections that may have been provided to it are based on assumptions of future operating results based on assumptions about certain events (many of which are beyond the control of Bloom, Southern or the Company). It understands that no assurances or representations can be given that the actual results of the operations of the Company will conform to the projected results for any period. AGM has relied solely on its own legal, tax and financial advisers for its evaluation of an investment in the Class C Membership Interests and not on the advice of Bloom, Southern, the Company, their Affiliates or any of their respective legal, tax or financial advisers.

(g) Acknowledgement. Except with respect to the representations and warranties expressly made by Bloom, Southern, the Company or any of their Affiliates in this Agreement and the other Transaction Documents and the Project Documents and the IP License, AGM acknowledges that none of Bloom, Southern, the Company or their Affiliates has made any representations or warranties, either express or implied, under this Agreement or any of the other Transaction Documents or otherwise, nor has AGM relied on any representation or warranty not expressly made in this Agreement or the other Transaction Documents or Project Documents.

(h) Utility Regulation. AGM (a) is not a “public utility” under Section 201(e) of the FPA and (b) is either (i) not a “holding company” under PUHCA or (ii) is a “holding company” that is exempt from regulation pursuant to 18 C.F.R. § 366.3(a) (not including any regulation as an “affiliate” or a “subsidiary company” of a “holding company,” as such terms are defined under PUHCA).

(i) Related Company. AGM is not related to DPL within the meaning of Code Section 267 or Code Section 707.

ARTICLE 4
[RESERVED]

ARTICLE 5
CONDITIONS TO CLOSING

5.1 <u>Conditions to the Obligations of Each Party</u>The respective obligations of each party to effect the transactions contemplated hereby are subject to the fulfillment or waiver by written consent of Bloom and AGM, where permissible, at or prior to the Effective Date, of each of the following conditions:

(a) No preliminary or permanent governmental order, injunction or other order, decree or ruling issued by a court or other Governmental Authority of competent jurisdiction nor any statute, rule, regulation or executive order promulgated or enacted by any governmental agency of competent jurisdiction shall be in effect which would have the effect of (i) making the consummation of the transactions contemplated hereby illegal or (ii) otherwise prohibiting the consummation of the transactions contemplated hereby. In addition, there shall not be pending by any Governmental Authority any action that seeks to restrain or prevent the consummation of the transactions contemplated by this Agreement.

(b) Since June 14, 2019, there shall not have occurred and be continuing any events that, individually or in the aggregate, have had or reasonably would be expected to have a Material Adverse Effect with respect to the Project or the Company.

5.2 <u>Conditions Precedent to the Obligations of AGM on the Effective Date</u>The obligation of AGM to make the Initial Funding on the Effective Date will be subject to the satisfaction of each of the following conditions (any or all of which may be waived in whole or in part by AGM in its sole discretion):

(a) AGM has received fully executed copies of this Agreement, the LLC Agreement, the MOMA, the Administrative Services Agreement, the Phase 1 CapEx Agreement, the Redemption Agreement, the Phase 2 CapEx Agreement and the IP License;

(b) AGM has received fully executed copies of each of the Transaction Documents other than those set forth in <u>Section 5.2(a)</u>, in form and substance satisfactory to AGM;

(c) AGM has received fully executed copies of all other Material Contracts not referenced in <u>Section 5.2(a)</u> and <u>Section 5.2(b)</u>, in form and substance satisfactory to AGM;

(d) AGM has received a legal opinion, in a form reasonably satisfactory to AGM, of each of (i) Morris James, LLP, as Delaware counsel to Bloom, with respect to certain state regulatory matters; (ii) Akin Gump Strauss Hauer & Feld LLP, as counsel to Bloom, with respect to (A) constitutional matters concerning the QFCP-RC Tariff and (B) certain federal energy regulatory matters, and (iii) Stoel Rives LLP, as special counsel to AGM, with respect to certain tax matters;

(e) AGM has received (i) from each of Bloom, DSGH, Southern and the Company (A) an incumbency certificate dated as of the date hereof, (B) a good standing certificate, dated no more than thirty (30) days prior to the date of this Agreement, from the applicable Secretary of State, (C) resolutions of the board of directors, or other equivalent governing and managing body, authorizing and approving the execution of this Agreement and each of the other Transaction Documents to which it is a party, and the transactions contemplated hereunder and thereunder, or, if no such authorization and approval is required, a statement to such effect, in each case certified by a secretary or an assistant secretary as of the date hereof, and (D) formation documents certified by a secretary or an assistant secretary as of the date hereof and (ii) from an authorized officer of Bloom, DSGH, Southern and the Company, a certificate dated as of the date hereof to the effect that the conditions set forth in Sections 5.2(g) and 5.2(h) have been satisfied;

(f) Each of the representations and warranties of Bloom, DSGH, Southern, the Company or their respective Affiliates in this Agreement or any other Transaction Document shall be true and correct when made and on and as of the Effective Date as if made on and as of such time, except to the extent that any such representation or warranty shall have been expressly made only as of an earlier date in which case such representation and warranty was true and correct as of such earlier date;

(g) Each of Bloom, DSGH, Southern, the Company and their Affiliates shall have performed or complied in all material respects with all conditions, agreements and covenants required by this Agreement and the other Transaction Documents to be performed or complied with by it on or prior to the Effective Date;

(h) Each of Bloom, DSGH, Southern and the Company has received all necessary third party consents, waivers, authorizations and approvals in connection with the execution, delivery and performance of this Agreement and each of the Transaction Documents to which it is a party and the transactions contemplated hereunder and thereunder, each of which consents, waivers, authorizations and approvals have been required by AGM and are in such forms as reasonably satisfactory to AGM, and copies of the same have been delivered to AGM;

(i) AGM has received the Base Case Model and the Project Budget, each in form and substance satisfactory AGM;

(j) AGM has received a copy of the Independent Engineer Report (and, if not addressed to AGM, then a reliance letter in connection therewith) in form and substance reasonably satisfactory to AGM, regarding (i) the technical aspects of the Phase 2 New Systems, and (ii) the maintenance program for the Phase 2 New Systems pursuant to the MOMA;

(k) The findings of AGM's customary due diligence review, including with respect to any environmental compliance issues, are reasonably satisfactory to AGM;

(l) None of Bloom, DSGH, Southern or the Company (i) has admitted in writing its inability to pay its debts generally as they become due, (ii) has filed a petition or answer seeking reorganization or arrangement under the federal bankruptcy laws or any other applicable law or statute of the United States of America or any State, district or territory thereof, (iii) has made an assignment for the benefit of creditors, (iv) has consented to the appointment of a receiver of the whole or any substantial part of its assets, (v) has had a petition in bankruptcy filed against it, (vi) has had a court of competent jurisdiction enter an order, judgment, or decree appointing a receiver of the whole or any substantial part of such entity's assets or (vii) has had, under the provisions of any other law for the relief or aid of debtors, any court of competent jurisdiction assume custody or control of the whole or any substantial part of such entity's assets;

(m) The Company (i) has entered into all PJM Agreements, DPL Agreements and all other agreements and made all filings and other arrangements necessary for the transmission (if applicable), interconnection and delivery of the Phase 2 New Project's Energy, capacity and ancillary services to the PJM Grid and (ii) shall be a PJM member (or shall have contracted with a market participant in PJM to perform its PJM obligations and such market participant shall have entered into all required PJM Agreements and shall be in compliance therewith);

(n) The Company is an Exempt Wholesale Generator;

(o) The Company has MBR Authority;

(p) Bloom shall have delivered to AGM a final appraisal, valuation, and cost segregation report concerning the Portfolio from Marshall & Stevens, together with a reliance letter in favor of AGM, both in form and substance satisfactory to AGM;

(q) AGM has received all necessary third-party consents, waivers, authorizations and approvals in connection with the execution, delivery and performance of this Agreement and each of the Transaction Documents to which it is a party and the transactions contemplated hereunder and thereunder, each of which consents, waivers, authorizations and approvals is in form reasonably satisfactory to AGM;

(r) AGM has received a Phase I environmental site assessment with respect to the Sites prepared by Terracon Consultants, Inc. in accordance with ASTM Standard E1527-13 (and, if not addressed to AGM, then a reliance letter in connection therewith) in form and substance reasonably satisfactory to AGM;

(s) AGM shall have received a FIRPTA certificate complying with the Code and applicable Treasury Regulations, in form and substance reasonably satisfactory to it, certifying that the transactions contemplated by this Agreement are exempt from withholding under Section 1445 of the Code;

(t) Southern, DSGH and the Issuing Bank shall have amended the Letter of Credit to make the Company as beneficiary thereunder in the stated amount of $97,200,000; and

(u) AGM shall have received evidence reasonably satisfactory to AGM that insurance coverages in place for the Company comply with the requirements of Schedule 8.4 of the LLC Agreement.

5.3 <u>Conditions Precedent to the Obligations of Bloom and the Company on the Effective Date</u>The obligation of Bloom and the Company to effect the transactions contemplated hereby will be subject to the satisfaction of each of the following conditions (any or all of which may be waived in whole or in part by Bloom and the Company, each in its sole discretion):

(a) The Company has received fully executed copies of this Agreement, the LLC Agreement, the MOMA, the Administrative Services Agreement, and the Phase 2 CapEx Agreement;

(b) The Company has received fully executed copies of each of the Transaction Documents other than those set forth in Section 5.3(a), in form and substance satisfactory to the Company;

(c) The Company and Bloom have each received from AGM (A) an incumbency certificate dated as of the date hereof, (B) a good standing certificate, dated no more than forty five (45) days prior to the date of this Agreement, from the applicable Secretary of State, (C) resolutions of the board of directors, or other equivalent governing and managing body, authorizing and approving the execution of this Agreement and each of the other Transaction Documents to which it is a party, and the transactions contemplated hereunder and thereunder, certified by a secretary or an assistant secretary as of the date hereof, and (D) formation documents certified by a secretary or an assistant secretary as of the date hereof;

(d) Each of the representations and warranties of AGM in this Agreement or any other Transaction Document to which it is a party shall be true and correct when made and on and as of the Effective Date as if made on and as of such time, except to the extent that any such representation or warranty shall have been expressly made only as of an earlier date in which case such representation and warranty was true and correct in all material respects as of such earlier date.

ARTICLE 6
CONDITIONS TO SUBSEQUENT FUNDINGS; CONDITIONS SUBSEQUENT

6.1 Conditions Precedent to the Obligations of AGM on each Subsequent Funding Date.

The obligation of AGM to make a Subsequent Funding on a Subsequent Funding Date will be subject only to the satisfaction of the following conditions (any or all of which may be waived in whole or in part by AGM in its sole discretion):

(a) The Company shall be obligated to make payment to Bloom on the Subsequent Funding Date pursuant to the Phase 2 CapEx Agreement.

(b) AGM shall have received a duly executed certificate from the Independent Engineer, substantially in the form of Exhibit C with respect to each of the Phase 2 New Systems for which a Funding Notice has been delivered.

(c) Each of the representations and warranties of Bloom, Southern, the Company or their respective Affiliates in this Agreement or any other Transaction Document shall be true and correct when made and on and as of the Subsequent Funding Date as if made on and as of such time, except to the extent that any such representation or warranty shall have been expressly made only as of an earlier date in which case such representation and warranty was true and correct as of such earlier date.

(d) Each of Bloom, Southern, the Company and their Affiliates shall have performed or complied in all material respects with all conditions, agreements and covenants required by this Agreement and the other Transaction Documents to be performed or complied with by it on or prior to the Subsequent Funding Date.

(e) None of Bloom, Southern or the Company (i) has admitted in writing its inability to pay its debts generally as they become due, (ii) has filed a petition or answer seeking reorganization or arrangement under the federal bankruptcy laws or any other applicable law or statute of the United States of America or any State, district or territory thereof, (iii) has made an assignment for the benefit of creditors, (iv) has consented to the appointment of a receiver of the whole or any substantial part of its assets, (v) has had a petition in bankruptcy filed against it, (vi) has had a court of competent jurisdiction enter an order, judgment, or decree appointing a receiver of the whole or any substantial part of such entity's assets or (vii) has had, under the provisions of any other law for the relief or aid of debtors, any court of competent jurisdiction assume custody or control of the whole or any substantial part of such entity's assets.

(f) AGM has received from an authorized officer of Bloom and DSGH a certificate dated as of such Subsequent Funding Date to the effect that the conditions set forth in Sections 6.1(c) and 6.1(d) have been satisfied.

(g) No legislation has been passed by any Governmental Authority adversely affecting the Tariffs.

(h) Solely with respect to the first Subsequent Funding Date, AGM has received evidence that any filing regarding the reactive power for the Project has been filed;

(i) The stated amount of the Letter of Credit is at least $101,200,000 and no drawing have been made on such Letter of Credit; and

(j) Bloom shall have paid the reasonable and documented out-of-pocket costs and expenses incurred by AGM and its Affiliates in connection with the preparation, negotiation and delivery of this Agreement and the other Transaction Documents and the due diligence review of the Project Documents and the consummation of the transactions contemplated hereby and thereby.

6.2 Post-Closing Covenants.

Bloom will use commercially reasonable efforts to promptly, but in no event later than 90 days from the Effective Date, do the following:

(a) assign the Gas Services Agreement with respect to the Brookside Facility to the Company and, prior to such assignment, Bloom shall enforce and perform on behalf of the Company, all of Bloom's rights and obligations under such Gas Services Agreement;

(b) have the Interconnection Agreements amended to reflect the inclusion of the Phase 2 New Systems and a reduction in nameplate capacity of the Systems;

(c) obtain all approvals from the Delaware Department of Natural Resources and Environmental Control, including amendment of Permits APC-2012/0013 and APC-2012/0052, necessary for the operation of the Phase 2 New Project; and

(d) cause the Company to file a notice of consummation in FERC Docket No. EC19-105 and applicable notice(s) of change in status to the Company's market-based rate docket in FERC Docket No. ER12-1383 within the timeframes required by FERC.

ARTICLE 7
INDEMNIFICATION

7.1 Indemnification

(a) In the event that the Class C Indemnified Parties have incurred Indemnified Costs or Losses or any other amounts are payable by Bloom or DSGH to any Class C Indemnified Parties under this Section 7.1, and Bloom or DSGH has failed to pay such amounts when due, the Class C Indemnified Parties may elect to draw on the Letter of Credit maintained pursuant to Section 2.2(d) and the LLC Agreement by delivering to the Managing Member a Class C Draw Request to satisfy such unpaid amounts; provided, no Class C Draw Request may exceed the Class C LC Cap.

(b) General Indemnification. Each Indemnifying Party agrees to indemnify, defend and hold harmless the other Indemnified Parties from and against any and all Indemnified Costs incurred by such Indemnified Parties; provided, however, except with respect to Indemnified Costs resulting from (i) fraud or willful misconduct, (ii) a Third Party Claim, or (iii) solely with respect to Bloom as the Indemnifying Party and the Class C Indemnified Parties as the Indemnified Parties, the matters described on Schedule 3.1(k), in no event will such Indemnifying Party's aggregate obligation (including any prior indemnity payments by such Indemnifying Party under this Agreement or under the LLC Agreement) to indemnify the Indemnified Party or Indemnified Parties under this Section 7.1 exceed the total Capital Contributions made by such Indemnified Party or Indemnified Parties, as the case may be, as of the date such indemnification obligations arises.

(c) Tariff Indemnity. Upon the occurrence of a Tariff Event, Bloom and DSGH agree to pay AGM or the applicable Class C Indemnified Parties the amount of any Tariff Damages. For the avoidance of doubt, neither Southern nor any of its Affiliates shall have any liability to AGM for any Tariff Damages.

"Tariff Damages" means the amount necessary, if treated as a pre-tax cash distribution to AGM by the Company, for AGM to achieve an Internal Rate of Return (as set forth in the Base Case Model) equal to six percent (6%) based on an updated Base Case Model updated solely to reflect (a) if the Tariff Event results in a reduction in the "Disbursement Rates" (as defined in the QFCP-RP Tariff or the corresponding figure in the Base Case Model) applicable to the Systems pursuant to the QFCP-RP Tariff, such reduced "Disbursement Rates", or (b) if any of the Systems are thereafter ineligible for service under the QFCP-RP Tariff, a "Disbursement Rate" equal to $0.00; provided, however, in no event shall "Tariff Damages" as of any date exceed the amounts set forth below, based on the date of the initial reduction in revenues to the Company (the "Tariff Damages Cap"):

Date	**Amount**
On or before [*]	[*]
On or before [*]	[*]
On or before [*]	[*]
On or before [*]	[*]
On or before [*]	[*]
On or before [*]	[*]
On or before [*]	$0

If the initial reduction in revenue falls in between two of the dates above, the amount of Tariff Damages will be an amount in between the two corresponding amounts, pro rata based on the number of days from the first of the two applicable dates above to the date of the initial reduction in revenue.

Bloom, DSGH and AGM acknowledge and agree that it would be impracticable or impossible to determine with precision the amount of damages resulting from a Tariff Event. It is therefore understood and agreed that: (a) the Class C Indemnified Parties may be damaged by a Tariff Event; (b) it would be impractical or impossible to fix the actual damages resulting therefrom; and (c) the amounts of the Tariff Damages are in the nature of liquidated damages, and not a penalty, and are fair and reasonable estimate of compensation for the losses that may reasonably be anticipated to incur by such failure. Each of Bloom and DSGH hereby (i) waives any argument that its failure to comply with its obligations set forth in this section would not cause irreparable harm, (ii) agrees that it shall be estopped from arguing the invalidity, or otherwise questioning the reasonableness, of the liquidated damages provided for herein, and (iii) agrees that it will consent to the entry of judgment ordering payment of such liquidated damages in any court of competent jurisdiction.

The foregoing indemnity is provided in place of and in lieu of all representations, warranties, covenants or other indemnities regarding the Tariffs by Bloom under the Transaction Documents. Further, Bloom shall not have any liability to AGM related to any Tariff Event except as expressly set forth in this Section 7.1(c) unless such Tariff Event results from any breach of an expressly-stated representation, warranty or covenant of Bloom or the Class A Member pursuant to any Transaction Document, and any recovery pursuant to this Section 7.1(c) shall be included in the consideration of the applicable Class C Indemnified Party(ies)'s damages resulting from any such breach.

(d) Tax Indemnity. [*].

“Assumed Tax Benefits” means the periodic assumed federal income tax reductions resulting from items of loss, deduction and credits, to be allocated to the Class C Indemnified Parties under the LLC Agreement, as reflected in the Base Case Model, calculated using the highest marginal rate in effect each year under Code Section 11(b)(1) and determined for all periods without regard to whether the Class C Indemnified Parties have any income, gains, or tax liability against which it is permitted to offset such loss, deduction or credit.

AGM agrees in connection with the process of determining the tax basis of the Phase 2 New Systems as follows: (i) it will provide Bloom notice of any objections or adverse feedback from the Internal Revenue Service, (ii) it will provide Bloom with advance notice and opportunity to review and comment on any filings or communications between AGM and the Internal Revenue Service, (iii) it will include Marshall & Stevens in discussions with the Internal Revenue Service (as allowed by Bloom), and (iv) it will reasonably consider Bloom feedback. AGM will have sole discretion as to all contents of its income tax returns.

(e) MOMA. Bloom agrees to indemnify, defend and hold harmless the Class C Indemnified Parties from and against and pay to the Class C Member any and all of the following (i) Losses equal to any amount with respect to which Operator fails to make payment when due under Sections 4.9 (*Warranty and Guaranty Claims*), 11.3 (*Owner's Remedies Upon Occurrence of an Operator Default*), or 12.3 (*Indemnification of Owner by Operator*) of the MOMA during the Term (as such term is defined therein), in each case solely to the extent exclusively related to the Phase 2 New Systems and allocable to a period during which the Class C Member or any of its Affiliates owns Class C Membership Interests, and (ii) Losses of the Class C Indemnified Parties incurred in connection with enforcement of the foregoing sub-clause (i) if required. For clarity, without limiting Bloom's obligations under the MOMA, Bloom is not obligated under this Section 7.1(e) to provide indemnification in respect of any Losses equal to any amount with respect to which Operator fails to make payment when due under Sections 11.3 (*Owner's Remedies Upon Occurrence of an Operator Default*) or 12.3 (*Indemnification of Owner by Operator*) of the MOMA during the Term (as such term is defined therein) that relate to a Facility generally or that relate to both the Phase 1 New Systems and the Phase 2 New Systems, in each case, if such amount is not identifiable as exclusively related to the Phase 2 New Systems.

(f) Funding Date. Bloom agrees to indemnify, defend and hold harmless AGM from and against any and all Losses incurred by AGM as a result of the failure to Commission at least 6 MWs of Phase 2 New Systems by the Funding Termination Date. In the event that less than 6 MWs of Phase 2 New Systems have not completed Commissioning by the Funding Termination Date, the Losses suffered by AGM, and the amount payable by Bloom for any claim for indemnification under this Section 7.1(f) shall be deemed to be an amount equal to the sum of (i) the Initial Contribution plus (ii) [*] (without any requirement of AGM to prove actual Losses), which shall be payable as liquidated damages and, when paid, shall constitute full and complete satisfaction of all amounts due and payable to AGM as a result of such claim. Upon receipt by AGM of such liquidated damages (and solely to the extent that entire the Phase 2 New System has been Placed in Service), AGM shall transfer, assign and convey to Bloom, and Bloom shall (or shall cause such designee to) accept and assume, 100% of the Class C Membership Interests. In the event that Bloom commissions 6 MWs or more, but not all of the Phase 2 New Systems by the Funding

Termination Date, the Class C Member may request a refund in accordance with Section 2.6(c) of the Phase 2 CapEx Agreement.

(g) Other than with respect to Indemnified Costs resulting from Third Party Claims, no claim for indemnification may be made with respect to any Indemnified Costs until the aggregate amount of such costs for which indemnification is (or previously has been) sought by the Indemnified Party under all Transaction Documents exceeds [*] and once such threshold amount of claim has been reached, the relevant Indemnified Party and its Affiliates shall have the right to be indemnified for all such Indemnified Costs. Claims for indemnification under this Agreement and the other Transaction Documents shall not be duplicative of one another and shall not allow for duplicative recoveries.

7.2 Direct Claims

In any case in which an Indemnified Party seeks indemnification under Section 7.1 that is not subject to Section 7.3 because no Third Party Claim is involved, the Indemnified Party shall promptly notify the Indemnifying Party in writing of any amounts that the Indemnified Party claims are subject to indemnification under the terms of this Article 7. The failure of the Indemnified Party to exercise promptness in such notification shall not amount to a waiver of such claim, except to the extent the resulting delay materially and adversely prejudices the position of the Indemnifying Party with respect to such claim.

7.3 Third Party Claims

An Indemnified Party shall give written notice to the Indemnifying Party promptly after it has actual knowledge of commencement or assertion of any Third Party Claim in respect of which the Indemnified Party may seek indemnification under Section 7.1. Such notice shall state the nature and basis of such Third Party Claim and the events and the amounts thereof to the extent known. Any failure to so notify the Indemnifying Party shall not relieve the Indemnifying Party from any liability that the Indemnifying Party may have to the Indemnified Party under this Article 7, except to the extent the failure to give such notice materially and adversely prejudices the Indemnifying Party. In case any such action, proceeding or claim is brought against an Indemnified Party, so long as it has acknowledged in writing to the Indemnified Party that it is liable for such Third Party Claim pursuant to this Section 7.3, the Indemnifying Party shall be entitled to participate in and, unless in the reasonable judgment of the Indemnified Party a conflict of interests between it and the Indemnifying Party may exist in respect of such Third Party Claim or such Third Party Claim is a Third Party Penalty Claim, to assume the defense thereof, with counsel selected by the Indemnifying Party and reasonably satisfactory to the Indemnified Party, and after notice from the Indemnifying Party to the Indemnified Party of its election so to assume the defense thereof, the Indemnifying Party shall not be liable to the Indemnified Party for any legal or other expenses subsequently incurred by the latter in connection with the defense thereof other than reasonable costs of investigation or defending such portion of such Third Party Penalty Claim; provided nothing contained herein shall permit Southern to control or participate in any Tax contest or dispute involving AGM or any Affiliate of AGM, or permit AGM to control or participate in any Tax contest or dispute involving Southern or any Affiliate of Southern other than the Company; and, provided, further, the Parties agree that the handling of any Tax contests involving the Company will be governed by Section 7.7 of the LLC Agreement. In the event that (i) the Indemnifying Party advises an Indemnified Party that the Indemnifying Party will not contest a claim for indemnification hereunder, (ii) the Indemnifying Party fails, within thirty (30) days of receipt of any indemnification notice to notify, in writing, such Indemnified Party of its election, to defend, settle or compromise, at its sole cost and expense, any such Third Party Claim (or discontinues its defense at any time after it commences such defense) or (iii) in the reasonable judgment of the Indemnified Party, a conflict of interests between it and the Indemnifying Party exists in respect of such Third Party Claim or the action or claim is a Third Party Penalty Claim, then the Indemnified Party may, at its option, defend, settle or otherwise compromise or pay such action or claim or Third Party Claim in each case, at the sole cost and expense of the Indemnifying Party. In any event, unless and until the Indemnifying Party elects in writing to assume and does so assume the defense of any such claim, proceeding or action, the Indemnifying Party shall be liable for the Indemnified Party's reasonable costs and expenses arising out of the defense, settlement or compromise of any such action, claim or proceeding. The Indemnified Party shall cooperate to the extent commercially reasonable with the Indemnifying Party in connection with any negotiation or defense of any such action or claim by the Indemnifying Party. The Indemnifying Party shall keep the Indemnified Party fully apprised at all times as to the status of the defense or any settlement negotiations with respect thereto. If the Indemnifying Party elects to defend any such action or claim, then the Indemnified Party shall be entitled to participate in such defense with counsel of its choice at its sole cost and expense unless otherwise specified herein; provided that any such participation of the Indemnified Party shall be at the Indemnifying Party's sole cost and expense to the extent such participation relates to a Third Party Penalty Claim. If the Indemnifying Party does not assume such defense, the Indemnified Party shall keep the Indemnifying Party apprised at all times as to the status of the defense; provided, however, that the failure to keep the Indemnifying Party so informed shall not affect the obligations of the Indemnifying Party hereunder. The Indemnifying Party shall not be liable for any settlement of any action, claim or proceeding effected without its written consent; provided, however, that the Indemnifying Party shall not unreasonably withhold, delay or condition any such consent. Notwithstanding anything in this Section 7.3 to the contrary, the Indemnifying Party shall not, without the Indemnified Party's prior written consent, (x) settle or compromise any claim or consent to entry of judgment in respect thereof which involves any condition other than payment of money by the Indemnified Party, (y) settle or compromise any claim or consent to entry of judgment in respect thereof without first demonstrating to the Indemnified Party the ability to pay such claim or judgment, or (z) settle or compromise any claim or consent to entry of judgment in respect thereof that does not include, as an unconditional term thereof, the giving by the claimant or the plaintiff to the Indemnified Party, a full and complete release from all liability in respect of such claim.

7.4 No Duplication

Any liability for indemnification under this Article 7 shall be determined without duplication of recovery. Without limiting the generality of the prior sentence, if a statement of facts, condition or event constitutes a breach of more than one representation, warranty, covenant or agreement which is subject to the indemnification obligation in Section 7.1, any other Transaction Document or Project Document, only one recovery of Indemnified Costs or Losses per Indemnified Party shall be allowed.

7.5 Sole Remedy

Except in the case of fraud, willful misconduct or failure to pay, the enforcement of the claims of the Parties under this Article 7 are the sole and exclusive remedies that a Party shall have under this Agreement for the recovery of Indemnified Costs or Losses; provided, however, that notwithstanding anything to the contrary in this Agreement, each Party hereby reserves all equitable remedies.

7.6 Survival

All representations, warranties, covenants and obligations made or undertaken by a Party in this Agreement or in any other Transaction Document are material, have been relied upon by the other Parties and shall survive until the final date for any assertion of claims as forth in Section 7.7, if and as applicable, or as otherwise provided in the Transaction Documents.

7.7 Final Date for Assertion of Indemnity Claims

All claims by an Indemnified Party for indemnification pursuant to this Article 7 resulting from breaches of representations or warranties in Section 3.1, Section 3.2, Section 3.4 and Section 3.5 shall be forever barred unless the other party is notified within eighteen (18) months after the applicable Subsequent Funding Date; provided, that notwithstanding the foregoing, the representations in Section 3.1(g), and Section 3.1(k) shall survive until that date which is sixty (60) days after the applicable statute of limitations expires and the representations in Section 3.1(a), Section 3.1(b), Section 3.1(e) and Section 3.1(f) shall survive indefinitely; and provided further that if written notice of a claim for indemnification has been given by an Indemnified Party on or prior to the last day of the respective foregoing period, then the obligation of the other party to indemnify such Indemnified Party pursuant to this Article 7 shall survive with respect to such claim until such claim is finally resolved.

7.8 Mitigation and Limitations on Indemnified Costs Notwithstanding anything to the contrary contained herein:

(a) Reasonable Steps to Mitigate. Each Indemnified Party will take, at the Indemnifying Party's own reasonable cost and expense, all reasonable commercial steps identified by Indemnifying Party to the Indemnified Parties to mitigate all Indemnified Costs (other than any such Indemnified Costs that are Taxes), which steps may include availing itself of any defenses, limitations, rights of contribution, claims against third Persons and other rights at law or equity. The Indemnified Parties will provide such evidence and documentation of the nature and extent of the Indemnified Costs as may be reasonably requested by the Indemnifying Party.

(b) Net of Insurance Benefits. All Indemnified Costs shall be net of insurance recoveries from insurance policies of the Company (including under the existing title policies) to the extent that any proceeds of such policies, less any costs, expenses or premiums incurred by the Company in connection therewith, are distributed by the Company to the Indemnified Party; provided, however, such amount shall account for any costs or expenses incurred by the Indemnified

Party in connection with obtaining insurance proceeds with respect to any breach or nonperformance hereunder.

(c) No Consequential Damages. Indemnified Costs shall not include, and an Indemnifying Party shall have no obligation to indemnify any Indemnified Party for or in respect of, any punitive, consequential or exemplary damages of any nature including but not limited to damages for lost profits or revenues or the loss or use of such profits or revenue, loss by reason of plant shutdown or inability to operate at rated capacity, increased operating expenses of plant or equipment, increased costs of purchasing or providing equipment, materials, labor, services, costs of replacement, power or capital, debt service fees or penalties, inventory or use charges, damages to reputation, damages for lost opportunities, or claims of the Company's customers, members or affiliates, regardless of whether said claim is based upon contract, warranty, tort (including negligence and strict liability) or other theory of law unless payable by such Indemnified Party as part of a Third Party Claim; provided, however, that the lost profits or revenues (and the loss or use thereof) language set forth in this Section 7.8(c) shall not be interpreted to exclude from Indemnified Costs any damages, losses, claims, liabilities, demands charges, suits, Taxes, penalties, costs or expenses that would otherwise be included within the definition of Indemnified Costs because they result from a reduction in the profits of the Company or distributions to the Members or any losses arising as a result of the loss or recapture of any ITC.

7.9 Payment of Indemnification Claims

All claims for indemnification shall be paid by Indemnifying Party in immediately available funds in U.S. dollars. Any undisputed portion of an indemnification claim shall be paid promptly by the Indemnifying Party to the Indemnified Parties involved. An Indemnifying Party may dispute any portion of an indemnification claim, provided, however, that such disputed indemnification claim shall be paid promptly by the Indemnifying Party to the Indemnified Party together with interest at a market rate upon the final determination of the payable amount of the claim (if any) by a court of competent jurisdiction.

7.10 Repayment; Subrogation

If the amount of any Indemnified Costs, at any time after the making of an indemnity payment in respect thereof, is reduced by recovery, settlement or otherwise under any insurance coverage (excluding any proceeds from self-insurance or flow through insurance policies) or under any claim, recovery, settlement or payment by or against any other entity, the amount of such reduction, less any costs, expenses or premiums incurred in connection therewith, must promptly be repaid by the Indemnified Party to the Indemnifying Party net of any Taxes imposed upon the Indemnified Party in respect of such amounts, but taking into account any Tax benefit the Indemnified Party receives as a result of such repayment. Upon making any indemnity payment (other than any indemnity payment relating to Taxes), the Indemnifying Party will, to the extent of such indemnity payment, be subrogated to all rights of the Indemnified Party against any third party, except third parties that provide insurance coverage to the Indemnified Party or its Affiliates, in respect of the Indemnified Costs to which the indemnity payment relates. Without limiting the generality or effect of any other provision hereof, each such indemnified Party and the Indemnifying Party shall duly execute upon request all instruments reasonably necessary to evidence and perfect the above described subrogation rights, and otherwise cooperate in the prosecution of such claims at the direction of the Indemnifying Party. Nothing in this Section 7.10 will be construed to require any Party to obtain or maintain any insurance coverage.

7.11 After-Tax Basis

To the extent applicable and not expressly provided for elsewhere in the Transaction Documents, all indemnity payments pursuant to this Article 7 shall be made on a grossed-up, after-tax basis, assuming for this purpose that all indemnity payments are taxable at the highest applicable marginal rate in effect each year under Code Section 11(b)(1).

ARTICLE 8
GENERAL PROVISIONS

8.1 Annexes and Schedules All Annexes and Schedules are incorporated herein by reference.

8.2 Disclosure Schedules

Any matter disclosed in any section of the Schedules shall be deemed disclosed for all purposes and all sections of the Schedules to the extent it is readily apparent from a reading of the disclosure that such disclosure is applicable to such other sections.

8.3 Amendment, Modification and Waiver

This Agreement may not be amended or modified except by an instrument in writing signed by each of the Parties to this Agreement. Any failure of Bloom, DSGH, Southern or the Company to comply with any obligation, covenant, agreement, or condition contained herein may be waived only if set forth in an instrument in writing signed by AGM, and any failure of AGM to comply with any obligation, covenant, agreement or condition contained herein may be waived only if set forth in an instrument in writing signed by Bloom, DSGH, Southern and the Company, but any such waiver or failure to insist upon strict compliance with such obligation, covenant, agreement or condition shall not operate as a waiver of, or estoppel with respect to, any other failure.

8.4 Severability

If any term or other provision of this Agreement is invalid, illegal, or incapable of being enforced by any rule of Applicable Law, or public policy, all other conditions and provisions of this Agreement shall nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated herein are not affected in any manner materially adverse to any Party.

8.5 Expenses

Except as set forth herein, each Party will be responsible for paying all of its own respective reasonable legal and consultants' costs, fees and expenses incurred by itself and its

Affiliates in connection with the transactions contemplated by this Agreement and the other Transaction Documents in connection with the execution thereof and any Funding.

8.6 Parties in Interest

This Agreement shall be binding upon and, except as provided below, inure solely to the benefit of each Party and their successors and assigns, and nothing in this Agreement, express or implied, is intended to confer upon any other Person (other than the Indemnified Parties as provided in Article 7) any rights or remedies of any nature whatsoever under or by reason of this Agreement.

8.7 Notices

All notices and other communications hereunder shall be in writing and shall be deemed given if delivered personally, by a nationally recognized overnight courier, by facsimile, or mailed by registered or certified mail (return receipt requested) to the Parties at the following addresses (or at such other address for a Party as shall be specified by like notice):

(a) If to AGM, to:

Assured Guaranty Municipal Corp.
1633 Broadway
New York, NY 10019
Attention: General Counsel
Email: [*]

(b) If to the Company, to:

Diamond State Generation Partners, LLC
c/o Southern Power Company
30 Ivan Allen Jr. Blvd., NW
Bin SC 1108
Atlanta, GA 30308
Attention: [*]
Attention: [*]
E-mail: [*][*]
Telephone: [*]

(c) If to Southern, to:

Southern Power Company
30 Ivan Allen Jr. Blvd., NW
Bin SC 1108
Atlanta, GA 30308
Attention: [*]

Attention: [*]
E-mail: [*]

[*]

Telephone: [*]

and:

Smith, Anderson, Blount, Dorsett,
Mitchell & Jernigan, L.L.P.
150 Fayetteville Street, Suite 2300
Raleigh, NC 27601
Attention: [*]
Telephone: [*]
Email: [*]

(d) If to Bloom or DSGH, to:

Bloom Energy Corporation
Diamond State Generation Holdings, LLC
c/o Bloom Energy Corporation
4353 N. 1st Street
San Jose, CA 95134
Attention: [*]
Telephone: [*]

Unless otherwise provided herein, any offer, acceptance, election, approval, consent, certification, request, waiver, notice or other communication required or permitted to be given hereunder (collectively referred to as a "Notice"), shall be in writing and delivered (i) in person, (ii) by registered or certified mail with postage prepaid and return receipt requested, (iii) by recognized overnight courier service with charges prepaid or (iv) by facsimile transmission, directed to the intended recipient at the address of such Party listed in this Section 8.7 or at such other address as any Party hereafter may designate to the others in accordance with a Notice under this Section 8.7. A Notice or other communication will be deemed delivered on the earliest to occur of (a) its actual receipt when delivered in person, (b) the fifth (5th) Business Day following its deposit in registered or certified mail, with postage prepaid, and return receipt requested, (c) the second (2nd) Business Day following its deposit with a recognized overnight courier service, or (d) the date of receipt of a facsimile or, if such date of receipt is not a Business Day, the next Business Day following such date of receipt, provided the sender can and does provide evidence of successful transmission. Any Notice or other communication received on a day that is not a Business Day or later than 5:00 p.m. on a Business Day shall be deemed to be received on the next Business Day.

8.8 Counterparts

This Agreement may be executed and delivered (including by facsimile transmission or "portable document format") in one or more counterparts, all of which shall be considered one and the same agreement and shall become effective when one or more counterparts have been signed by each of the Parties and delivered to the other Party, it being understood that all Parties need not sign the same counterpart. Signatures of the Parties transmitted by facsimile or electronic mail shall be deemed to be their original signatures for all purposes.

8.9 Entire Agreement

This Agreement (together with the other Transaction Documents, the Project Documents and the IP License) constitutes the entire agreement of the Parties and supersedes all prior agreements, letters of intent and understandings, both written and oral, among the Parties with respect to the subject matter hereof.

8.10 Governing Law; Choice of Forum; Waiver of Jury Trial

THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, AS THEY APPLY TO CONTRACTS PERFORMED IN THAT STATE, WITHOUT REGARD TO PRINCIPLES OF CONFLICTS OF LAW (OTHER THAN SECTION 5-1401 OF THE NEW YORK GENERAL OBLIGATIONS LAW, WHICH SHALL APPLY TO THIS AGREEMENT). THE PARTIES HEREBY IRREVOCABLY SUBMIT TO THE EXCLUSIVE JURISDICTION OF ANY STATE OR FEDERAL COURT IN NEW YORK COUNTY, NEW YORK WITH RESPECT TO ANY ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS AGREEMENT. EACH PARTY IRREVOCABLY AND UNCONDITIONALLY WAIVES TRIAL BY JURY IN ANY ACTION, SUIT OR PROCEEDING RELATING TO A DISPUTE AND FOR ANY COUNTERCLAIM WITH RESPECT THERETO.

8.11 Public Announcements

Except for statements made or issued (i) pursuant to the Securities Act or the Securities Exchange Act of 1934, (ii) pursuant to any listing agreement with any national securities exchange or the Financial Industry Regulatory Authority, Inc., or pursuant to requirements of the New York Department of Financial Services, other regulatory authority or self-regulatory authority, or (iii) as otherwise required by Applicable Law, none of the Parties shall issue, or permit any of their respective Affiliates to issue, any press release or otherwise make any public statements with respect to this Agreement or the transactions contemplated hereby without the prior written consent of the other Parties. Subject to the prior written consent of each Party hereto (such consent not to be unreasonably withheld), AGM may issue a press release or disclose on its website or marketing materials the fact of its investment in the Company, the amount of such investment and the nature of its investment; *provided*, that all of the Parties hereto will use good faith efforts to expediently review and approve such press release, website disclosure or marketing materials. Subject to any requirements of Applicable Law, each Party will be given the opportunity to review in advance, upon the request of any other Party, as the case may be, all information relating to the transactions contemplated by the Transaction Documents that appear in any filing made in connection with the transactions contemplated hereby or thereby, other than any filing to be made by Southern or AGM to a regulator thereof.

8.12 Assignment

This Agreement and all of the provisions hereof will be binding upon and inure to the benefit of the Parties and their respective successors and permitted assigns. This Agreement may only be assigned to the same extent (and only by and to the same Persons) that membership interests in the Company are assignable pursuant to the terms of the LLC Agreement. Any attempted assignment of this Agreement other than in strict accordance with this section and the terms of the LLC Agreement shall be null and void ab initio and of no force or effect.

8.13 Relationship of Parties

This Agreement does not constitute a joint venture, association or partnership among the Parties. No express or implied term, provision or condition of this Agreement shall create, or shall be deemed to create, an agency, joint venture, partnership or any fiduciary relationship among the Parties.

[Remainder of page intentionally left blank. Signature pages to follow.]

IN WITNESS WHEREOF, each Party has caused this Equity Capital Contribution Agreement to be signed on its behalf as of the date first written above.

ASSURED GUARANTY MUNICIPAL CORP.

By: __________
Name:
Title:

DIAMOND STATE GENERATION PARTNERS, LLC

By:

Its:

By: __________
Name:
Title:

[Signature Page to the Equity Capital Contribution Agreement - Diamond State Generation Partners, LLC]

DIAMOND STATE GENERATION HOLDINGS, LLC

By:

Its:

By: __________
Name:
Title:

[Signature Page to the Equity Capital Contribution Agreement - Diamond State Generation Partners, LLC]

SP DIAMOND STATE CLASS B HOLDINGS, LLC

By: __________

Name:

Title:

[Signature Page to the Equity Capital Contribution Agreement - Diamond State Generation Partners, LLC]

BLOOM ENERGY CORPORATION

By: __________
Name:
Title:

[Signature Page to the Equity Capital Contribution Agreement - Diamond State Generation Partners, LLC]

EXHIBIT A

INITIAL FLOW OF FUNDS MEMORANDUM

EXHIBIT B

FORM OF FUNDING NOTICE

To: **Assured Guaranty Municipal Corp. (“AGM”)**

This Funding Notice, dated ________, 20_, is given pursuant to Section 2.2(b) of the Equity Capital Contribution Agreement (“ECCA”) between AGM, DIAMOND STATE GENERATION PARTNERS, LLC (the “Company”), DIAMOND STATE GENERATION HOLDINGS, LLC, BLOOM ENERGY CORPORATION, and SP DIAMOND STATE CLASS B HOLDINGS, LLC, dated December 23, 2019. Terms defined in the ECCA have the same meaning where used in this Funding Notice.

The Company hereby notifies AGM that, in connection with the Funding Date occurring on ___________, 20__, AGM shall be obligated to make the Contribution to the Company for all amounts set forth in the Payment Notice issued pursuant to Section 2.5(c) of the Phase 2 CapEx Agreement in the aggregate amount of $__________.

Included with this Funding Notice is the applicable Payment Notice referenced above.

Bloom hereby certifies that each of the applicable conditions set forth in Section 6.1 of the ECCA have been, and remain, satisfied as of the date of this Funding Notice.

This Funding Notice may be relied upon by AGM.

Signed for and on behalf of DIAMOND STATE GENERATION PARTNERS, LLC

By: ___________________________

Name:

Title:

Signed for and on behalf of BLOOM ENERGY CORPORATION

By: ___________________________

Name:

Title:

Attachment A Funding Notice

Payment Notice

EXHIBIT C

FORM OF INDEPENDENT ENGINEER CERTIFICATE

Exhibit 10.36

Redacted Exhibit: This Exhibit contains certain identified information that has been excluded because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed. Redacted information is identified by [*],

SECOND AMENDED AND RESTATED

MASTER OPERATIONS AND MAINTENANCE AGREEMENT

between

BLOOM ENERGY CORPORATION,

as Operator

and

DIAMOND STATE GENERATION PARTNERS, LLC,

as Owner

dated as of December 23, 2019

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SECOND AMENDED AND RESTATED

MASTER OPERATIONS AND MAINTENANCE AGREEMENT

This SECOND AMENDED AND RESTATED MASTER OPERATIONS AND MAINTENANCE AGREEMENT (this "Agreement"), dated as of December 23, 2019 (the "Agreement Date"), is entered into by and between BLOOM ENERGY CORPORATION, a Delaware corporation ("Operator"), and DIAMOND STATE GENERATION PARTNERS, LLC, a Delaware limited liability company ("Owner"). Operator and Owner are referred to in this Agreement individually, as a "Party" and, collectively, as the "Parties."

RECITALS

WHEREAS, Operator is in the business of designing, engineering, constructing, commissioning, operating, and maintaining on-site solid oxide fuel cell power generating Facilities comprised of Bloom Systems and BOF (as defined below);

WHEREAS, Owner is the owner of a 17.7 MW fuel cell generation project composed of Bloom Systems purchased pursuant to that certain Fuel Cell System Supply and Installation Agreement, dated June 14, 2019, by and between the Owner and Operator (such Bloom Systems, the "Phase 1 New Systems" and such agreement, the "Phase 1 CapEx Agreement") and operated by Operator pursuant to that certain Amended and Restated Master Operation and Maintenance Agreement, by and between Owner and Operator, dated June 14, 2019 (the "First A&R MOMA");

WHEREAS, on or about the Agreement Date hereof, Owner and Operator are entering into that certain Fuel Cell System Supply and Installation Agreement (the "Phase 2 CapEx Agreement"), pursuant to which, among other things, (i) Operator (as "Seller" under such Phase 2 CapEx Agreement) will sell to Owner (as "Buyer" under such Phase 2 CapEx Agreement) and Owner will purchase from Operator, new Bloom Systems with aggregate System Capacity of up to 9.8 MW (such Bloom Systems, the "Phase 2 New Systems") and all shared infrastructure BOF not already existing at the Project Site, and (ii) Operator (as "Seller" under such Phase 2 CapEx Agreement) will design, engineer, procure, construct, and commission each of the Phase 2 New Systems and such shared infrastructure BOF at the Project Sites; and

WHEREAS, Owner and Operator now wish to amend and restate the First A&R MOMA in order to, among other things, update the terms and conditions of Operator's operations and maintenance services for the Phase 1 New Systems and BOF (as defined below), provide for Operator to operate and maintain the Phase 2 New Systems and shared infrastructure BOF following such Bloom Systems' commissioning, and make certain other amendments to the First A&R MOMA, all in accordance with the terms and conditions of this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants, representations, warranties and agreements hereinafter set forth, and intending to be legally bound hereby, the Parties agree to amend and restate in its entirety the First A&R MOMA as follows:

AGREEMENT

ARTICLE I.
DEFINITIONS

Section 1.1 Definitions. As used in this Agreement, capitalized terms not otherwise defined shall have the meanings set forth below:

"A&R Administrative Services Agreement" means that certain Second Amended and Restated Administrative Services Agreement, amended and restated as of even date herewith, by and between Operator, as "Administrator," and Owner, as "Project Company."

"Actual Gas Consumption" with respect to any measurement period, the fuel consumed by the Project, measured in BTUs on a higher heating value basis as determined by the Facility Gas Meters.

"Actual kWh" means the actual electricity output in kWh produced by a Facility and measured by the Facility Meter and, where appropriate in the context of this Agreement, aggregated together with the actual electricity output of the other Facility.

"Affiliate" of any Person means a Person that directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with, the Person specified, provided that notwithstanding anything in this Agreement to the contrary, Operator is not an Affiliate of Owner. For purposes of this Agreement, the direct or indirect ownership of over fifty percent (50%) of the outstanding voting securities of an entity, or the right to receive over fifty percent (50%) of the profits or earnings of an entity shall be deemed to constitute control. Such other relationships as in fact results in actual control over the management, business and affairs of an entity, shall also be deemed to constitute control.

"Agreement" is defined in the preamble.

"Agreement Date" is defined in the preamble.

"Appraisal Procedure" means within fifteen (15) days of a Party invoking the procedure described in this definition Owner and Operator shall engage a Qualified Appraiser, mutually acceptable to them, to conclusively determine within fifteen (15) days after appointment the Fair Market Value of a Bloom System.

"Bankruptcy" as to any Person means (a) such Person admits in writing its inability to pay its debts generally as they become due; (b) such Person files a petition or answer seeking reorganization or arrangement under the federal bankruptcy laws or any other Legal Requirements of the United States of America or any State, district or territory thereof; (c) such Person makes an assignment for the benefit of creditors; (d) such Person consents to the appointment of a receiver of the whole or any substantial part of its assets; (e) such Person has a petition in bankruptcy filed against it, and such petition is not dismissed within sixty (60) days after the filing thereof; (f) a court of competent jurisdiction enters an order, judgment, or decree appointing a receiver of the whole or any substantial part of such Person's assets, and such order, judgment or decree is not vacated or set aside or stayed within sixty (60) days from the date of entry thereof; or (g) under the provisions of any other law for the relief or aid of debtors, any court of competent jurisdiction shall assume custody or control of the whole or any substantial part of such Person's assets and such custody or control is not terminated or stayed within sixty (60) days from the date of assumption of such custody or control.

"Bloom System" means a solid oxide fuel cell power generating system, capable of being powered by natural gas, which is designed, constructed and installed by Bloom Energy Corporation (a/k/a, "Operator" hereunder) and the related BOF. For the avoidance of doubt, each Phase 1 New System and each Phase 2 New System constitutes a "Bloom System" for purposes of this Agreement.

"Bloom System Meter" means, with respect to a Bloom System, the internal electricity generation meter located within such Bloom System, which is designed to measure the actual electricity output in kWh produced by such Bloom System.

"BOF" means, for each Site, the (a) existing balance of facility items included in each Facility as of the Original Agreement Date, including, as applicable, Electrical Interconnection Facilities, the natural gas supply facilities, the water supply facilities, the data communications facilities, the foundations formerly used for the Removed Systems or currently used for the Phase 1 New Systems and any other facilities and equipment formerly ancillary to the Removed Systems or currently ancillary to the Phase 1 New Systems and installed in connection with the Facility at each Site and all other things ancillary to the Facility and required on or in the vicinity of the Site which were necessary for operation of the Removed Systems prior to their decommissioning, which are necessary for operation of the Phase 1 New Systems or which are otherwise required by the Tariff or Site Lease for such Site ("Existing BOF"), and (b) any new balance of facility items installed in a Facility after the Original Agreement Date, including, as applicable, any new components in respect of Electrical Interconnection Facilities, the natural gas supply facilities, the water supply facilities, or the data communications facilities, the foundations for the Phase 1 New Systems or Phase 2 New Systems and any other facilities and equipment ancillary to the Phase 1 New Systems or Phase 2 New Systems and installed in connection with the Facility at each Site and all other things ancillary to the Facility and required on or in the vicinity of the Site which are necessary to achieve Commissioning after the Agreement Date with respect to any Phase 2 New System at each such Site or which are otherwise required by the Tariff or Site Lease for any Phase 2 New System or Site ("New BOF"). For clarity, "BOF" excludes any Existing BOF item that is removed from a Facility as part of the Installation Services as of the date of such removal.

"Brookside Facility" means all Bloom Systems and BOF located at 512 E. Chestnut Hill Road, Newark, DE 19713.

"BTUs" means British Thermal Units.

"Business Day" means a day other than a Saturday, Sunday or other day on which banks in New York, New York, or San Francisco, California, are authorized or required to close.

"Claiming Party" is defined in Section 11.6.

"Coastal Zone Permit" means [*].

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

"Commissioned" and "Commissioning" shall have the meaning afforded to such terms in the Phase 2 CapEx Agreement.

"Commissioning Date" means, with respect to any Bloom System, the date on which Commissioning of such Bloom System has occurred under the Phase 1 CapEx Agreement or the Phase 2 CapEx Agreement, as applicable.

"Confidential Information" is defined in Section 9.1.

"Documentation" means Bloom System documentation for a Facility, including testing, engineering, specifications, and operations and maintenance manuals, Training Materials, drawings, reports, standards, schematics, directions, samples and patterns, including any such Documentation required to be delivered prior to Commissioning a Bloom System pursuant to the Phase 1 CapEx Agreement or the Phase 2 CapEx Agreement, as applicable.

"DPL" means Delmarva Power & Light Company, d/b/a Delmarva Power, an investor owned utility company regulated by the Delaware Public Service Commission.

"DPL Agreements" means the service applications between Owner and DPL with respect to the REPS Act, the Tariff and the Gas Tariff, whereby DPL shall (a) serve as the agent for collection of amounts due from Owner (if any) and for disbursement of amounts due to Owner under the Tariff and (b) sell to Owner natural gas under the Gas Tariff.

"DSGP Operating Agreement" means that certain Fourth Amended and Restated Limited Liability Company Agreement of Diamond State Generation Partners, LLC, as amended and restated as of even date herewith, among Diamond State Generation Holdings, LLC, SP Diamond State Class B Holdings, LLC, and Assured Guaranty Municipal Corp.

"ECCA" means that certain Equity Capital Contribution Agreement, dated as of the date hereof, among Owner, Assured Guaranty Municipal Corp., Diamond State Generation Holdings, LLC, SP Diamond State Class B Holdings, LLC, and Operator.

"Efficiency" means, with respect a Facility, as applicable, the quotient of F/E, where (a) F = the fuel consumed by the Bloom System(s) comprising such Facility measured in BTUs on a higher heating value basis as determined by the Facility Gas Meter(s) included in such Facility and (b) E = the electricity produced by the Bloom System(s), comprising such Facility measured in kWh as determined by the Facility Meter(s) included in such Facility.

"Efficiency Guaranty" is defined in Section 4.3(a).

“Efficiency Guaranty Bank” means the virtual bank maintained by Operator in accordance with Section 4.3, tracking the Project’s aggregate Efficiency for purposes of the Efficiency Guaranty.

“Efficiency Guaranty Payment Cap” means (x) the aggregate Purchase Price of all Bloom Systems constituting the Project as of the applicable date, less (y) any amounts paid hereunder pursuant to the Output Guaranty.

“Electrical Interconnection Facilities” means the equipment and facilities required to safely and reliably interconnect a Facility to the transmission system of DPL or distribution system of PJM pursuant to the Interconnection Agreement for such Facility, including the collection system between the applicable Bloom System, transformers and all switching, metering, communications, control and safety equipment, including the facilities described in any applicable Interconnection Agreement.

“Environmental Law” means any applicable federal, state, or local laws, ordinances, rules or regulations relating to (a) protection of the air, water, land, natural resources, biological resources, or (b) the exposure to, or generation, use, handling, release, treatment, storage, disposal and transportation of, Hazardous Materials, in each case, including (to the extent applicable) the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. §§ 9601 et seq.), as amended by the Superfund Amendments and Reauthorization Act of 1986, the Emergency Planning and Community Right to Know Act (42 U.S.C. §§ 11001 et seq.), the Resource Conservation and Recovery Act of 1976 (42 U.S.C. §§ 6901 et seq.), as amended by the Hazardous and Solid Waste Amendments Act of 1984, the Clean Air Act (42 U.S.C. §§ 7401 et seq.), the Clean Water Act (33 U.S.C. §§ 1251 et seq.), the Toxic Substances Control Act (15 U.S.C. §§ 2601 et seq.), the Safe Drinking Water Act (42 U.S.C. §§ 300f et seq.), the Oil Pollution Act of 1990 (33 U.S.C. §§ 2701 et seq.), the Hazardous Materials Transportation Act (49 U.S.C. §§ 5101 et seq.), and any other local, state or federal environmental statutes, and all rules, regulations, orders and decrees now or hereafter promulgated under any of the foregoing, as any of the foregoing now exist or may be changed or amended or come into effect in the future.

“Environmental Requirements” means any Environmental Law, agreement or restriction (including any condition or requirement imposed by any insurance or surety company), as the same now exists or may be changed or amended or come into effect in the future, which pertains to (a) the protection of air, water, land, natural resources, biological resources, or (b) the exposure to, or generation, use, handling, release, treatment, storage, disposal and transportation of, Hazardous Materials.

“Existing BOF” has the meaning set forth in the definition of “BOF.”

“Extended Warranty Period” means, with respect to each Bloom System, the period commencing on the Commissioning Date of such Bloom System and ending on the thirtieth (30^{th}) anniversary of such date.

"Facility" means, with respect to each of the Brookside Facility and the Red Lion Facility, the Phase 1 New Systems, the Phase 2 New Systems, and the BOF at such Site, as may at any point in time share a single Interconnection Point and be operated as a unified whole.

"Facility Meter" means the revenue quality electricity generation meter located at the metering point, which shall register all energy produced by a Facility and delivered to the Interconnection Point.

"Facility Services" is defined in Section 3.1.

"Facility Services Warranty" is defined in Section 4.1.

"Facility Gas Meter" means, with respect to a Facility, the gas meter at the applicable Site, measuring the gas supplied to the Bloom Systems operating at such Site pursuant to the applicable Gas Supply Agreement.

"Fair Market Value" means, with respect to any Bloom System, the price at which such asset would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell, and both having reasonable knowledge of the relevant facts, and specifically with respect to a Bloom System or any portion thereof, as determined consistently with Section 4.05 of Revenue Procedure 2007-65.

"FERC" means the Federal Energy Regulatory Commission and any successor.

"First A&R MOMA" is defined in the Recitals.

"Force Majeure Event" means any event or circumstance that (a) prevents a Party from performing its obligations under this Agreement; (b) was not reasonably foreseeable by such Party; (c) was not within the reasonable control of, or the result of the negligence of such Party or a breach of this Agreement by such Party; and (d) such Party is unable to reasonably mitigate, avoid or cause to be avoided with the exercise of due diligence. "Force Majeure Event" may include, provided that the conditions in (a) through (d) in the foregoing sentence are met, a failure or interruption of performance due to an act of God, civil or military authority, war, civil disturbances, terrorist activities, fire, explosions, the external power delivery system (a/k/a the grid) being out of the required specifications or totally failing (a/k/a brownout or blackout), electric grid curtailment, or a change in Legal Requirements following the Original Agreement Date. Notwithstanding the foregoing, Force Majeure Event does not include the lack of economic resources of a Party or Operator's failure to design and construct the Facilities so as to meet the respective warranties hereunder. Force Majeure Events do not include the failure of a Party's contractor, subcontractor or supplier to furnish sufficient or proper labor, services, materials or equipment in accordance with its contractual obligations (unless such failure is caused solely by a Force Majeure Event). A Force Majeure Event includes fire and explosion, if the fire or explosion does not occur as a result of the failure of a Bloom System or BOF.

"Fundamental Representation" means the representations provided in [*], [*], [*], [*], [*] [*], [*], [*], and [*].

"GAAP" means United States generally accepted accounting principles consistently applied.

"Gas Supply Agreement" means, with respect to (a) the Brookside Facility, that certain Large Volume Gas Qualified Fuel Cell Provider – Renewable Capable Service Agreement, dated as of June 19, 2012, by and between DPL and Owner; and (b) the Red Lion Facility, that certain Large Volume Gas Qualified Fuel Cell Provider – Renewable Capable Service Agreement, dated as of December 12, 2012, by and between DPL and Owner.

"Gas Tariff" means DPL's Service Classification "LVG-QFCP-RC" filed for gas service applicable to REPS Qualified Fuel Cell Provider Projects and approved by the DPSC in Order no. 8062 dated October 18, 2011, as adopted and supplemented by DPSC's Findings, Opinion and Order No. 8079, dated December 1, 2011.

"Governmental Approvals" means (a) any authorizations, consents, approvals, licenses, rulings, permits, tariffs, rates, certifications, variances, orders, judgments, decrees by or with a relevant Governmental Authority and (b) any required notice to, any declaration of, or with, or any registration or filing by, or with, any relevant Governmental Authority.

"Governmental Authority" means any foreign, federal, state, local or other governmental, regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, court, tribunal, arbitrating body or other governmental authority, or the applicable Regional Transmission Organization or Independent System Operator subject to the jurisdiction of FERC (i.e., PJM as of the Original Agreement Date).

"Guaranteed Gas Consumption" means, with respect to any measurement period, the greatest quantity of fuel that may be consumed by the Bloom System(s) constituting the Project during such period, measured in BTUs on a higher heating value basis as determined by the Facility Gas Meters, in order to maintain the Minimum Project Efficiency Level with respect to such Bloom Systems based on Actual kWh produced by such Bloom Systems during such measurement period.

"Hazardous Material" means any hazardous or toxic material, substance, waste, pollutant, or contaminant as defined, prohibited, controlled or regulated under any Environmental Law, including, explosive or radioactive substances or wastes, hazardous or toxic substances, wastes or other pollutants, petroleum or petroleum distillates, asbestos or asbestos-containing materials, polychlorinated biphenyl, or radon gas.

"Indemnifiable Loss" means any claim, demand, suit, loss, liability, damage (including any losses arising as a result of the loss or recapture of any ITC), obligation, payment, penalty, fine, cost or expense (including the cost and expense of any investigation, action, suit, proceeding, assessment, judgment, settlement or compromise relating thereto and reasonable attorneys' fees and reasonable disbursements in connection therewith).

“Indemnified Party” is defined in Section 12.4.

“Indemnifying Party” is defined in Section 12.4.

“Installation Services” shall have the meaning afforded to such term in the Phase 1 CapEx Agreement and the Phase 2 CapEx Agreement.

“Intellectual Property” shall mean any or all of the following and all rights therein, whether arising under the laws of the United States or any other jurisdiction: (a) all patents and patent applications (and all reissues, divisions, re-examinations, renewals, extensions, provisionals, continuations and continuations-in-part thereof), patent disclosures and inventions (whether patentable or not); (b) all trade secrets, know-how and confidential and proprietary information; (c) all copyrights and copyrightable works (including computer programs) and registrations and applications therefor and any renewals, modifications and extensions thereof; (d) all moral and economic rights of authors and inventors, however denominated, throughout the world; (e) unregistered and registered design rights and any registrations and applications for registration thereof; (f) trademarks, service marks, trade names, service names, brand names, trade dress, logos, slogans, corporate names, trade styles, domain names and other source or business identifiers, whether registered or not, together with all applications therefor and all extensions and renewals thereof and all goodwill associated therewith; (g) semiconductor chip “mask” works, and registrations and applications for registration thereof; (h) database rights; (i) all other forms of intellectual property, including waivable or assignable rights of publicity or moral rights; and (j) any similar, corresponding or equivalent rights to any of the foregoing anywhere in the world.

[*]

“Interconnection Agreement” means, with respect to (a) the Brookside Facility, that certain Standard Agreement for Interconnection and Parallel Operation of Generation Facilities, dated as of March 27, 2012, by and between DPL and Owner, with respect to PJM Generation Interconnection Request Queue Position X2-083; and (b) the Red Lion Facility, that certain Interconnection Service Agreement, dated as of June 19, 2012, by and among PJM Interconnection, L.L.C., Owner, and DPL, with respect to PJM Generation Interconnection Request Queue Position X1-097.

“Interconnection Point” means, with respect to (a) the Brookside Facility, the “Point of Interconnection” specified in the Interconnection Agreement for such Facility; and (b) the Red Lion Facility, the “Point of Interconnection” specified in the Interconnection Agreement for such Facility.

“IP License” is defined in the Phase 1 CapEx Agreement or the Phase 2 CapEx Agreement, as applicable.

“IRS” means the Internal Revenue Service.

“ITC” means an investment tax credit pursuant to Code Sections 38(b)(1), 46 and 48(a).

“Knowledge” means (a) as to any Person other than a natural person, the actual knowledge (including any knowledge which would reasonably have been obtained after due inquiry) of such Person and its managers, directors officers and employees who have responsibility for the transactions contemplated by this Agreement, and (b) in respect of any Person who is a natural Person, the actual knowledge (including any knowledge which would reasonably have been obtained after due inquiry) of such Person.

“kW” means kilowatt.

“kWh” means kilowatt-hour.

“Legal Requirement” means any law, statute, act, decree, ordinance, rule, directive (to the extent having the force of law), tariff, order, treaty, code or regulation or any interpretation of any of the foregoing, including Environmental Requirements, as enacted, issued or promulgated by any Governmental Authority, NERC, any Person that NERC has delegated its authority to under the Federal Power Act or any Person that operates an interstate electric transmission system, including all amendments, modifications, extensions, replacements or re-enactments thereof, in each case applicable to or binding upon such Person or any of its properties or to which such Person or any of its property is subject.

“Liens” means any lien, security interest, mortgage, hypothecation, encumbrance or other restriction on title or property interest.

“Maintenance Specification Log” is defined in Section 5.1(a)(ii).

“Major Service Provider” is defined in Section 13.14.

“Managers” means Operations Manager and Owner Manager.

“Manufacturer’s Warranty Period” means, for each Bloom System, the period beginning on the Commissioning Date of such Bloom System and ending on the first (1^{st}) anniversary thereof.

“Material Adverse Effect” means, for any Person, any change, effect or occurrence that, individually or in the aggregate, is or could reasonably be expected to be materially adverse to (a) the business, earnings, assets, results of operations, property or condition (financial or otherwise) of such Person, (b) the validity or enforceability of this Agreement, any Site Lease or the transactions contemplated by this Agreement, or (c) any Person’s ability to perform its obligations under this Agreement or any applicable Site Lease.

“Maximum Liability” means, with respect to claims of one Party against the other Party arising with respect to (x) the Phase 1 New Systems, [*] and (y) the Phase 2 New Systems, [*].

“Minimum Project Efficiency Level” means, with respect to the Project and any measurement period, an Efficiency equal to 7,550 BTU/kWh.

"Minimum kWh" means the product of (x) (A) the number of hours in the applicable period, *minus* (B) the number of hours the applicable Bloom System(s) (or the Facility such Bloom System is incorporated into) was subject to any of the exclusions set forth in Section 4.8 (including any periods during which the applicable Bloom System(s) are ramping up or down in connection with suspended operations resulting from any such event), multiplied by (y) the applicable Minimum Power Product. An example of a calculation of the Minimum kWh is set forth in Annex A.

"Minimum Power Product" means (1) when this term is used for the Output Warranty, the aggregate System Capacity of the Bloom Systems in kW for the applicable calendar month multiplied by [*] and (2) when this term is used for the Output Guaranty, the aggregate System Capacity of the Bloom Systems in kW for the applicable calendar month multiplied by [*]. An example of a calculation of the Minimum Power Product is set forth in Annex A.

"Monthly Report" is defined in Section 5.1(a)(iii).

"MW" means megawatt.

"NERC" means the North American Electric Reliability Corporation or any successor.

"New BOF" has the meaning set forth in the definition of "BOF."

"Operations Manager" is defined in Section 3.6(a).

"Operator" is defined in the preamble.

"Operator Default" is defined in Section 11.1.

"Operator Indemnitee" is defined in Section 12.2.

"Operator Personnel" means any Person who is performing any Facility Services at the direction (or on behalf) of Operator, including the Operations Manager, any Service Technicians, subcontractors (at any tier), Service Providers (including Major Service Providers), Representatives, or agents (irrespective if such Person is employed or engaged by Owner, Operator, an Affiliate of Operator or any other Person).

"Original Agreement Date" means June 14, 2019.

"Output Guaranty" is defined in Section 4.2(a).

"Output Guaranty Bank" means, with respect to each Tranche, the virtual bank maintained by Operator in accordance with Section 4.3, tracking the aggregate output for each Tranche, as the case may be, for purposes of the Output Guaranty.

"Output Guaranty Payment Cap" means, as of any date of determination, with respect to either Tranche, the product of [*] (y) the aggregate Purchase Price of all Bloom Systems constituting such Tranche as of the applicable date.

"Output Guaranty Payment Rate" means the "Disbursement Rate" in effect pursuant to the Tariff as of the applicable date divided by [*] so that such rate is stated on a dollar-per-kWh ($/kWh) basis.

"Output Warranty" is defined in Section 4.5(a).

"Output Warranty Bank" means with respect to each Tranche, the virtual bank maintained by Operator pursuant to Section 4.5, tracking such Tranche's aggregate surplus or deficit of electricity deliveries for purposes of the Output Warranty.

"Output Warranty Correction Date" means the date on which Operator has completed the repair or replacement of Bloom Systems following a valid claim under the Output Warranty, as notified to Owner in writing.

"Output Warranty Testing Period" is defined in Section 4.9(e).

"Owner" is defined in the preamble.

"Owner Default" is defined in Section 11.2.

"Owner Indemnitee" is defined in Section 12.3(a).

"Owner Manager" is defined in Section 3.6(b).

"Party" and "Parties" have the meanings set forth in the preamble.

"Performance Standards" is defined in Section 2.3.

"Permits" means all Governmental Approvals that are necessary under applicable Legal Requirements or this Agreement to have been obtained at such time in light of the stage of development of the Project to construct, maintain, and operate the Facilities, to perform the Installation Services for the Bloom Systems as contemplated by the Phase 1 CapEx Agreement or the Phase 2 CapEx Agreement, as applicable, or to sell electricity from the Facilities (other than the Tariff) or for a Party to enter into this Agreement or to consummate any transaction contemplated hereby, including in the case of Operator, performance of the Facility Services, in each case in accordance with all applicable Legal Requirements.

"Permitted Liens" means any (a) obligations or duties to any Governmental Authority arising in the ordinary course of business (including under licenses and Permits held by Owner and under all Legal Requirements); (b) obligations or duties under easements, leases or other property rights; and (c) any other Liens agreed to in writing by Operator and Owner.

"Person" means any individual, partnership, limited liability company, joint venture, corporation, trust, unincorporated organization, or governmental entity or any department or agency thereof.

"Phase 1 CapEx Agreement" is defined in the Recitals.

"Phase 1 ECCA" means that certain Equity Capital Contribution Agreement, dated as of June 14, 2019, among Operator, SP Diamond State Class B Holdings, LLC, Diamond State Generation Holdings, LLC, and Owner, as amended by that certain First Amendment to Equity Capital Contribution Agreement, dated as of the date hereof.

"Phase 1 New Systems" is defined in the Recitals.

"Phase 2 CapEx Agreement" is defined in the Recitals.

"Phase 2 New Systems" is defined in the Recitals.

"PJM" means PJM Interconnection, LLC.

"PJM Agreements" is defined in the Tariff.

"PJM Market Rules" means (a) the rules and obligations set forth in Section C (*Sales of Energy, Capacity, Other Available Product*) of the Tariff, and (b) the provisions of all applicable PJM rules and procedures pertaining to generation and transmission, including the rules and procedures concerning the dispatch of generation or scheduling transmission set forth in the applicable PJM tariff, the PJM operating agreement, and applicable PJM manuals.

"Placed in Service" means, with respect to any Bloom System, the completion and performance of all of the following activities: (a) obtaining the necessary licenses and Permits (if any) for the operation of such Bloom System and the sale of power generated by the Bloom System in accordance with clause (d) of this definition, (b) satisfactory completion of all tests necessary for the proper operation of such Bloom System in accordance with clause (d) of this definition, (c) if necessary, synchronization of such Bloom System onto the electric distribution and transmission system of DPL or PJM, as applicable, and (d) the commencement of regular, continuous, daily operation of such Bloom System.

"Project" means collectively, Tranche 1 and Tranche 2.

"Project Warranty" is defined in Section 4.7(a).

"Prudent Electrical Practices" means those practices, methods, equipment, specifications and standards of safety and performance, as the same may change from time to time, as are commonly used by a significant portion of the grid-tied fuel cell electrical generation industry operating in the United States and/or approved or recommended by the NERC as good, safe and prudent engineering practices in connection with the design, construction, operation, maintenance, repair and use of electrical and other equipment, facilities and improvements of electrical generating facilities, including any applicable practices, methods, acts, guidelines, standards and criteria of FERC and all applicable Legal Requirements.

"Purchase Price" means, with respect to a Bloom System, the dollar-per-kilowatt ($/kW) purchase price paid for such Bloom System pursuant to the Phase 1 CapEx Agreement or the Phase 2 CapEx Agreement, as applicable (calculated on the basis of such Bloom System's rated System Capacity), plus any taxes paid by Owner to Operator for such Bloom System pursuant to the Phase 1 CapEx Agreement or the Phase 2 CapEx Agreement, as applicable.

"Qualified Appraiser" means a nationally recognized third-party appraiser reasonably acceptable to Owner and Operator which shall (a) be qualified to appraise power systems similar to the Bloom Systems, and experienced in such businesses in the general geographic region of the relevant Facility, and (b) not be associated with either Owner or Operator or any Affiliate thereof. If the Parties cannot agree on a third-party appraiser within fifteen (15) days of a Party invoking the Appraisal Procedure, then Marshall & Stevens Incorporated shall act as the Qualified Appraiser.

"Qualified Fuel Cell Provider" shall have the meaning afforded such term in Section 352(16) of the Renewable Energy Portfolio Standards Act, as amended by S.B. 124, enacted July 10, 2011 (Title 26, Chap. 1, section 351 et seq. of the Code of the State of Delaware).

"Qualified Fuel Cell Provider Project" shall have the meaning afforded such term in Section 352(17) of the Renewable Energy Portfolio Standards Act, as amended by S.B. 124, enacted July 10, 2011 (Title 26, Chap. 1, section 351 et seq. of the Code of the State of Delaware).

"Recapture Period" means the period from the date the last Phase 2 New System is Placed in Service until the fifth anniversary thereof.

"Red Lion Facility" means all Bloom Systems and BOF located at 1493 River Road, New Castle, DE 19720.

"Removed Systems" means those Bloom Systems at each Site which are owned by Operator and scheduled for removal by Operator.

"Representatives" of a Party means such Party's authorized representatives, including its professional and financial advisors.

"REPS Act" means the Renewable Energy Portfolio Standards Act, as amended by S.B.124, enacted July 10, 2011 (Title 26, Chap. 1, section 351 et seq. of the Code of the State of Delaware).

"Repurchase Amount" means the sum of (a) the applicable Repurchase Value, (b) [*] of the taxes, if any, which were paid by or on behalf of Owner pursuant to Section 2.4(d) of the Phase 1 CapEx Agreement or Section 2.4(d) of the Phase 2 CapEx Agreement, as applicable, for such Bloom System, and (c) [*] of any Taxes, if any, that are required to be paid by Operator in connection with the return and repurchase of such Bloom System.

"Repurchase Value" means, with respect to any Bloom System, the greater of (a) the Fair Market Value of such Bloom System (as determined under the Appraisal Procedure if Owner and Operator cannot agree as to that Fair Market Value within ten (10) days)), and (b) 100% of the Purchase Price for such Bloom System until the first anniversary of Commissioning, declining by [*]% (i.e. [*]) on such first anniversary and on each anniversary of such date thereafter (for example, on the fourth anniversary of Commissioning, the Repurchase Value will decline to [*] of the Purchase Price), in each case as calculated as of the date that Operator becomes obligated to pay such amount to Owner.

"Service Fees" is defined in Section 3.3(a).

"Service Provider" means an operation and maintenance contractor appointed by Operator and, if required, approved by Owner pursuant to Section 13.14.

"Service Technicians" is defined in Section 3.2(d).

"Site" means, with respect to the Brookside Facility and the Red Lion Facility, the real property leased to Owner for the use of such Facility pursuant to the Site Lease for such Facility.

"Site Landlord" means the applicable landlord under a Site Lease.

"Site Lease" means, with respect to (a) the Brookside Facility, that certain Lease Agreement, dated as of April 19, 2012, by and between the Delaware Department of Transportation and Owner; and (b) the Red Lion Facility, that certain Amended and Restated Lease Agreement, dated as of June 26, 2012, by and between DPL and Owner.

"Software" shall mean all computer software that is necessary for Owner to own and operate the Facilities in compliance with the terms of this Agreement, the Phase 1 CapEx Agreement, the Phase 2 CapEx Agreement, the Tariff, PJM Market Rules, the PJM Agreements, the DPL Agreements, the DSGP Operating Agreement, and the Site Leases.

"Software License" is defined in the Phase 1 CapEx Agreement or Phase 2 CapEx Agreement, as applicable.

"Specifications" means the specifications for the Bloom Systems, as applicable, as set forth in Exhibit A to the Phase 2 CapEx Agreement.

"System Capacity" means, with respect to any Bloom System, the "System Capacity" set forth on the applicable specification sheet provided by the manufacturer of such Bloom System.

"Tariff" means Service Classification "QFCP-RC" as administered by DPL, as approved by the DPSC in Order no. 8062 dated October 18, 2011, as adopted and supplemented by DPSC's Findings, Opinion and Order No. 8079, dated December 1, 2011.

"Tax" (and, with correlative meaning, "Taxes" and "Taxable") means:

(a) any taxes, customs, duties, charges, fees, levies, penalties or other assessments imposed by any federal, state, local or foreign taxing authority, including income, gross receipts, windfall profit, severance, property, production, sales, use, license, excise, franchise, net worth, employment, occupation, payroll, withholding, social security, alternative or add-on minimum, ad valorem, transfer, stamp, or environmental tax, or any other tax, custom, duty, fee, levy or other like assessment or charge of any kind whatsoever, together with any interest, penalty, addition to tax, or additional amount attributable thereto; and

(b) any liability for the payment of amounts with respect to payment of a type described in clause (a), including as a result of being a member of an affiliated, consolidated, combined or unitary group, as a result of succeeding to such liability as a result of merger, conversion or asset transfer or as a result of any obligation under any tax sharing arrangement or tax indemnity agreement.

"Term" means the period which (a) commenced on the Original Agreement Date and (b) shall, unless terminated earlier under ARTICLE XI of this Agreement or unless extended by mutual agreement of the Parties, terminate on the date that is the last day of the Warranty Period for the last Bloom System subject to the Warranty Period.

"Third Party Claim" means any claim, action, or proceeding made or brought by any Person who is not (a) a Party to this Agreement, or (b) an Affiliate of a Party to this Agreement.

"Third Party Operator" is defined in Section 11.8.

"Third Party Warranty" is defined in Section 2.6.

"Training Materials" is defined in Section 13.15.

"Tranche" means Tranche 1 or Tranche 2 individually.

"Tranche 1" means all of the Phase 1 New Systems.

"Tranche 2" means all of the Phase 2 New Systems.

"Transaction Documents" means the Phase 1 ECCA, the ECCA, the DSGP Operating Agreement, the Phase 1 CapEx Agreement, the Phase 2 CapEx Agreement, this Agreement and the A&R Administrative Services Agreement.

"Transmitting Utility" means, with respect to a Facility, the counterparty to the applicable Interconnection Agreement.

"Underperforming Bloom System" means any Bloom System that fails to deliver, in any calendar month during which the Project fails to satisfy the Output Warranty, a number of kWh greater than or equal to such Bloom System's *pro rata* portion of the Project's Minimum kWh.

"Warranty Period" means, for each Bloom System, the Manufacturer's Warranty Period, as extended or renewed by Owner pursuant to Section 3.1(b), *provided*, that the Warranty Period for each Bloom System shall in all events end on the expiration of the applicable Extended Warranty Period for such Bloom System.

"Warranty Specifications" means the Output Warranty, the Output Guaranty, and the Efficiency Guaranty.

Section 1.2 Other Definitional Provisions.

(a) All exhibits, annexes, and schedules attached to this Agreement are incorporated herein by this reference and made a part hereof for all purposes. References to sections, exhibits, annexes and schedules are, unless otherwise indicated, references to sections, exhibits, annexes and schedules to this Agreement. References to a section shall mean the referenced section and all sub-sections thereof.

(b) As used in this Agreement and in any certificate or other documents made or delivered pursuant hereto or thereto, financial and accounting terms not defined in this Agreement or in any such certificate or other document, and financial and accounting terms partly defined in this Agreement or in any such certificate or other document to the extent not defined, will have the respective meanings given to them under GAAP. To the extent that the definitions of financial and accounting terms in this Agreement or in any such certificate or other document are inconsistent with the meanings of such terms under GAAP, the definitions contained in this Agreement or in any such certificate or other document will control.

(c) The words "hereof," "herein," "hereunder," and words of similar import when used in this Agreement will refer to this Agreement as a whole and not to any particular provision of this Agreement. The terms "including" and "includes" mean "including without limitation" and "includes without limitation," respectively.

(d) The definitions contained in this Agreement are applicable to the singular as well as the plural forms of such terms and to the masculine as well as to the feminine and neuter genders of such terms.

(e) Any agreement or instrument defined or referred to herein or in any instrument or certificate delivered in connection herewith means (unless otherwise indicated herein) such agreement or instrument as from time to time amended, amended and restated, modified or supplemented and includes (in the case of agreements or instruments) references to all attachments thereto and instruments incorporated therein.

(f) Any references to a Person are also to its permitted successors and assigns.

(g) References to any statute, code or statutory provision are to be construed as a reference to the same as it exists as of the Original Agreement Date, or date a Party performed or was required to perform an obligation hereunder (as applicable), and include references to all bylaws, instruments, orders and regulations for the time being made thereunder or deriving validity therefrom unless the context otherwise requires.

ARTICLE II.
APPOINTMENT OF OPERATOR AS SERVICE PROVIDER

Section 2.1 Appointment of Operator. Subject to Section 13.13, Owner hereby appoints Operator to act as Owner's provider of Facility Services, and Operator hereby accepts such appointment and agrees to provide all such Facility Services, inclusive of all labor, equipment, materials, supplies, and tests therefor, in accordance with the terms and conditions set forth in this Agreement. Operator shall be entitled to Service Fees in respect of Facility Services rendered with respect to such Facility as described in Section 3.3.

Section 2.2 Access to Sites. Owner shall provide Operator with access to the Sites in a manner consistent with the Site Leases to permit Operator to perform the Facility Services.

Section 2.3 Performance Standards. For the purpose of this Agreement, Operator shall perform Facility Services under this Agreement in accordance and consistent with each of the following (unless the context requires otherwise), in each case to the extent applicable to the Facility Services: (A) plans and specifications subject to Permits under Legal Requirements and applicable to each Bloom System; (B) the manufacturer's recommendations with respect to all equipment and all maintenance and operating manuals or service agreements, whenever furnished or entered into, including any subsequent amendments or replacements thereof, issued by the manufacturer, provided they are consistent with generally accepted practices in the fuel cell industry; (C) the requirements of all applicable insurance policies; (D) preserving all rights to any incentive payments, warranties, indemnities or other rights or remedies, and enforcing or assisting with the enforcement of the applicable warranties, making or assisting in making all claims with respect to all insurance policies; (E) the Tariff, the PJM Market Rules, the DPL Agreements and the PJM Agreements; (F) all Legal Requirements and all Permits/Governmental Approvals; (G) any applicable provisions of the Site Leases; (H) Prudent Electrical Practices; (I) the relevant provisions of each Interconnection Agreement; (J) the Operator Corporate Safety Plan provided in Exhibit C (as updated by Operator from time to time, with a copy provided promptly to Owner); (K) the Operator Subcontractor Quality Plan provided in Exhibit D (as updated by Operator from time to time, with a copy provided promptly to Owner); (L) all Environmental Requirements; and (M) the environmental compliance duties provided in Exhibit E (collectively, the "Performance Standards"); provided, however, that meeting the Performance Standards shall not relieve Operator of its other obligations under this Agreement.

Section 2.4 Disposal; Right of First Refusal.

(a) Except as set forth in Section 11.9 or Section 13.4, in the event that Owner decides to scrap, abandon or otherwise dispose of any Bloom System, Owner shall notify Operator and Operator shall have the right but not the obligation to obtain title to the Bloom System and remove the Bloom System at Operator's cost; provided, however, that Operator will not be responsible for remediation of the Site in which the Bloom System was located.

(b) Except as set forth in Section 13.4, in the event that Owner or its Affiliates desire to sell or otherwise transfer title to any Bloom System to a transferee other than an Affiliate of Owner, Owner shall notify Operator and Operator shall have the right of first refusal to purchase or acquire the Bloom System on the same terms and conditions of such sale. In the event that Operator exercises such right of first refusal, Operator shall, promptly following payment of the purchase price of such Bloom System, remove the Bloom System at Operator's cost, including the remediation of the Site in which the Bloom System was located in accordance with the terms of the applicable Site Lease.

(c) Notwithstanding the foregoing, Operator shall not be permitted to exercise any right under this Section 2.4 if Operator is exercising the corresponding right pursuant to Section 3.6 of the Phase 1 CapEx Agreement or the Phase 2 CapEx Agreement, as applicable.

Section 2.5 Insurance. Operator shall maintain the insurance described in Annex B.

Section 2.6 Third Party Warranties. If any express or implied warranties, indemnities, guaranties, remedies, covenants and other rights which any subcontractor or supplier has made to Operator with respect to any good, service, or other deliverable furnished under this Agreement in respect of a Facility (each a "Third Party Warranty") would provide any additional rights to Owner beyond the warranties under ARTICLE IV, then (a) such Third Party Warranty providing additional rights will be for the benefit of and passed through to Owner to the fullest extent possible, (b) Operator transfers and assigns to Owner all of Operator's right, title and interest under such Third Party Warranty to exercise such additional rights, and (c) Operator hereby appoints Owner as attorney-in-fact coupled with an interest to exercise and enforce all such additional rights in the name of either Owner or Operator. Nothing in this Section 2.6 will limit Operator's obligations to Owner under ARTICLE IV.

Section 2.7 Access; Cooperation. Operator shall provide to Owner such other information that is in the possession of Operator or its Affiliates or is reasonably available to Operator regarding the permitting, engineering, construction, or operations of Operator, its subcontractors or the Facilities, and other data concerning Operator, its subcontractors or the Facilities that Owner may, from time to time, reasonably request in writing, subject to Operator's obligations of confidentiality to third parties with respect to such information and Operator's reasonable concerns regarding protection of highly confidential information and/or trade secrets. Operator shall not knowingly take any action or omit to take any action as would cause Owner to violate any Legal Requirements, and to the extent that Operator has knowledge of any such existing or prospective violation, shall take, or cause to be taken, commercially reasonable actions, to redress or mitigate any such violation, which action shall be at Operator's sole expense if Operator is obligated to perform such action as part of the Facility Services, and otherwise shall be at Owner's sole expense. For the avoidance of doubt, Operator shall not be excused from any indemnification obligations, claims for damages or Indemnifiable Losses suffered by Owner to the extent caused by Operator's violation of Legal Requirements or Owner's violation of Legal Requirements to the extent relating to, resulting from or arising out of or in connection with any act or omission by Operator, any Affiliate of Operator, or any Operator Personnel. Operator shall give to Owner prompt written notice of any disputes with Governmental Authorities. Operator shall furnish, or cause to be furnished, to Owner copies of all material documents furnished to Operator by any Governmental Authority in respect of Owner or any Facility.

ARTICLE I.

FACILITY SERVICES

Section 1.1 In General.

(a) During the Warranty Period, in consideration of the Service Fees, Operator shall service each Bloom System and all BOF (including, for clarity, all New BOF) so that each Bloom System and the Project performs in accordance with the Warranty Specifications and so that the BOF will not cause the Project to fail to perform in accordance with the Warranty Specifications (as applicable), as more fully set forth in ARTICLE IV. Without limiting the foregoing, Operator agrees to perform on behalf of Owner all operations and maintenance obligations in respect of each Facility under the Tariff, PJM Market Rules, and each Site Lease in a manner fully consistent with the terms and conditions of such documents. The services set forth in this Section 3.1, including those more fully described in this ARTICLE III, are collectively referred to herein as the "Facility Services." For clarity, but without in any way excusing Operator from its obligations hereunder or under any other Transaction Document or Owner's remedies for breach thereof, Operator shall have no liability, authority or responsibility with respect to the payment or receipt of monies from PJM or DPL or with respect to serving or receiving formal notices to or from PJM, DPL, and Site Landlords; provided, however, that Operator may informally communicate with PJM, DPL, and Site Landlords regarding routine, day-to-day Facility Services matters. For so long as Operator is performing Facility Services in respect of a Facility (or any portion thereof), the Parties intend that Operator shall be responsible for all operational and scheduled preventative maintenance (including all of the Operator's obligations under the Interconnection Agreement), and unscheduled corrective maintenance activities in respect of such Facility that are required to be performed physically at the Site. If a Party has any uncertainty regarding which Party is responsible for particular obligations, the Party's Manager shall discuss such matter with the other Party's Manager to implement the allocation of responsibility intended by this Agreement and the Parties thereafter shall, if necessary, amend this Agreement to clarify the Parties' agreement regarding such allocation of responsibility.

(b) Upon the expiration of the Manufacturer's Warranty Period with respect to any Bloom System(s), Owner may, at its option, elect to renew the Warranty Period with respect to such Bloom System(s) for a period of one (1) additional year, *provided*, that the Warranty Period for such Bloom System shall in all events end on the expiration of applicable Extended Warranty Period for such Bloom System. The Warranty Period for each Bloom System shall be automatically renewed for a period of one (1) additional year at the termination of the existing Warranty Period if Owner has not informed Operator in writing of its election to terminate the Warranty Period at the end of such existing Warranty Period at least thirty (30) days prior to the final date of such existing Warranty Period.

Section 1.2 Operation and Maintenance Services. Without limiting, and in furtherance of, Section 3.1, for the duration of the Warranty Period for the Bloom Systems comprising the Project, Operator is hereby granted the right and authority (and, to the extent necessary to carry out its functions hereunder, a limited power of attorney) and agrees, for the benefit of Owner, to safely and reliably operate, maintain and repair each Bloom System and all items of BOF (including, for clarity, all New BOF) in accordance with the terms of this Agreement and keep each such Bloom System and BOF items in good condition and repair in accordance with the Warranty Specifications, Performance Standards and Prudent Electrical Practices. During the Warranty Period, the specific responsibilities of Operator under this Agreement shall include the following:

(a) Facility Operations. Operator shall ensure that all Bloom Systems and each item of BOF are operated and maintained safely and in a manner designed to meet the Warranty Specifications and Performance Standards and as otherwise required under this Agreement.

(b) Facility Maintenance, Repair and Replacement. Operator shall perform, or cause to be performed, all scheduled and unscheduled maintenance, repair and replacement required so that each Bloom System and the Project performs in accordance with the Warranty Specifications and Performance Standards. In that regard, Operator's responsibilities hereunder shall include promptly correcting any

Bloom System or BOF malfunctions, either by (i) recalibrating or resetting the malfunctioning Bloom System or BOF, or (ii) subject to Section 4.8, repairing or replacing Bloom System or BOF components which are defective, damaged, worn or otherwise in need of repair or replacement. Operator agrees to respond in a timely manner to any Facility outage or other casualty that materially reduces power output by (A) promptly diagnosing the source of such issue and (B) if on-Site Facility Services are required, using commercially reasonable efforts to (1) dispatch field service personnel to the Site within six (6) hours of Operator's Knowledge that such on-Site Facility Services are required, and (2) cause its field service personnel to arrive at the applicable Site in order to commence diagnosis and/or repair services at the applicable Facility no later than the next Business Day. Without in any way limiting the foregoing, Operator shall in any event comply with any and all response time(s) and/or corrective activity(ies) required by the applicable Site Lease or Interconnection Agreement. Operator shall calibrate, or cause to be calibrated, not less than once per year all measurement tooling used for Facility Services as well as Bloom System and BOF measurement equipment and components, including the Facility Meter, the Facility Gas Meter, and the Bloom System Meters for all Bloom Systems. Any costs associated with services performed by third parties with respect to the calibration of the Facility Meters and Facility Gas Meters shall be paid by Owner to such third party(ies) directly or subject to reimbursement by Owner if Operator pays such costs for Owner's convenience.

(c) Repair and Replacement of Power Modules. Owner agrees that Operator may replace the power modules included in each Bloom System with power modules of a different model provided that such replacement model has been subjected to inspections and tests performed by Operator which indicate that such replacement power module model is reasonably expected to perform at least as well as the model it replaces; provided, however, that, upon Owner's request, Operator agrees to promptly provide Owner with copies of such inspection and test results. Notwithstanding the foregoing, Operator represents to Owner that it reasonably expects that any repair or replacement of power modules to be made within five (5) years of the date the applicable Bloom System was Placed in Service will have an aggregate value of replaced parts that is less than eighty percent (80%) of the Bloom System's total value (the cost of the new parts plus the value of the remaining Bloom System originally Placed in Service).

(d) Personnel. Operator shall ensure that all operations and maintenance functions contemplated by this Section are performed by technically competent and qualified personnel (the "Service Technicians"). Operator shall ensure that all Service Technicians: (i) participate in a maintenance training program and receive confirmation of having achieved the requisite level of proficiency for the tasks they are assigned to perform, and (ii) attend periodic "refresher" training programs to the extent Operator deems necessary, in its reasonable judgment.

(e) Spare Parts. Operator shall establish and maintain an adequate inventory of spare parts in one or more locations to facilitate scheduled and unscheduled maintenance required on the Facilities.

(f) Programs and Procedures. Operator represents and warrants to Owner that, as of the Agreement Date, Operator has adopted and implemented (and until the end of the Warranty Period Operator shall maintain) programs and procedures, consistent with Prudent Electrical Practices, intended to ensure safe and reliable operation of the Facilities. Operator may update such programs and procedures from time-to-time during the Term as it may determine appropriate, in its reasonable judgment and in accordance with Prudent Electrical Practices. Owner may, not more than once per calendar year and at Owner's sole cost and expense, review such programs and procedures from time to time to confirm compliance with Prudent Electrical Practices. Owner may from time to time provide comments on any such Operator programs and procedures and Operator agrees to consider any such comments in good faith; provided that Owner's review and comment on any such program or procedure will not relieve Operator of any of its obligations under this Agreement.

(g) Operational Complaints. Operator will promptly provide notice to Owner if Operator has received any written communication from any Site Landlord, PJM, DPL or any other Person suggesting that such Person is dissatisfied with the operational performance of any Facility or with the manner in which Installation Services or Facility Services have been provided by Owner, Operator or any other Service Provider in respect of any Facility. If any Site Landlord, PJM, or DPL misdirects any written notice to Operator that should have been delivered to Owner under the applicable contract between Owner and such Person related to the applicable Facility, Operator shall promptly deliver such written notice to Owner.

(h) Operations, Maintenance, Repairs and Replacements Procedures. Without in any way limiting Operator's obligations pursuant to this Section 3.2, Operator shall perform all operations, maintenance, repairs and replacement work in accordance with the provisions of Schedule 3.2.

(i) Title. Title to all replacement items, parts, materials and equipment supplied under or pursuant to this Agreement shall transfer to Owner upon installation or inclusion and commissioning in a Facility. Notwithstanding the foregoing, Operator shall be solely responsible for the management of and take title to any materials or waste generated as a result of the Facility Services, will be considered the "generator" of any wastes and the "arranger" of the disposal of any such materials or waste as those terms are defined under Environmental Laws, and shall have the right and obligation to dispose of any such materials or waste in any lawful manner that it chooses in its sole discretion at the Operator's cost. Upon replacement of an item or part as part of the Facility Services provided hereunder, Operator shall promptly remove such item or part, shall take title to such removed item or part upon removal, and shall have the right and obligation to dispose of such replaced property in any lawful manner that it chooses in its sole discretion at the Operator's cost.Liens. Operator shall not directly or indirectly cause, create, incur, assume or suffer to exist any Lien on or with respect to any Site, Bloom System or Facility, and shall, within ten (10) Business Days after Operator becomes aware of the filing or creation of such Lien and at Operator's sole cost and expense, take such action as may be required to cause any Lien filed against the Site or Facility for work claimed to have been done for, or materials claimed to have been furnished to, Owner or its Affiliates to be discharged by bond or otherwise.Service Fees.

(j) In consideration of Operator's provision of the Facility Services, including all parts provided and services performed in connection with and required for the Facility Services, Owner shall compensate Operator for the Facility Services, on a monthly basis in advance, by paying Operator service fees for all Bloom Systems that have achieved Commissioning, beginning on the first day following the expiration of the Manufacturer's Warranty Period for each Bloom System, equal to (A) the rate (in $/kW) specified in Exhibit B hereto for the applicable calendar month, multiplied by (B) the aggregate System Capacity (in kW) of such Bloom System (collectively, the "Service Fees"). For purposes of Exhibit B, a "Warranty Year" with respect to a Bloom System shall mean the consecutive twelve (12) month period commencing on the first (1^{st}) anniversary date of the Commissioning Date for such Bloom System and each succeeding twelve (12) month period.

(k) If Facility Services are provided by Operator for a particular Bloom System for only a portion of any calendar month, the Service Fees due with respect to such Bloom System shall be pro-rated based on the number of days such Facility Services were provided in respect of such Bloom System during the calendar month.

(l) Service Fees shall be invoiced not later than five (5) Business Days prior to the first day of the applicable calendar month, and, subject to Section 3.3(f), shall be payable no later than the thirty (30) calendar days following such proper delivery of such invoice; *provided* that the pro rata Service Fees invoiced for the calendar month in which falls the first anniversary of the date that a Bloom System is Commissioned shall be invoiced and paid with the Service Fees for the calendar month subsequent to the one year anniversary of such Commissioning. Interest shall accrue, unless being contested in good faith, daily on the Service Fees not paid when due, at the lesser of the monthly rate of (i) one percent (1.0%) and (ii) the highest rate permissible by law on such unpaid balance. Operator shall be under no obligation to provide or perform services hereunder for any Bloom System if any invoiced Service Fees under Section 3.3(a) (other than Service Fees disputed in good faith or offset pursuant to Section 3.3(f)) have not been paid in full within thirty (30) days of invoice until such date upon which such Service Fee has been paid.

(m) If Owner disputes any amount shown in an invoice issued by Operator in accordance with Section 3.3(a): (i) Owner must pay the undisputed portion of the invoice amount within the time prescribed by Section 3.3(a), and (ii) liability for the disputed portion of that invoice will be determined in accordance with the dispute resolution procedure set out in Section 13.5.

(n) Any disputed portion of an invoiced amount which was not paid under Section 3.3(d) and is determined as being due to Operator in accordance with the dispute resolution procedure set out in Section 13.5 must be paid by Owner within ten (10) days of the determination of the dispute in accordance with the procedure set out in Section 13.5 plus, if it is determined in accordance with the dispute resolution procedures that the disputed portion was not disputed in good faith, interest calculated in accordance with Section 3.3(c).

(o) Owner shall have the sole and absolute right to set off any undisputed amounts to which it is entitled under this Agreement and which are past due, including under Section 4.9, against any amounts owed by Owner to Operator under this Agreement. The deduction of any such amounts shall operate for all purposes as a complete discharge (to the extent of such deduction) of the obligation of Owner to pay the amount from which such deduction was withheld and made. Neither the exercise of, nor the failure to exercise, such right of setoff will constitute an election of remedies or limit Owner in any manner in the enforcement of any other remedies that may be available to it.

(p) Owner at its sole option is hereby authorized to setoff any undisputed amounts owed Owner under the Phase 1 CapEx Agreement, the Phase 2 CapEx Agreement or this Agreement, as applicable, and which are past due against any amounts owed by Owner to Operator under the Phase 1 CapEx Agreement, the Phase 2 CapEx Agreement or this Agreement. The rights provided by this paragraph are in addition to and not in limitation of any other right or remedy (including any right to set-off, counterclaim, or otherwise withhold payment) to which Owner may be entitled (whether by operation of law, contract or otherwise).

(q) Owner acknowledges that the Service Fees set forth as of the Agreement Date reflect the Parties' agreement regarding such amounts based on the Operator's costs of performing the Facility Services in accordance with the terms of this Agreement, including all applicable Legal Requirements as of the Agreement Date. In the event of any change in Legal Requirements following the Agreement Date that results in a material increase in Operator's costs of performing the Facility Services following the Agreement Date, the Parties agree to negotiate in good faith regarding an appropriate adjustment to the Service Fees to reflect such increased costs.

Section 1.3 Remote Monitoring; BloomConnect. For purposes of monitoring the operational performance and determining when repair services are necessary, Operator shall monitor and evaluate the information gathered through remote monitoring of each Facility as well as the maintenance and inspection Site visits. For so long as Operator is responsible for the Facility Services in respect of any Facility, Operator shall provide Owner with access to the "BloomConnect" portal so that Owner may have access to applicable information gathered through remote monitoring of such Facility. Such access shall be provided in real time or as close to real time as practicable.

Section 1.4 Permits; Tariff.

(a) Operator shall be responsible, at its sole cost and expense, for obtaining, maintaining and complying with all Permits required to perform the Facility Services under this Agreement, and shall promptly notify Owner of any written communications from Governmental Authorities or third parties with regard to Permits or compliance with Legal Requirements, or challenges to the status of a Permit for a Facility, or any other material issues or anticipated material issues relating to obtaining or maintaining a Permit for a Facility. Owner shall cooperate with and assist Operator in obtaining all such Permits at Operator's sole cost and expense.

(b) Operator agrees to assist with the Owner's preparation and submission of all filings and notices of any nature which are required to be made by Owner under the terms of any Permit held by Owner or any Legal Requirements applicable to the Facilities or to Owner on account of the Facilities.

(c) Each of Owner and Operator shall, in connection with the matters referenced in Section 3.5(a) and Section 3.5(b), consult with each other in advance of any meeting or conference with any such Governmental Authorities or, in connection with any proceeding by any other Person, and to the extent permitted by the applicable Governmental Authority or other Person, give the other Party the opportunity to attend and participate in such meetings and conferences.

(d) If any Governmental Authority shall take any action which requires a response or action by Operator with respect to any Permits required to perform the Facility Services or related to compliance with Legal Requirements applicable to the Facility Services, Operator agrees immediately to notify Owner of the required response or action and shall proceed only with the prior advice of Owner, which shall not be unreasonably withheld, conditioned or delayed. Owner has the right to review and comment on Operator's draft responses to any Governmental Authorities regarding Permits required to perform the Facility Services or related to compliance with Legal Requirements applicable to the Facility Services prior to Operator's issuance of such response. Operator agrees to consider any comments or suggestions from Owner in good faith.

(e) Without limiting the foregoing, promptly following the Agreement Date, the Parties shall meet to discuss the applicability, desirability and timing for pursuing the "ingredient" exclusion contemplated by 40 CFR 261.2(e)(1)(i) in respect of desulfurization canisters removed from the Facilities in connection with the Facilities Services.

Section 1.5 Coordination of Relationship.

(a) Operator's Operations Manager. Operator shall at all times retain an operations manager (the "Operations Manager") who shall be dedicated to the overall supervision and management of performance of Operator's Facility Services obligations under this Agreement. Operator's initial Operations Manager is set forth on Exhibit A. Operator may, from time to time, designate another individual as a proposed replacement for the Operations Manager by notice to Owner. Operator's suggested replacement Operations Manager shall be subject to Owner's approval, which may not be unreasonably withheld or delayed in all instances. Where feasible, Owner shall have the opportunity to meet the replacement Operations Manager in person or telephonically prior to assignment. Such meeting will take place telephonically except as otherwise agreed upon by the Parties. Nothing in this paragraph shall prevent Operator from assigning interim replacements on a temporary basis to enable it to continue to timely perform its obligations while assignment of a permanent replacement is pending. During the Term, Operator shall not assign the Operations Manager duties that are inconsistent or that conflict with the obligations of the Operations Manager in respect of his or her Facility Services duties.

(b) Owner Manager. Owner will appoint an individual to serve as its primary contact person with regard to this Agreement (the "Owner Manager"). Owner's initial Owner Manager is set forth on Exhibit A. Owner may, from time to time, designate another individual as a proposed replacement for the Owner Manager by notice to Operator.

(c) Manager Meetings. The Owner Manager and the Operations Manager will serve as each Party's main contact to, and for, the other Party with regard to day-to-day matters affecting the Parties' relationship in relation to Installation Services and Facility Services. The Owner Manager and the Operations Manager (or their designees) will meet, by phone or in person, as often as they feel necessary to monitor and manage such day-to-day activities. Such managers shall operate by consensus to the extent practicable but shall have no authority to amend or waive compliance with the terms and conditions of this Agreement, or to approve actions of the Parties that are inconsistent with this Agreement. Any such waivers or amendments shall be implemented only as described in Section 13.1 or Section 13.2, as the case may be. Operator will not be relieved of any obligations to perform in accordance with this Agreement by its performance or failure to perform pursuant to any direction verbally or in writing provided by the Owner Manager.

ARTICLE II.
WARRANTIES

Section 2.1 Facility Services Warranty. Without limiting Operator's obligations under ARTICLE III, during the Warranty Period, Operator shall perform, or cause to be performed, all such Facility Services in respect of the Bloom

Systems and the BOF necessary for the Project to perform in accordance with the Warranty Specifications (the "Facility Services Warranty").

Section 2.2 Output Guaranty. With respect to each Tranche, as the case may be:

(a) During the Warranty Period, Operator shall determine within thirty (30) days after the end of each calendar month, whether such Tranche has delivered the Minimum kWh to the applicable Interconnection Points during such calendar month ("Output Guaranty").

(b) If such calculation indicates that the Actual kWh delivered by such Tranche was greater than the Minimum kWh during such calendar month, then the difference (in kWh) between Actual kWh less Minimum kWh shall be recorded as a positive balance in the Output Guaranty Bank for such Tranche.

(c) If such calculation indicates that the Actual kWh delivered by such Tranche was less than the Minimum kWh during such calendar month, then the difference (in kWh) between Minimum kWh less Actual kWh shall be recorded as a negative balance in the Output Guaranty Bank for such Tranche.

(d) Operator shall report the balance of the Output Guaranty Bank to Owner within thirty (30) days of the end of each calendar month. If at any time the Output Guaranty Bank for a Tranche has a negative balance, Owner may make a claim under Section 4.9. If Operator fails to report the results of any Output Guaranty calculation within the period required by this Section 4.2(d), Owner may perform its own calculations, notify Operator of the results of such calculation and, if applicable, make a claim under Section 4.9. An example of an Output Guaranty calculation is attached as Annex C.

Section 2.3 Project Efficiency Guaranty.

(a) During the Warranty Period, Operator shall determine within twenty (20) days after the end of each calendar month, whether the Project has performed at the Minimum Project Efficiency Level during such calendar month ("Efficiency Guaranty").

(b) If such calculation indicates that the Actual Gas Consumption of the Project was less than the Guaranteed Gas Consumption of the Project for a calendar month, then the difference (in MMBtu) between Guaranteed Gas Consumption and Actual Gas Consumption shall be recorded as a positive balance in the Efficiency Guaranty Bank.

(c) If such calculation indicates that the Actual Gas Consumption of the Project was greater than the Guaranteed Gas Consumption for a calendar month, then the difference (in MMBtu) between Actual Gas Consumption less Guaranteed

Gas Consumption shall be recorded as a negative balance in the Efficiency Guaranty Bank.

(d) Operator shall report the balance of the Efficiency Guaranty Bank to Owner within thirty (30) days of the end of each calendar month. If Operator fails to report the results of any Efficiency Guaranty calculation within the period required by this Section 4.3(d), Owner may perform its own calculations and notify Operator of the results of such calculation and, if applicable, make a claim under Section 4.9.

(e) The Parties acknowledge and agree that the balance of Efficiency Guaranty Bank as of the Agreement Date (as updated to reflect the Project's operations through November 30, 2019) equals 45,171 MMBtu.

Section 2.4 [Reserved].

Section 2.5 Output Warranty. With respect to each Tranche, as the case may be:

(a) During the Warranty Period, Operator shall determine within thirty (30) days after the end of each calendar month, whether such Tranche has delivered to the applicable Interconnection Points the Minimum kWh ("Output Warranty").

(b) If such calculation indicates that the Actual kWh delivered by such Tranche was greater than the Minimum kWh during such calendar month, then the difference (in kWh) between Actual kWh and the Minimum kWh shall be recorded as a positive balance in the Output Warranty Bank for such Tranche.

(c) If such calculation indicates that the Actual kWh delivered by such Tranche was less than the Minimum kWh during such calendar month, then the difference (in kWh) between Minimum kWh and the Actual kWh shall be recorded as a negative balance in the Output Warranty Bank for such Tranche.

(d) Operator shall report the balance of each Output Warranty Bank to Owner within thirty (30) days of the end of each calendar month. If at any time an Output Warranty Bank has a negative balance, Owner may make a claim under Section 4.9. If Operator fails to report the results of any Output Warranty calculation within the period required by this Section 4.5(d), Owner may perform its own calculations, notify Operator of the results of such calculation and, if applicable, make a claim under Section 4.9. An example of an Output Warranty calculation is attached as Annex D.

Section 2.6 [Reserved]. Project Warranty.

(a) Subject to Section 4.8 and Section 12.5(a), Operator warrants to Owner that each Tranche shall perform in accordance with the Warranty

Specifications applicable to such Tranche during the Warranty Period (collectively, the "Project Warranty").

(b) The Project Warranty is not transferable to any third person, including any Person who buys the Project, a Facility, or a Bloom System from Owner, without Operator's prior written consent (which shall not unreasonably be withheld).

(c) Any period of time in which the Warranty Specifications are not met shall not extend the Warranty Period.

Section 2.7 Exclusions. Operator shall have no obligations or liabilities under the Project Warranty to the extent caused by or arising from (a) the Bloom Systems or BOF being affected by vandalism or other third-party's actions or omissions occurring after Commissioning (other than to the extent that Operator, Operator Affiliate, the Service Provider or a subcontractor thereof fails to properly protect the Bloom Systems or BOF and Operator was required to do so under this Agreement); (b) any interruption in the supply of natural gas or natural gas interconnection services, (unless caused by Operator, Operator Affiliate, the Service Provider or a subcontractor thereof); (c) the removal of any safety device by Owner or its Representatives (as opposed to removal by Operator, Operator Affiliate, the Service Provider or a subcontractor thereof); (d) any conditions caused by unforeseeable movement in the environment in which the Bloom Systems are installed (provided that normal soil settlement, shifting, subsidence or cracking will not constitute 'unforeseeable movement'); (e) accidents, abuse, improper third party testing (unless caused by Operator, Operator Affiliate, the Service Provider or a subcontractor thereof); (f) Force Majeure Events; or (g) installation, operation, repair or modification of the Bloom Systems or BOF by anyone other than Operator, Operator's Affiliate, a Service Provider or other subcontractor thereof, or any of such Person's authorized agents. OPERATOR SHALL HAVE NO OBLIGATION UNDER THE PROJECT WARRANTY AND MAKES NO REPRESENTATION AS TO BLOOM SYSTEMS OR BOF WHICH HAVE BEEN OPENED OR MODIFIED BY ANYONE OTHER THAN OPERATOR, OPERATOR'S AFFILIATE, A SERVICE PROVIDER OR A SUBCONTRACTOR THEREOF, OR ANY OF SUCH PERSON'S REPRESENTATIVES, IN EACH CASE TO THE EXTENT OF ANY DAMAGE OR OTHER NEGATIVE CONSEQUENCE OF SUCH OPENING OR MODIFICATION.

Section 2.8 Warranty and Guaranty Claims.

(a) Subject to the provisions of Section 12.5(a), if Owner desires to make a Project Warranty claim during the Warranty Period, Owner must notify Operator of the defect or other basis for the claim in writing.

(b) If, with respect to a Tranche, on the last day of each calendar month, the Output Guaranty Bank for such Tranche has a negative balance, then Owner may make a claim under the Output Guaranty. Upon verification of such claim Operator shall make a payment to Owner within ten (10) days of receipt of such claim equal to (x) the absolute value of the balance of the Output Guaranty Bank for such Tranche multiplied by (y) the Output Guaranty Payment Rate. Upon payment of such amount, the Output Guaranty Bank for such Tranche shall be reset to zero. Notwithstanding anything to the contrary set forth in this Agreement, Operator's cumulative aggregate liability for all claims related to the Output Guaranty for each Tranche shall not exceed each such Tranche's respective Output Guaranty Payment Cap.

(c) If at any time (i) the Efficiency Guaranty Bank has a negative balance and (ii) Owner suffers a reduction in payments under the Tariff for gas usage above the Minimum Project Efficiency Level pursuant to section C.(5) of the Tariff, Owner may file a claim with Operator for the amount of such reduction and Operator shall, within thirty (30) days of such claim, make a payment to Owner in the amount of such reduction in payments. If any subsequent audit or revision of Owner's records results in payments to Owner as reimbursement of unwarranted reductions for which Operator has made a payment to Owner under this Section 4.9(c), Operator shall be owed a reimbursement of its payments to Owner hereunder to the extent of the reimbursement actually paid to Owner. Notwithstanding anything to the contrary set forth in this Agreement, Operator's cumulative aggregate liability for all claims related to the Efficiency Guaranty shall not exceed the Efficiency Guaranty Payment Cap.

(d) [Reserved].

(e) In the event of a claim relating to the Output Warranty for a given Tranche, upon receipt of such notice and verification by Operator of such warranty claim, Operator will promptly, and in all cases within ninety (90) days of the final day of the applicable calendar month giving rise to such Output Warranty claim, repair or replace, at Operator's sole option and discretion, a sufficient number of Underperforming Bloom Systems in order for such Tranche to perform consistent with the Output Warranty and will notify Owner of the Output Warranty Correction Date. The Tranche shall thereafter perform in accordance with the Output Warranty in the period commencing on the final day of the applicable calendar month giving rise to such Output Warranty claim and ending two hundred seventy (270) days following the Output Warranty Correction Date (the "Output Warranty Testing Period"). If Operator is obligated to perform any repair or replacement pursuant to this Section 4.9 and either (i) Operator has failed to notify Owner of the occurrence of the Output Warranty Correction Date within ninety (90) days of the final day of the applicable calendar month giving rise to such Output Warranty claim, or (ii) the applicable Tranche fails to perform in accordance with the Output Warranty during the Output Warranty Testing Period, then, in each case, Operator will, within thirty (30) days, pay to Owner the Repurchase Amount of such number of Underperforming Bloom Systems (calculated as of the date of such payment) as will cause the remainder of the applicable Tranche to comply with the Output Warranty calculated through the final day of the applicable calendar month in which case Operator shall be deemed to have taken title to such Underperforming Bloom Systems, such Underperforming Bloom Systems shall be deemed to no longer constitute a portion of such Tranche and Operator shall remove such Bloom System from such Tranche at its sole cost and expense. In the event that Operator is obligated to repurchase any Underperforming Bloom Systems pursuant to this Section 4.9(e) in connection with an Output Warranty claim, the first Underperforming Bloom System repurchased shall be the Bloom System in the applicable Tranche with the lowest output as a factor of its System Capacity in the prior calendar month, followed by the next lowest, and so on until Operator's repurchase obligations are satisfied.

(f) Owner is hereby notified that refurbished parts may be used in repair or replacement activities, provided that (i) any such refurbished parts will have passed the same inspections and tests performed by Operator on its new parts of the same type before such refurbished parts are used in any repair or replacement, and (ii) Operator shall within thirty (30) days of a written request therefor by Owner, provide a report for any or all Bloom Systems included in the Project that lists all components that have been replaced in any individual Bloom System. If it is determined that a Bloom System will be removed pursuant to Section 4.9(e), Operator shall at its sole cost and expense remove the Bloom System and all ancillary equipment (including the concrete pad and any other improvements to the applicable portion of the Site to the extent required under the applicable Site Lease) from the applicable Site, restoring such portion of the Site to its condition before the installation, including closing all utility connections and properly sealing any penetrations in the manner required by all Legal Requirements and the applicable Site Lease.

(g) WITHOUT IN ANY WAY LIMITING (I) OPERATOR'S OBLIGATIONS IN RESPECT OF THE MANUFACTURER'S WARRANTY UNDER THE PHASE 1 CAPEX AGREEMENT AND THE PHASE 2 CAPEX AGREEMENT, (II) OPERATOR'S OBLIGATION TO INDEMNIFY OWNER PURSUANT TO ARTICLE XII, OR (III) ANY SETOFF OR EQUITABLE REMEDIES NECESSARY TO ENFORCE OPERATOR'S EXPRESS OBLIGATIONS PURSUANT TO THIS SECTION 4.9, THE REMEDIES SET FORTH IN THIS SECTION 4.9 ARE OWNER'S SOLE AND EXCLUSIVE REMEDY, AND OPERATOR'S SOLE AND EXCLUSIVE LIABILITY, FOR THE FAILURE OF ANY BLOOM SYSTEM OR EITHER TRANCHE, AS APPLICABLE, TO PERFORM IN ACCORDANCE WITH THE WARRANTY SPECIFICATIONS.

Section 2.9 Disclaimers. EXCEPT FOR THE REPRESENTATIONS AND WARRANTIES SET FORTH IN SECTION 10.2, ARTICLE III, ARTICLE VII AND THIS ARTICLE IV, THE FACILITY SERVICES ARE PROVIDED "AS IS, WHERE IS," AND OPERATOR EXPRESSLY DISCLAIMS ANY REPRESENTATIONS OR WARRANTIES OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, AS TO LIABILITIES, OPERATIONS OF THE FACILITIES, VALUE OR QUALITY OF THE FACILITIES OR THE

PROSPECTS (FINANCIAL AND OTHERWISE), RISKS AND OTHER INCIDENTS OF THE FACILITIES (PROVIDED, THAT THE FOREGOING DISCLAIMER SHALL NOT NEGATE OR DISCLAIM ANY REPRESENTATIONS OR WARRANTIES PROVIDED UNDER ANY OF THE OTHER TRANSACTION DOCUMENTS). EXCEPT FOR THE REPRESENTATIONS AND WARRANTIES SET FORTH IN SECTION 10.2, ARTICLE III, ARTICLE VII, THIS ARTICLE IV, THE PHASE 1 CAPEX AGREEMENT AND THE PHASE 2 CAPEX AGREEMENT, OPERATOR SPECIFICALLY DISCLAIMS ANY REPRESENTATION OR WARRANTY OF MERCHANTABILITY, USAGE, SUITABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE WITH RESPECT TO THE FACILITIES, OR ANY PART THEREOF. NO PERSON IS AUTHORIZED TO MAKE ANY OTHER WARRANTY OR REPRESENTATION CONCERNING THE PERFORMANCE OF THE FACILITIES. FOR THE AVOIDANCE OF DOUBT, NOTHING CONTAINED IN THIS SECTION 4.10 SHALL EXCUSE OPERATOR FROM ITS OBLIGATION TO INDEMNIFY OWNER PURSUANT TO ARTICLE XII.

ARTICLE III.
RECORDS AND AUDITS

Section 3.1 Record-Keeping Documentation; Audit Rights.

(a) Operator shall ensure that records concerning the Facility Services activities hereunder are properly created and maintained at all times in accordance with all Legal Requirements, including FERC requirements regarding record retention for Holding Companies in 18 C.F.R. Part 368 and any successor regulations to the extent applicable to Operator. Such records shall include the following:

(i) records, reports, or other documentation reasonably requested by Owner to support an ITC eligibility determination, subject to Operator's reasonable concerns regarding protection of highly confidential information and/or trade secrets of Operator;

(ii) a separate "Maintenance Specification Log" for each Facility in a paper or electronic format (with entries made for each inspection (including any discrepancies found during such inspection), repair, replacement or servicing of components, and reportable observations made by Operator's Service Technicians); subject to Operator's reasonable concerns regarding protection of its highly confidential information and/or trade secrets, a copy of the Maintenance Specification Log shall be made available for audit by Owner not more than once per calendar quarter and Operator shall make its Representatives reasonably available to answer any questions Owner may have regarding any entry(ies) therein;

(iii) a monthly report submitted to Owner within twenty (20) days after the end of each month ("Monthly Report") detailing and documenting, on a monthly basis, the (A) Efficiency and total output (in kWh) of the Project and each Facility, and (B) total output (in kWh) of the Project and each Facility, in each case for each calendar month in the preceding month;

(iv) records and documentation shall be maintained by Operator in respect of the Project or each Facility or each Tranche, as applicable, regarding compliance with the Warranty Specifications during the Warranty Period;

(v) any other records, reports, or other documentation related to the production and sale of energy from the Facilities that Owner is required to maintain in respect of any Facility under the Tariff and PJM Market Rules;

(vi) subject to Operator's reasonable concerns regarding protection of its highly confidential information and/or trade secrets, records documenting the calibration of tooling, equipment and components consistent with the requirements of Section 3.2(b), including data used for calibration;

(vii) records and data in the form and type listed on Schedule 5.1(a)(vii);

(viii) records and documentation required to be maintained under Legal Requirements applicable to the Facility Services, and all records and data that must be timely produced and turned over to (A) DPL pursuant the Tariff (including without limitation, the Heat Rate calculations as set forth in Tariff Section C., and monthly documentation of PJM Revenues as set forth in Tariff Section H.) and the DPL Agreements; and

(ix) any other records, reports, or other documentation reasonably requested by Owner, subject to Operator's reasonable concerns regarding protection of highly confidential information and/or trade secrets of Operator.

(b) All such records required to be created and maintained pursuant to Section 5.1(a) shall (i) be kept available at Operator's office and made available for Owner's inspection upon request at all reasonable times, and (ii) be retained for the relevant retention period provided under Legal Requirements, including in 18 C.F.R. § 368.3 or any successor regulation as amended from time, to the extent applicable to Operator, or any longer period required under the Tariff, or by DPL or PJM. Any documentation prepared by Operator during the Term for the purposes of this Agreement shall be directly prepared for Owner's benefit and immediately become Owner's property. Any such documentation shall be stored by Operator on behalf of Owner until its final delivery to Owner. Operator may retain a copy of all records related to each Facility for future analysis.

(c) Owner shall have the right no more than once during any calendar year and going back no more than two (2) calendar years preceding the calendar year in which an audit takes place, upon reasonable prior written notice, including using an independent public accounting firm reasonably acceptable to Operator, to examine such records during regular business hours in the location(s) where such records are maintained by Operator for the purposes of verifying Operator's compliance with its obligations hereunder, including the accuracy of Monthly Reports and Operator's calculations in respect of Warranty Specifications. Owner shall pay the cost of the audit unless the results of the audit reveal that the Minimum kWh or Actual kWh reported by Owner in respect of the Project or any Facility during any calendar year that is audited exceeds by five percent (5%) or more the true Minimum kWh or Actual kWh, as the case may be, in which case Operator shall pay the audit costs.

Section 3.2 Reports; Other Information. Without in any way limiting Operator's other reporting, notification, and other similar obligations under this Agreement, during the Warranty Period, Operator shall furnish to Owner the following reports, notices, and other information regarding the Facility Services activities (which may be effected by e-mail communication to the Owner Manager or other appropriate Owner Representative):

(a) Promptly upon Operator's knowledge of the occurrence of any damage to any Facility or Site, notice of such damage in reasonable detail;

(b) Promptly (and in any case within three (3) Business Days) following Operator's final determination of the applicability thereof, notice that the operation of a Facility is subject to any of the exclusions described in Section 4.8;

(c) Any information Owner may reasonably request in connection with any claim filed by Owner under any insurance maintained with respect to the Facilities, and any information such insurance providers may reasonably request in connection with such claim; and

(d) Operator shall, upon Owner's reasonable request, make available to Owner appropriate members of Operator's senior technical personnel to discuss any performance issues relating to any Facility that experienced a reduction in average output in any calendar month as compared to the immediately preceding calendar month exceeding five percent (5%).

ARTICLE IV.
DATA ACCESS

Section 4.1 Access to Data and Meters. Throughout the Term, and thereafter to the extent relevant to calculations necessary for periods prior to the end of the Term and subject to any confidentiality obligation owed to any third party, any limitations under Legal Requirements as determined by Owner in its reasonable discretion, and/or any restrictions on the disclosure of information which may be subject to Intellectual Property rights restricting disclosure, at the sole cost of Operator:

(a) Owner shall grant Operator access to all data relating to the electricity production of each Facility, it being understood that it is Operator's responsibility to determine the performance of the Facility, and any other calculations as required under this Agreement, and that it is Owner's responsibility to handle all accounting and invoicing activities;

(b) Owner shall allow Operator access to all data from all Facility Meters; and

(c) Owner shall allow Operator access to Facility performance data delivered to third parties pursuant to obligations set forth in the Tariff.

(d) Operator shall be entitled to use the foregoing data for its internal business purposes, in all cases unless and to the extent such uses of or disclosures by Operator are restricted under the Tariff or Legal Requirements, including those related to privacy.

ARTICLE V.
REPRESENTATIONS AND WARRANTIES OF OPERATOR

Section 5.1 Representations and Warranties of Operator. Operator represents and warrants to Owner as of the Agreement Date, as of each Commissioning Date, and, solely with respect to any representation that expressly sets forth a different date, as of such different date, as follows:

(a) Incorporation; Qualification. Operator is a corporation duly incorporated, validly existing and in good standing under the laws of the State of Delaware and has all requisite corporate power and authority to own, lease, and operate its business as currently conducted. Operator is duly qualified to do business as a foreign corporation and is in good standing under the laws of each jurisdiction that its business, as currently being conducted, shall require it to be so qualified, except where the failure to be so qualified would not have a Material Adverse Effect on Operator or its ability to perform its obligations hereunder.

(b) Authority. Operator has full corporate power and authority to execute and deliver this Agreement and the other Transaction Documents to which it is a party and to consummate the transactions contemplated hereby and thereby. The execution and delivery by Operator of the Transaction Documents to which it is a party and the consummation by Operator of the transactions contemplated thereby have been duly and validly authorized by all necessary corporate action required on the part of Operator and the Transaction Documents to which it is a party have been duly and validly executed and delivered by Operator. Each of the Transaction Documents to which Operator is a party constitutes the legal, valid and binding agreement of Operator, enforceable against Operator in accordance with its terms, except as enforcement may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally and by general principles of equity (regardless of whether considered in a proceeding in equity or at law).

(c) Consents and Approvals; No Violation. Neither the execution, delivery and performance of this Agreement nor the other Transaction Documents to which Operator is a party nor the consummation by Operator of the transactions contemplated hereby and thereby will (i) conflict with or result in any breach of any provision of the certificate of incorporation or bylaws of Operator, (ii) with or without the giving of notice or lapse of time or both, conflict with, result in any violation or breach of, constitute a default under, result in any right to accelerate, result in the creation of any Lien (other than Permitted Liens) on Operator's assets, or create any right of termination under the conditions or provisions of any note, bond, mortgage, indenture, any material agreement or other instrument or obligation to which Operator is a party or by which it, or any material part of its assets may be bound, in each case that would individually or in the aggregate result in a Material Adverse Effect on Operator or its ability to perform its obligations hereunder or (iii) constitute violations of any law, regulation, order, judgment or decree applicable to Operator, which violations, individually or in the aggregate, would result in a Material Adverse Effect on Operator or its ability to perform its obligations hereunder.

(d) Legal Proceedings. There are no pending or, to Operator's Knowledge, threatened claims, disputes, governmental investigations, suits, actions (including non-judicial real or personal property foreclosure actions), arbitrations, legal, administrative or other proceedings of any nature, domestic or foreign, criminal or civil, at law or in equity, against Operator that challenge the enforceability of this Agreement or the other Transaction Documents to which Operator is a party or the ability of Operator to consummate the transactions contemplated hereby or thereby, in each case, that could reasonably be expected to result in a Material Adverse Effect on Operator or its ability to perform its obligations hereunder.

(e) U.S. Person. Operator is not a "foreign person" within the meaning of Section 1445(b)(2) of the Code and has provided a Certificate of Non-Foreign Status in the form and substance required by Section 1445 of the Code and the regulations thereunder.

(f) Insurance. Operator has obtained the insurance described in Annex B, all such policies remain in full force and effect, and all insurance premiums that are due and payable have been paid in full with no premium overdue.

(g) Title; Liens. As of each date title is required to pass to Owner hereunder with respect to any assets comprising a Facility, Operator has and will convey good and marketable title to such assets to be sold to Owner on such date and all such assets are free and clear of all Liens other than Permitted Liens. Except to the extent arising by law, neither Operator nor any of its subcontractors have placed any Liens on the Sites or the Facilities other than Permitted Liens. To the extent that Operator has actual Knowledge that any of its subcontractors has placed any Lien on a Facility or Site, then Operator shall cause such Liens to be discharged, or shall provide a bond in an amount and from a surety acceptable to Owner to protect against such Lien, in each case, within thirty (30) days after Operator is aware of the existence thereof. Operator shall indemnify Owner against any such lien claim, provided that if the applicable Site Lease requires additional or more stringent action, Operator shall also indemnify Owner for the costs and expenses of such actions.

(h) Intellectual Property. No Bloom System and no other product or service marketed, sold, or provided (or proposed to be marketed, sold or provided) by Operator in connection with the Facility Services violates or will violate any license or infringes or will infringe any Intellectual Property rights of any other Person. Operator owns or has the right to use and to authorize Owner to use all Intellectual Property and Software associated with the Bloom Systems so as to grant the license rights and other rights granted by Operator to Owner in respect of Bloom Systems. Operator has received no written communications alleging, and has no knowledge of, any claim that Operator has violated, or by conducting its business, would violate, infringe or misappropriate, or that the Bloom Systems violate, infringe or misappropriate, any of the patents, trademarks, service marks, tradenames, copyrights, trade secrets, mask works or other proprietary rights or processes of any other Person. No such claims or allegations are reasonably anticipated or foreseen by Operator.

(i) Consents and Approvals. As of any date Operator is required to perform an obligation hereunder, Operator has received all material third party consents which are required as of such date for the consummation and performance of the transactions contemplated hereunder.

(j) Bankruptcy. No event of Bankruptcy has occurred with respect to Operator.

(k) Material Adverse Effect.

(i) As of the Agreement Date, no Material Adverse Effect has occurred with respect to Operator or, to the Knowledge of Operator, PJM, DPL, or any Site Landlord.

(ii) As of each Commissioning Date, no Material Adverse Effect has occurred between the Agreement Date and the applicable Commissioning Date with respect to Operator or, to the Knowledge of Operator, with respect to PJM, DPL, or the Site Landlord relating to any of the Bloom Systems Commissioned on such date.

(l) Governmental Approvals. As of each of the dates each Bloom System is Commissioned, Operator, as applicable on behalf of Owner, has obtained all Governmental Approvals required for construction and operation of such Facility and each of the Governmental Approvals obtained as of such date is validly issued, final and in full force and effect and is not subject to any current legal proceeding or to any unsatisfied condition, and any applicable appeal period has expired. On each of such dates, Operator, as applicable on behalf of Owner, is in compliance in all material respects with all applicable Governmental Approvals and has not received any written notice from a Governmental Authority of an actual or potential violation of any such Governmental Approval, and none of the persons referenced in Section 5.2(b)(ii) of the Phase 2 CapEx Agreement has received any other communication from a Governmental Authority of an actual or potential violation of any such Governmental Approval.

(m) Compliance. Operator has performed in all respects all obligations, and complied in all material respects with the agreements and covenants, required to be performed by or complied with by Operator hereunder.

(n) No Breaches. As of the Agreement Date, each Interconnection Agreement, Gas Supply Agreement, and Site Lease is a legal, valid, binding and enforceable obligation of Owner and, to Operator's Knowledge, of each other party thereto, and each Interconnection Agreement, Gas Supply Agreement, and Site Lease is in full force and effect. To Operator's Knowledge, neither Owner nor any other Person party thereto is in material breach or violation of any Interconnection Agreement, Gas Supply Agreement, or Site Lease, and no event has occurred, is pending or is threatened, which, after the giving of notice, with lapse of time, or otherwise, would constitute any such breach or default by Owner or any other party thereto.

(o) QFCP-RC Tariff. During the term of this Agreement, the Project shall not fail to receive full payment and service under the Tariff for either of the following reasons:

(i) Operator fails to be a Qualified Fuel Cell Provider throughout the original term of the Tariff due to any action or inaction of Operator in violation of this Agreement; or

(ii) Operator takes any action in violation of the Phase 1 CapEx Agreement or Phase 2 CapEx Agreement or this Agreement which causes: (A) Owner not to qualify (or lose qualification) for service under the Tariff or (B) the Project not to qualify (or lose qualification) as a Qualified Fuel Cell Provider Project.

ARTICLE VI.
REPRESENTATIONS AND WARRANTIES OF OWNER

Section 6.1 Representations and Warranties of Owner. Owner represents and warrants to Operator as of the Agreement Date and as of each Commissioning Date, as follows.

(a) Organization. Owner is a limited liability company duly formed, validly existing and in good standing under the laws of the State of Delaware and has all requisite limited liability company power and authority to own, lease, and operate its business as currently conducted.

(b) Authority. Owner has full limited liability company power and authority to execute and deliver this Agreement and the other Transaction Documents to which it is a party and to consummate the transactions contemplated hereby and thereby. The execution and delivery by Owner of this Agreement and the other Transaction Documents to which it is a party and the consummation by Owner of the transactions contemplated hereby and thereby have been duly and validly authorized by all necessary corporate action required on the part of Owner and the Transaction Documents to which Owner is a party have been duly and validly executed and delivered by Owner. Each of the Transaction Documents to which Owner is a party constitutes the legal, valid and binding agreement of Owner, enforceable against Owner in accordance with its terms, except as enforcement may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally and by general principles of equity (regardless of whether considered in a proceeding in equity or at law).

(c) Consents and Approvals; No Violation. Neither the execution, delivery and performance of this Agreement nor the other Transaction Documents to which Owner is a party nor the consummation by Owner of the transactions contemplated hereby and thereby will (i) conflict with or result in any breach of any provision of the articles of formation of Owner nor Owner's limited liability company agreement, (ii) with or without the giving of notice or lapse of time or both, conflict with, result in any violation or breach of, constitute a default under, result in any right to accelerate, result in the creation of any Lien on Owner's assets, or create any right of termination under the conditions or provisions of any note, bond, mortgage, indenture, material agreement or other instrument or obligation to which Owner is a party or by which it, or any material part of its assets may be bound, in each case that would individually or in the aggregate result in a Material Adverse Effect on Owner or its ability to perform its obligations hereunder or (iii) constitute violations of any law, regulation, order, judgment or decree applicable to Owner, which violations, individually or in the aggregate, would result in a Material Adverse Effect on Owner or its ability to perform its obligations hereunder.

(d) Legal Proceedings. There are no pending or, to Owner's Knowledge, threatened claims, disputes, governmental investigations, suits, actions (including non-judicial real or personal property foreclosure actions), arbitrations, legal, administrative or other proceedings of any nature, domestic or foreign, criminal or civil, at law or in equity, by or against Owner that challenge the enforceability of this Agreement or the other Transaction Documents to which Owner is a party or the ability of Owner to consummate the transactions contemplated hereby or thereby, in each case, that could reasonably be expected to result in a Material Adverse Effect on Owner or its ability to perform its obligations hereunder.

ARTICLE VII.
CONFIDENTIALITY

Section 7.1 Confidential Information. Subject to the other terms of this ARTICLE IX each Party shall, and shall cause its Affiliates and its respective stockholders, members, subsidiaries and Representatives to, hold confidential the terms of this Agreement and all information it has obtained or obtains from the other Party in connection with this Agreement concerning Operator and Owner and their respective assets, business, operations or prospects (the "Confidential Information"), including all materials and information furnished by Operator in performance of this Agreement, regardless of form conveyed or whether financial or technical in nature, including any trade secrets and proprietary know how and Software whether such information bears a marking indicating that they are proprietary or confidential or not; provided, however, that Confidential Information shall not include (a) information that (i) is or becomes generally available to the public other than as a result of any breach of this ARTICLE IX by a Party or any of its Representatives, (ii) is or becomes available to a Party or any of its Representatives on a non-confidential basis from a source other than the other Party or its Representatives, provided that such source was not and is not bound by any contractual, legal or fiduciary obligation of confidentiality with respect to such information or (iii) was or is independently developed or conceived by a Party or its Representatives without use of or reliance upon the Confidential Information of the other Party, as evidenced by sufficient written record.

Section 7.2 Restricted Access. Subject to Section 11.8:

(a) Owner agrees that the Bloom Systems themselves contain Operator's valuable trade secrets. Owner agrees (i) to restrict the use of such information to matters relating to the Facilities, and such other purposes, if any, expressly provided herein, and (ii) to restrict access to such information as provided in Section 9.3(b).

(b) Operator's Confidential Information will not be reproduced without Operator's prior written consent, and following termination of this Agreement all copies of such written information will be returned to Operator upon written request (not to be made while materials are still of use to the operation of a Bloom System and no Owner Default has occurred and is continuing) or shall be certified by Owner as having been destroyed, unless otherwise agreed by the Parties. Owner's Confidential Information will not be reproduced by Operator without Owner's prior written consent, and following termination of this Agreement all copies of such written information will be returned to Owner upon written request or shall be certified by Operator as having been destroyed. Notwithstanding the foregoing, each Party and its Representatives may each retain archival copies of any Confidential Information to the extent required by law, regulation or professional standards or copies of Confidential Information created pursuant to the automatic backing-up of electronic files where the delivery or destruction of such files would cause undue hardship to the receiving Party, so long as any such archival or electronic file back-up copies are accessible only to legal or information technology personnel, provided that such Confidential Information will continue to be subject to the terms of this Agreement.

(c) Subject to ARTICLE X and Section 9.2(a) and Section 9.2(b), the Facility Services are provided by Operator subject to the condition that such performance does not convey any license, expressly or by implication, to manufacture, reverse engineer, duplicate or otherwise copy or reproduce any part of the Facilities, documentation or Software without Operator's express advance written permission. Subject to ARTICLE X hereof, Owner agrees not to remove the covering of any Bloom System, not to access the interior or to reverse engineer, or cause or knowingly allow any third party to open, access the interior or reverse engineer any Bloom System, BOF, or Software provided by Operator. Subject to ARTICLE X hereof, and anything to the contrary contemplated pursuant to this Agreement, only Operator or its Representatives may open or access the interior of a Facility.

Section 7.3 Permitted Disclosures.

(a) Legally Compelled Disclosure. Confidential Information may be disclosed (i) as required or requested to be disclosed by a Party or any of its Affiliates or their respective stockholders, members, subsidiaries or Representatives as a result of any applicable Legal Requirement or rule or regulation of any stock exchange, the Financial Industry Regulatory Authority, Inc., the New York Department of Financial Services or other regulatory authority or self-regulatory authority having jurisdiction over such Party, (ii) as required or requested by the IRS, the Department of Justice or the Office of the Inspector General in connection with a Facility, cash grant, or tax credits relating thereto, including in connection with a request for any private letter ruling, any determination letter or any audit, or (iii) as required under any Interconnection Agreement or any of the other Transaction Documents. If a Party becomes compelled by legal or administrative process to disclose any Confidential Information, such Party shall, to the extent permitted by Legal Requirements, provide the other Party with prompt notice of any such disclosure (other than any disclosure in connection with routine regulatory filings, reviews or audits, or requests for regulatory approvals in the ordinary course of the recipient's business, which, in each case, may be made without notice or restriction) so that the other Party may seek a protective order or other appropriate remedy with respect to the information required to be disclosed. If such protective order or other appropriate remedy is not obtained with respect to the information required to be disclosed, the first Party shall furnish only that portion of such information that it is advised by counsel is legally required to be furnished and shall exercise reasonable efforts, at the expense of the Party whose Confidential Information is being disclosed, to obtain reliable assurance that confidential treatment will be accorded such information, including, in the case of disclosures to the IRS described in clause (ii) above, to obtain reliable assurance that, to the maximum extent permitted by applicable Legal Requirements, such information will not be made available for public inspection pursuant to Section 6110 of the Code.

(b) Disclosure to Representatives. Notwithstanding the foregoing, and subject always to the restrictions in Section 9.2, a Party may disclose Confidential Information received by it (i) to its and its Affiliates' (x) actual or potential investors or financing parties, underwriters and insurers and its and their employees, consultants, legal counsel or agents who have a need to know such information and (y) auditors and advisers (including, without limitation, legal and financial advisers) who need to know such information in connection with the transactions contemplated hereby, or (ii) as required to be disclosed to rating agencies requesting such information; provided that such Party informs each such Person who has access to the Confidential Information of the confidential nature of such Confidential Information, the terms of this Agreement, and that such terms apply to them. The Parties shall use commercially reasonable efforts to ensure that each such Person complies with the terms of this Agreement and that any Confidential Information received by such Person is kept confidential.

(c) Securities Filings. A Party may file this Agreement as an exhibit to any relevant filing with the Securities Exchange Commission (or equivalent foreign agency) in accordance with Legal Requirements only after complying with the procedure set forth in this Section 9.3(c). In such event, the Party seeking such disclosure shall prepare a draft confidential treatment request and proposed redacted version of this Agreement to request confidential treatment for this Agreement, and the other Party agrees to promptly (and in any event, no less than fourteen (14) days after receipt of such confidential treatment request and proposed redactions) give its input in a reasonable manner in order to allow the Party seeking disclosure to file its request within the time lines prescribed by Legal Requirements. The Party seeking such disclosure shall exercise commercially reasonable efforts to obtain confidential treatment of the Agreement from the Securities Exchange Commission (or equivalent foreign agency) as represented by the redacted version reviewed by the other Party. Each Party shall bear its own costs in connection with such efforts. Either Party may, without the consent of the other Party, describe the transaction contemplated herein as required by Legal Requirements pursuant to the filing of a form 8-K, 10-K, 10-Q, or similar filing with the Securities and Exchange Commission.

(d) Other Permitted Disclosures. Nothing herein shall be construed as prohibiting a Party hereunder from using such Confidential Information in connection with (i) any claim against the other Party, (ii) any exercise by a Party hereunder of any of its rights hereunder, (iii) a financing or proposed financing by Operator or Owner or their respective Affiliates, (iv) a disposition or proposed disposition by any direct or indirect Affiliate of Owner of all or a portion of such Person's equity interests in Owner, (v) a disposition or proposed disposition by Owner of any Bloom System or Facility, or (vi) any disclosure required to be made pursuant to the Tariff, an Interconnection Agreement, a Gas Supply Agreement, or a Site Lease, provided that, in the case of items (iii), (iv) and (v), the potential financing party or purchaser has entered into a confidentiality agreement with respect to Confidential Information on customary terms used in confidentiality agreements in connection with corporate financings or acquisitions before any such information may be disclosed and a copy of such confidentiality agreement has been provided to the non-disclosing party for informational purposes, which copy of such confidentiality agreement may contain redactions of confidential information relating to the potential financing party or purchaser. No disclosures of Confidential Information shall be made by Owner in exercise of its rights under this Section 9.3(d) until Operator has first had the opportunity to exercise its right to take or purchase the Bloom System in question, if applicable.

ARTICLE VIII.
INTELLECTUAL PROPERTY

Section 8.1 No Software Warranty. Owner acknowledges and agrees that the use of the Software is at Owner's sole risk. Except as set forth in Section 10.2, the Software and related documentation are provided "AS IS" and without any warranty of any kind and Operator EXPRESSLY DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Section 8.2 Representations and Warranties.Operator represents and warrants to Owner as of the Agreement Date and as of each Commissioning Date as follows with respect to the Software and all other Intellectual Property that is (A) required (i) for Operator or its Affiliates to perform their respective obligations under this Agreement and each other Transaction Document, and (ii) for the continued operation of the Facilities in accordance with the Tariff and the Interconnection Agreements without a material decrease in performance of the Facilities, or (B) that is licensed, provided or otherwise made available by Operator to Owner:

(a) Operator owns or has the right to use and to authorize Owner to use all such Intellectual Property and Software; and

(b) Operator and its Affiliates are not infringing on any Intellectual Property of any third party and the Facilities do not infringe on any Intellectual Property of any third party.

ARTICLE IX.
EVENTS OF DEFAULT AND TERMINATION

Section 9.1 Operator Default. The occurrence at any time of any of the following events shall constitute an "Operator Default":

(a) Failure to Pay. The failure of Operator to pay any undisputed amounts owing to Owner on or before the day following the date on which such amounts are due and payable under the terms of this Agreement and Operator's failure to cure each such failure within ten (10) Business Days after Operator receives written notice from Owner of each such failure;

(b) Failure to Perform Other Obligations. Unless due to a Force Majeure Event, the failure of Operator to perform or cause to be performed any other material obligation required to be performed by Operator under this Agreement, or the failure of any representation and warranty set forth herein to be true and correct as and when made; provided, however, that if such failure by its nature can be cured, then Operator shall have a period of thirty (30) days after receipt of written notice of such failure to cure the same and an Operator Default shall not be deemed to exist during such period; provided, further, that if Operator commences to cure such failure during such period and is diligently and in good faith attempting to effect such cure, said period shall be extended for sixty (60) additional days; notwithstanding the foregoing, the cure period set forth above will in no event exceed (and will be deemed modified as necessary to match) the cure period applicable to any particular failure or breach under the Tariff or the applicable Interconnection Agreement, if any;

(c) Failure to Remedy Injunction. The failure of Operator to remedy any injunction that prohibits Owner's use of any Facility as contemplated by Section 12.1 within sixty (60) days of Operator's receipt of written notice of Owner being enjoined therefrom; or

(d) Bankruptcy. If Operator is subject to a Bankruptcy.

Section 9.2 Owner Default. The occurrence at any time of the following events with respect to Owner shall constitute an "Owner Default":

(a) Failure to Pay. The failure of Owner to pay any undisputed amounts owing to Operator on or before the day following the date on which such amounts are due and payable under the terms of this Agreement and Owner's failure to cure each such failure within ten (10) Business Days after Owner receives written notice of each such failure;

(b) Failure to Perform Other Obligations. Unless due to a Force Majeure Event, the failure of Owner to perform or cause to be performed any material obligation required to be performed by Owner under this Agreement or the failure of any representation and warranty set forth herein to be true and correct as and when made; provided, however, that if such failure by its nature can be cured, then Owner shall have a period of thirty (30) days after receipt of written notice of such failure to cure the same and an Owner Default shall not be deemed to exist during such period; provided, further, that if Owner commences to cure such failure during such period and is diligently and in good faith attempting to effect such cure, said period shall be extended for sixty (60) additional days; or

(c) Bankruptcy. If Owner is subject to a Bankruptcy.

Section 9.3 Owner's Remedies Upon Occurrence of an Operator Default. If an Operator Default has occurred under Section 11.1(d), Owner may terminate this Agreement by written notice, and assert all rights and remedies available to Owner under Legal Requirements subject to the limitations of liability set forth in Section 12.5. If an Operator Default has occurred under Section 11.1(a), Section 11.1(b) or Section 11.1(c), Owner may terminate this Agreement only with respect to the Bloom System(s) for which such Operator Default has occurred by written notice, and (i) assert all rights and remedies available to Owner under Legal Requirements subject to the limitations of liability set forth in Section 12.5, or (ii) require that Operator and, if so required, Operator shall repurchase the relevant Bloom System(s) in respect of which this Agreement is being terminated from Owner on an AS IS basis by paying the Repurchase Amount of any such Bloom System(s), calculated as of the date of such payment, in which case Operator shall take title to such Bloom System(s) upon paying the Repurchase Amount, and such Bloom System(s) shall no longer constitute a portion of the Project. If a Bloom System will be removed pursuant to this Section 11.3, Operator shall at its sole cost and expense remove the Bloom System and any other ancillary equipment (including the concrete pad and any other improvements to the applicable Site to the extent required under the applicable Site Lease) from the applicable Site, restoring the relevant portion of the Site to its condition before the installation, including closing all utility connections and properly sealing any Site penetrations in the manner required by all Legal Requirements and the applicable Site Lease.

Section 9.4 Operator's Remedies Upon Occurrence of an Owner Default. If an Owner Default has occurred, Operator may terminate this Agreement and assert all rights and remedies available to Operator under Legal Requirements, subject to the limitations of liability set forth in Section 12.5.

Section 9.5 Preservation of Rights. Termination of this Agreement shall not affect any rights or obligations as between the Parties which may have accrued prior to such termination or which expressly or by implication are intended to survive termination whether resulting from the event giving rise to termination or otherwise, including ARTICLE IX, ARTICLE X, and ARTICLE XII.

Section 9.6 Force Majeure. Force Majeure Events. Except as otherwise set forth in Section 11.6(b), if either Party is rendered wholly or partially unable to perform any of its obligations under this Agreement by reason of a Force Majeure Event, that Party (the "Claiming Party") will be excused from whatever performance is affected by the Force Majeure Event to the extent so affected; provided, however, that (i) the Claiming Party, within a reasonable time after the occurrence of such Force Majeure Event gives the other Party notice describing the particulars of the occurrence; (ii) the suspension of performance shall be of no greater scope and of no longer duration than is reasonably required by the Force Majeure Event; (iii) no liability of either Party for an event that arose before the occurrence of the Force Majeure Event shall be excused as a result of the Force Majeure Event; (iv) the Claiming Party shall exercise commercially reasonable efforts to (A) correct or cure the event or condition excusing performance, (B) mitigate the effects of such Force Majeure Event pending any correction or cure of the event or condition that renders it wholly or partially unable to perform any of its obligations hereunder, including as appropriate by subcontracting to Third Parties the performance of one or more of such obligations, and (C) provide the non-Claiming Party with regular reports (no less than weekly) as to its efforts to correct, cure, and mitigate the Force Majeure Event and its estimate regarding when it expects correction or cure of the event or condition excusing performance; and (v) when the Claiming Party is able to resume performance of its obligations under this Agreement, the Claiming Party shall promptly give the other Party notice to that effect and shall promptly resume performance.

(a) Termination for Extended Force Majeure Event. Owner may terminate this Agreement by written notice in the event of a Force Majeure Event which prevents Operator from performing its material obligations under this Agreement for a continuous period of at least one hundred eighty (180) days and which Owner reasonably concludes is not reasonably likely to be remedied within a further period of one hundred eighty (180) days.

Section 9.7 No Duplication of Claims; Cumulative Limitation of Liability Caps. Notwithstanding anything to the contrary in this Agreement, (a) the Parties acknowledge and agree that no claiming or indemnified party shall be entitled to a double recovery for the same monetary loss or damage under the provisions of this Agreement and the provisions of any other Transaction Document, (b) to the extent that all or any portion of the Warranty Specifications or any other warranty, guarantee or indemnification provision set forth herein is duplicative of any warranty, guarantee or indemnification coverage provided under the Phase 1 CapEx Agreement or Phase 2 CapEx Agreement, as applicable, the Parties acknowledge and agree that Owner shall be entitled to pursue recovery for money damages in respect of a single event or circumstance, at its sole option, under either this Agreement or, as applicable, the Phase 1 CapEx Agreement or Phase 2 CapEx Agreement, as applicable, and that limitation of liability caps set forth in each such agreement are to be calculated on an aggregate basis taking into account all claims for indemnification, warranty or otherwise (if any) made under this Agreement or, as applicable, Phase 1 CapEx Agreement or the Phase 2 CapEx Agreement, and (c) if an "Indemnifiable Loss" or other amount paid for any event(s) or circumstance(s) under this Agreement or, as applicable, the Phase 1 CapEx Agreement or Phase 2 CapEx Agreement, as the case may be, would be taken into account for purposes of calculating the "Maximum Liability" under such agreement, then such amount will also be taken into account for purposes of calculating the "Maximum Liability" under the other such agreement.

Section 9.8 Actions to Facilitate Continued Operations After an Owner Termination. Notwithstanding anything herein to the contrary, and without limitation of the rights set forth in this ARTICLE XI hereof, if any Facility is no longer covered by this Agreement or another agreement between Owner and Operator (or any Affiliate of Operator) regarding the operation and maintenance of such Facility as a result of the termination of this Agreement with respect to such Facility (A) in connection with an Operator Default or (B) in connection with the expiration of the Extended Warranty Period with respect to all Bloom Systems at such Facility, Owner shall be entitled to maintain, or cause a third party to maintain, such Facility (each such maintainer party, a "Third Party Operator"), including replacing consumables and components as needed or desired, including, if applicable, electricity sales pursuant to the Tariff; provided that:

(a) No less than thirty (30) calendar days prior to the event of such termination pursuant to subsection (B) above, to the extent Owner requires any maintenance services for such Facility following such termination, Owner shall notify Operator of such requirements in writing. If Operator desires to perform such maintenance services, Operator shall provide within five (5) Business Days to Owner the material terms and conditions (including the scope of services offered, the price(s) quoted for such services, and the terms of any performance warranties to be provided in connection with such services) pursuant to which it is willing to provide such maintenance services for such Facility, which shall be no less favorable to Owner than Operator's standard rates, terms and warranties as of such date. If Owner declines to engage Operator to perform such services, or the Parties are unable to execute appropriate documentation to reflect such services, Owner may (subject to Section 11.8(b)) seek to engage a Third Party Operator to perform such services, provided that, prior to engaging any such Third Party Operator to maintain such Facility, Owner shall provide written notice to Operator of the material terms and conditions on which such third party has offered to provide such service (including (X) the scope of services offered, (Y) the price(s) quoted for such services, and (Z) the terms of any performance warranties to be provided in connection with such services). Operator shall have ten (10) Business Days to notify Owner if Operator will agree to perform the applicable services for a price not to exceed the quoted amount and otherwise on terms no less favorable to Owner than those included in the notice required hereunder. If Operator agrees to provide such services, the Parties will negotiate in good faith regarding appropriate documentation to reflect such services. If Operator declines to provide such services, Owner may engage the applicable third party on terms no more favorable to such third party than those provided in the notice to Operator.

(b) Without in any way limiting the provisions of the foregoing Section 11.8(a), Owner shall in all events use commercially reasonable efforts to engage a Third Party Operator to provide such maintenance that is not a competitor of Operator or its Affiliates and is not in litigation or other material dispute with Operator.

Section 9.9 Termination at Expiration of Tariff; Removal of Facilities by Operator.

(a) Notwithstanding anything to the contrary set forth in Section 2.4(a), Owner may, by written notice to Operator delivered not less than one hundred eighty (180) days prior to the expiration of the Tariff with respect to the final Bloom System eligible for service under such Tariff, elect to abandon the Project. If Owner notified Operator of its intent to abandon the Project in connection with the expiration of the Tariff, then (i) Operator, at its sole cost, shall assume all of Owner's obligations to remove the Bloom Systems and all BOF from each Site and to restore each Site in accordance with the Performance Standards (including all requirements of each Site Lease), (ii) title to each Bloom System, item of BOF and each other Project asset shall pass from Owner to Operator as of the day the Operator removes such item from the applicable Site, and (iii) Operator shall indemnify Owner from any and all Indemnifiable Losses related to the removal and restoration of each Site in accordance with the terms of Section 12.3.

(b) In the event that Owner elects to abandon the Project pursuant to Section 11.9(a), Owner agrees to cooperate with Operator as Operator may reasonably request (and at Operator's sole cost and expense) so that Operator may satisfy its obligations pursuant to such Section 11.9(a), including assisting Operator in seeking an extension of the period to complete the removal of the Project and restoration of the Sites afforded by the Site Leases if necessary.

Section 9.10 Termination of Owner Obligations. (i) At the expiration or termination, as applicable, of the Warranty Period with respect to a Bloom System, all obligations and rights of Owner and Operator with respect to such Bloom System shall terminate and be discharged in full and (ii) at the expiration of the Term, subject to Section 11.5, all obligations and rights of Owner and Operator hereunder shall terminate and be discharged in full; *provided*, in each case of (i) and (ii), (A) such termination shall not affect any rights or obligations as between the Parties which may have accrued prior to such termination and (B) those provisions which expressly or by implication are intended to survive termination whether resulting from the event giving rise to termination or otherwise, including ARTICLE IX, ARTICLE X, and ARTICLE XII, shall survive such termination.

ARTICLE X.
INDEMNIFICATION

Section 10.1 IP Indemnity.

(a) Except as expressly limited below, Operator agrees to indemnify, defend and hold Owner, its members and its permitted successors and assigns, and their Affiliates and their respective managers, officers, directors, employees and agents harmless from and against any and all Third Party Claims and Indemnifiable Losses (including in connection with obtaining any Intellectual Property necessary for continuation of completion, operation and maintenance, and performance of the Facility Services for the Bloom Systems purchased by Owner from Operator), arising from or in connection with any alleged infringement, conflict, violation, misappropriation or misuse of any patents, copyrights, trade secrets or other third party Intellectual Property rights by the Bloom Systems purchased by Owner from Operator (or the use, operation or maintenance thereof) or the exercise of the IP License or the Software License granted pursuant to the Phase 1 CapEx Agreement or Phase 2 CapEx Agreement, as applicable. Owner shall give Operator prompt notice of any such claims. Operator shall be entitled to participate in, and, unless in the opinion of counsel for Operator a conflict of interest between the Parties may exist with respect to such claim, assume control of the defense of such claim with counsel reasonably acceptable to Owner. Owner authorizes Operator to settle or defend such claims in its sole discretion on Owner's behalf, without imposing any monetary or other obligation or liability on Owner and subject to Owner's participation rights set forth in this Section 12.1 and further provided that any such settlement: (i) includes a full and complete release in favor of Owner; and (ii) does not require any admission of fault or liability on the part of Owner. Owner shall assist Operator upon reasonable request by Operator and, at Operator's reasonable expense, in defending any such claim. If Operator does not assume the defense of such claim, or if a conflict precludes Operator from assuming the defense, then Operator shall reimburse Owner on a monthly basis for Owner's reasonable defense expenses of such claim through separate counsel of Owner's choice reasonably acceptable to Operator. Even if Operator assumes the defense of such claim, Owner may, at its sole option, participate in the defense, at Owner's expense, without relieving Operator of any of its obligations hereunder. Should Owner be enjoined from selling or using any Bloom System as a result of such claim, or should Owner reasonably and in good faith conclude that Owner is likely to be so enjoined, Operator will, at its sole option and discretion, either (i) procure or otherwise obtain for Owner the right to use or sell the Bloom System in the form purchased by Owner; (ii) modify the Bloom System so that it becomes non-infringing but still substantially meets the original functional specifications of the Bloom System (in which event, for the avoidance of doubt, all warranties hereunder shall continue to apply unmodified); (iii) upon return of the Bloom System to Operator, as directed by Operator, provide to Owner a non-infringing Bloom System meeting the functional specifications of the Bloom System, or (iv) when and if none of the first three options is reasonably available to Operator after having exercised good faith efforts to pursue such options, authorize the return of the Bloom System to Operator and, upon receipt thereof, return to Owner all monies paid by Owner to Operator for the cost of the Bloom System and BOF, net of any monies paid by Operator to Owner pursuant to the Output Warranty, Efficiency Guaranty and/or Output Guaranty to the extent such Operator payments are allocable to such Bloom System; provided that Operator shall not elect the option in the preceding clause (i) without Owner's written consent if such election could reasonably be expected to materially decrease Owner's revenues or materially increase Owner's operating expenses.

(b) THIS INDEMNITY SHALL NOT COVER ANY CLAIM:

(i) for Intellectual Property infringement, conflict, violation or misuse that would not have been caused but for any combination made by Owner of any Bloom System with any other product or products or modifications made by or on behalf of Owner to any part of the Bloom System, unless (A) such combination or modification is in accordance with Operator's specifications for the Bloom System or is otherwise contemplated in the Documentation, (B) such combination or modification is made by or on behalf of or at the written request of Operator where Operator has requested the specific combination or modification giving rise to the claim by Owner, or (C) such other product or products would not infringe the Intellectual Property rights of a third party but for the combination with any part of the Bloom System; or

(ii) for infringement of any Intellectual Property rights arising in whole or in part from any aspect of the Bloom System which was designed by or requested by Owner on a custom basis (unless Operator knew or had reason to know that such design would cause such infringement).

Section 10.2 Indemnification of Operator by Owner. Owner shall indemnify, defend and hold harmless Operator, its officers, directors, employees, shareholders, Affiliates and agents (each, an "Operator Indemnitee") from and against any and all Indemnifiable Losses asserted against or suffered by any Operator Indemnitee arising out of a Third Party Claim (other than a claim for an Operator Indemnitee's breach of any contract to which such Operator Indemnitee is a party), and in any way relating to, resulting from or arising out of or in connection with any Third Party Claims against an Operator Indemnitee to the extent arising out of or in connection with (a)(1) the negligent or intentional acts or omissions of Owner or its subcontractors, agents or employees or others under Owner's control (excluding any act or omission by any Operator Indemnitee, or any Operator Personnel), (2) a breach by Owner of its representations, warranties or obligations under this Agreement (except to the extent caused by any Operator Indemnitee or any Operator Personnel), or (3) any breach of a Site Lease or Interconnection Agreement, except to the extent relating to, resulting from or arising out of or in connection with any act or omission by Operator, any Operator Indemnitee or any Operator Personnel, or (b) the operation of any Bloom System by any Person other than Operator or an Affiliate or subcontractor of Operator (but subject to Operator's warranties, covenants and indemnities under this Agreement and any other Transaction Document to which Operator is a party); provided that Owner shall have no obligation to indemnify Operator to the extent caused by or arising out of any (i) negligence, fraud or willful misconduct of any Operator Indemnitee or the breach by Operator or any Operator Indemnitee of its covenants, representations and warranties under this Agreement, or (ii) operation of Bloom Systems by a party outside of Owner's control or direction (including any Operator Personnel) or by a party taking such action despite Owner's reasonable efforts to prevent the same.

Section 10.3 Indemnification of Owner by Operator. Operator shall indemnify, defend and hold harmless Owner, its members, managers, officers, directors, employees, Affiliates and agents (each, an "Owner Indemnitee") from and against any and all Indemnifiable Losses (other than Indemnifiable Losses addressed in Section 12.1) asserted against or suffered by any Owner Indemnitee arising out of a Third Party Claim, and in any way relating to, resulting from or arising out of or in connection with any Third Party Claims against an Owner Indemnitee to the extent arising out of or in connection with (i) the negligent or intentional acts or omissions of Operator or any Operator Personnel (other than matters addressed separately in Section 12.1, which shall be governed by the terms thereof), (ii) a breach by Operator of its representations, warranties or obligations under this Agreement, including any breach of a Site Lease or Interconnection Agreement to the extent relating to, resulting from or arising out of or in connection with any act or omission by Operator or any Operator Personnel, (iii) any injury, death, or damage to property caused by a defect in any Bloom System, BOF, or New BOF, (iv) an alleged violation by Operator of Environmental Requirements resulting in claims, penalties, fines, or other enforcement actions, or (v) any claims, penalties, fines or other enforcement actions taken by the State of Delaware Department of Natural Resources and Environmental Control relating to inaccuracies in the original application submitted in connection with the Coastal Zone Permit with respect to Hazardous Materials generated by the Red Lion Facility, including any costs incurred in proceedings to defend or amend such Coastal Zone Permit; provided that, Operator shall have no obligation to indemnify Owner to the extent caused by or arising out of (x) any negligence, fraud or willful misconduct of an Owner Indemnitee, except to the extent caused or directed by any Operator Personnel, (y), the breach by Owner or any Owner Indemnitee of its covenants, representations and warranties under this Agreement or any Site Lease or Interconnection Agreement, except to the extent such breach is caused by Operator's (or any Operator Personnel's) breach of this Agreement (including any failure to perform obligations on behalf of Owner in accordance with the terms of this Agreement), or (z) the inability of Owner to ultimately utilize any tax benefits solely as a result of insufficient taxable income or tax liability.

(a) Except as otherwise set forth in this Agreement, in the event that Owner incurs any liability, cost, loss or expense to a Site Landlord (including relating to a breach of a Site Lease) in relation to the repurchase by or return to Operator of any Bloom System under this Agreement, Operator shall indemnify and hold Owner harmless for any such liability, cost, loss or expense incurred by Owner.

(b) Operator acknowledges and agrees that each Site Landlord is an intended third party beneficiary of Operator's indemnification obligations in favor of the Owner Indemnitees and that Owner may, with Operator's reasonable consent following cooperative discussions between the Parties regarding the least disruptive manner of resolving the applicable Site Landlord claim, elect to assign to a Site Landlord the right to seek indemnification directly from Operator in the event that

Owner owes to such Site Landlord any indemnification obligations arising out of or in connection with any breach of a Site Lease or arising out of any actions or inactions of Operator under this Agreement that give rise to an indemnification obligation of Operator in favor of any Owner Indemnitee.

Section 10.4 Indemnity Claims Procedure. Except as otherwise provided in Section 12.1, if any indemnifiable claim is brought against a Party (the "Indemnified Party"), then the other Party (the "Indemnifying Party") shall be entitled to participate in, and, unless in the reasonable opinion of counsel for the Indemnifying Party a conflict of interest between the Parties may exist with respect to such claim, assume the defense of such claim, with counsel reasonably acceptable to the Indemnifying Party. If the Indemnifying Party does not assume the defense of the Indemnified Party or if a conflict precludes the Indemnifying Party from assuming the defense, then the Indemnifying Party shall reimburse the Indemnified Party on a monthly basis for the Indemnified Party's reasonable defense expenses through separate counsel of the Indemnified Party's choice. Even if the Indemnifying Party assumes the defense of the Indemnified Party with acceptable counsel, the Indemnifying Party, at its sole option, may participate in the defense, at its own expense, with counsel of its own choice without relieving the Indemnifying Party of any of its obligations hereunder.

Section 10.5 Limitation of Liability; Waiver.

(a) Notwithstanding anything to the contrary in this Agreement, in no event shall a Party be liable to the other Party for an amount in excess of the Maximum Liability unless and to the extent such liability is the result of (A) fraud, willful default, willful misconduct, or gross negligence of a Party or that Party's employees, agents, subcontractors (except that for the purposes of this provision, Operator and any applicable Operator Personnel and their respective employees, agents and subcontractors will not be deemed to be employees, agents, or Representatives or subcontractors of Owner), (B) a Third Party Claim, (C) a claim of Operator against Owner for Owner's failure to pay the Service Fees for any Facility (which amounts shall not be included in calculating Owner's Maximum Liability), (D) a claim with respect to injury to or death of any individual, (E) Operator's abandonment to the extent constituting a repudiation of this Agreement in respect of all or any part of the Facilities, (F) events or circumstances in respect of which insurance proceeds are available or that would have been available but for a failure by Operator to maintain, or comply with the terms of, insurance that it is required to obtain and maintain under this Agreement, and any amounts so received will not be included when calculating Operator's Maximum Liability, (G) a claim of Owner against Operator for Operator's breach of a Fundamental Representation or (H) a claim brought pursuant to Section 12.1. Subject always to the Maximum Liability limitations set forth in the preceding sentence, except for damages or amounts specifically provided for in this Agreement or in connection with the indemnification for damages awarded to a third party under a Third Party Claim, damages hereunder are limited to direct damages, and in no event shall a Party be liable to the other Party, and the Parties hereby waive claims, for indirect, punitive, special or consequential damages or loss of profits; provided, however, that the loss of profits language set forth in this Section 12.5(a) shall not be interpreted to exclude from Indemnifiable Losses any losses arising as a result of the loss or recapture of any ITC or recovery for any losses merely because such losses would result in a reduction in the profits of Owner, Assured Guaranty Municipal Corp., SP Diamond State Class B Holdings, LLC, or any or all of such Persons. Notwithstanding anything to the contrary set forth herein, in no event shall the limitation of liability set forth above as it pertains to Operator limit Operator's obligations to Owner for any payments owed by Operator to Owner regarding (i) the Repurchase Amount in respect of any Bloom Systems, (ii) Output Guaranty and/or Efficiency Guaranty payments, or (iii) Indemnifiable Losses arising from the loss or recapture of any ITC. Any amounts paid or payable by Operator to Owner as described in the preceding sentence will not be included when calculating Operator's Maximum Liability.

(b) Each Party hereby agrees that any claim for damages against the other Party under this ARTICLE XII shall be reduced to the extent of any insurance proceeds actually received by such claiming Party.

(c) Operator, on behalf of itself and each Operator Indemnitee hereby waives and releases Owner and each Owner Indemnitee of any and all Indemnifiable Losses arising out of or relating to any violation of Environmental Law at a Facility other than any such violation directly resulting from physical actions of Owner's subcontractors, agents or employees or others under Owner's control (excluding Operator, any Operator Affiliate or any Operator Personnel) performed at such Facility.

Section 10.6 Liquidated Damages; Estoppel. The Parties acknowledge and agree that it would be impracticable or impossible to determine with precision the amount of damages that would or may be incurred by Owner as a result of the Project's failure to satisfy the Output Warranty. It is therefore understood and agreed by the Parties that: (a) Owner may be damaged by Operator's failure to satisfy the Output Guaranty or Efficiency Guaranty; (b) it would be impractical or impossible to fix the actual damages to Owner resulting therefrom; and (c) any cash payments in respect of a claim under the Output Guaranty or Efficiency Guaranty and any Repurchase Amounts payable to Owner under Section 4.9 for failure to meet such obligations are in the nature of liquidated damages, and not a penalty, and are fair and reasonable estimate of compensation for the losses that Owner may reasonably be anticipated to incur by such failure. Operator hereby (i) waives any argument that its failure to comply with its obligations set forth in Section 4.9 would not cause Owner irreparable harm, (ii) agrees that it shall be estopped from arguing the invalidity, or otherwise questioning the reasonableness, of the liquidated damages provided for herein, and (iii) agrees that it will consent to the entry of judgment ordering payment of such liquidated damages in any court of competent jurisdiction.

Operator and Owner each agree that Owner shall be under no obligation to submit any dispute regarding the payment of any Repurchase Amount when due to the dispute resolution mechanism set forth in Section 13.5, but may rather immediately pursue whatever rights it has available under this Agreement, at law or in equity in accordance with Section 13.6 herein.

Section 10.7 Survival. The Parties' respective rights and obligations under this ARTICLE XII shall survive any total or partial termination of this Agreement.

Section 10.8 After-Tax Basis.

All tax-related indemnity payments pursuant to this ARTICLE XII which are taxable to the recipient shall be made on a grossed-up, after-tax basis, assuming for this purpose that all such indemnity payments are taxable at the highest applicable marginal rate in effect each year under Code Section 11(b)(1).

ARTICLE XI.
MISCELLANEOUS PROVISIONS

Section 11.1 Amendment and Modification. This Agreement may be amended, modified or supplemented only by written agreement of Owner and Operator.

Section 11.2 Waiver of Compliance; Consents. Except as otherwise provided in this Agreement, any failure of any of the Parties to comply with any obligation, covenant, agreement or condition herein may be waived by the Party entitled to the benefits thereof only by a written instrument signed by the Party granting such waiver, but any such waiver of such obligation, covenant, agreement or condition shall not operate as a waiver of, or estoppel with respect to, any subsequent failure to comply therewith.

Section 11.3 Notices. All notices, provisions of Documentation, reports, certifications, or other documentation, and other communications hereunder shall be in writing and shall be deemed given when received if delivered personally or by facsimile transmission with completed transmission acknowledgment or by electronic mail, or when delivered if mailed by overnight delivery via a nationally recognized courier or registered or certified first class mail (return receipt requested), postage prepaid, to the recipient Party at its below address (or at such other address or facsimile number for a Party as shall be specified by like notice; provided, however, that notices of a change of address shall be effective only upon receipt thereof and that any notice provided by electronic mail will be followed promptly by another form of notice consistent with this Section 13.3 and will be effective when such follow-up notice is deemed effective):

To Operator: Bloom Energy Corporation
4353 N. 1st Street, San Jose CA 95134
Attention: Scott Reynolds
Email: [*]

and to:

Bloom Energy Corporation
4353 N. 1st Street, San Jose CA 95134
Attention: General Counsel

To Owner: Diamond State Generation Partners, LLC
c/o SP Diamond State Class B Holdings, LLC
30 Ivan Allen Jr. Blvd.
Atlanta, GA 30308
Attention: General Counsel and Corporate Secretary

with copies to (which copies shall not constitute notice):

Smith, Anderson, Blount, Dorsett, Mitchell & Jernigan, L.L.P.
150 Fayetteville Street, Suite 2300
Raleigh, NC 27601
Attention: Timothy S. Goettel
Telephone: [*]
Email: [*]
and

Assured Guaranty Municipal Corp.
1633 Broadway
New York, New York 10019
Attention: General Counsel
Email: [*]

Section 11.4 Assignment. This Agreement and all of the provisions hereof shall be binding upon and inure to the benefit of the Parties and their respective successors and permitted assigns (including by operation of law), but neither this Agreement nor any of the rights, interests or obligations hereunder shall be assigned by any Party without the prior written consent of the other Party (to be granted in the other Party's sole discretion), provided that (i) Owner may assign its indemnification rights to Site Landlords as set forth in Section 12.3 upon notice to Operator, (ii) Owner may assign all of its right, title and interest in and to this Agreement to an Affiliate wholly owned (directly or indirectly) by The Southern Company or Assured Guaranty Municipal Corp. without the prior consent of Operator (provided that such assignee Affiliate shall assign this Agreement back to Owner at any future date that such assignee is no longer an Affiliate of Owner), (iii) Owner may make such an assignment without Operator's consent to a successor to substantially all of Owner's business, whether in a merger, sale of stock, sale of membership interests, sale of assets or other transaction (other than a transaction with an entity that is a competitor of Operator or its Affiliates, unless consented to under the provisions of Section 13.4(b)), and (iv) Operator shall be entitled to subcontract any of its obligations under this Agreement without consent (except as set forth in Section 13.14) or to assign its obligations under this Agreement to an Affiliate under common ownership with Operator, provided further that (X) such assignment or subcontracting shall not excuse Operator from the obligation to competently perform any subcontracted or assigned obligations or any of its other obligations under the Agreement and (Y) nothing in this Agreement shall be deemed to require the consent of any Party with respect to any change in control, merger or sale of all or substantially all of the assets of Southern Power Company, Assured Guaranty Municipal Corp., or Operator. Any purported assignment or delegation in violation of this Section shall be null and void.

(a) In the event of an assignment by Owner or other transaction described in clause (iii) of Section 13.4(a), Owner shall notify Operator of the identity of the proposed assignee or successor in writing, and Operator shall have the right to consent to such assignment or transaction in the event that Operator reasonably believes such proposed assignee to be a competitor of Operator. Operator shall notify Owner of its determination within ten (10) Business Days of receipt of notice from Owner hereunder. If Operator notifies Owner that it has determined that the proposed assignee is a competitor of Operator and that Operator is electing to withhold consent, then Owner shall be prohibited from consummating the proposed transaction unless it has been finally determined that such proposed assignee is not a competitor of Operator.

(b) Any disputes regarding Operator's determination of a proposed assignee as a competitor to Operator shall be resolved as follows:

(i) Owner will promptly provide written notification of the dispute to Operator within five (5) Business Days after notice by Operator that it has determined the proposed assignee to be a competitor and that it is withholding its consent. Thereafter, a meeting shall be held promptly between the Parties, attended by Operator's Chief Financial Officer and Owner's Chief Financial Officer or President, to attempt in good faith to negotiate a resolution of the dispute, *provided,* that either Party may elect to escalate the dispute to the Parties' respective Chief Executive Officer at any time.

(ii) If the Parties are not successful in resolving a dispute within ten (10) Business Days of the meeting called for above, the dispute shall be submitted, within ten (10) Business Days thereafter, to a mediator with energy industry experience. The Parties shall cooperate with and provide such documents, information and other assistance as is requested by the mediator to assist in efforts to resolve the dispute. The costs of the mediator shall be borne equally by the Parties.

(iii) If efforts to mediate are not successful within thirty (30) days of submitting the dispute to the mediator, both Parties will retain all legal remedies available to them.

Section 11.5 Dispute Resolution; Service of Process.

(a) Except as provided in Section 12.6 and Section 13.4(c), in the event a dispute, controversy or claim arises hereunder, including any claim whether in contract, tort (including negligence), strict product liability or otherwise, the aggrieved Party will promptly provide written notification of the dispute to the other Party within ten (10) days after such dispute arises. Thereafter, a meeting shall be held promptly between the Parties, attended by Representatives of the Parties with decision-making authority regarding the dispute, to attempt in good faith to negotiate a resolution of the dispute. If the Parties are not successful in resolving a dispute within twenty-one (21) days of such meeting, then, subject to the limitations on remedies set forth in Section 11.3 and Section 11.4 and ARTICLE XII, either Party may pursue whatever rights it has available under this Agreement, at law or in equity in accordance with Section 13.6 herein.

(b) In the event of any dispute arising out of or relating to this Agreement, each Party hereby consents to service of process made to the addressees set forth in Section 13.3 herein either by overnight delivery by a nationally recognized courier or by certified first class mail, return receipt requested, and hereby acknowledges that service by such means shall constitute valid and lawful service of process against the Party being served.

Section 11.6 Governing Law, Jurisdiction, Venue. THIS AGREEMENT SHALL BE GOVERNED BY AND INTERPRETED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT GIVING EFFECT TO ANY CONFLICTS OF LAW OR OTHER PRINCIPLES THEREOF THAT WOULD RESULT IN THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION (OTHER THAN SECTION 5-1401 OF THE NEW YORK GENERAL OBLIGATIONS LAW). THE PARTIES HEREBY IRREVOCABLY SUBMIT TO THE NON-EXCLUSIVE JURISDICTION OF THE COURTS OF THE STATE OF NEW YORK LOCATED IN NEW YORK COUNTY AND OF THE UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF NEW YORK WITH RESPECT TO ANY DISPUTE ARISING OUT OF OR RELATING TO THIS AGREEMENT. EACH PARTY IRREVOCABLY AND UNCONDITIONALLY WAIVES TRIAL BY JURY IN ANY ACTION, SUIT OR PROCEEDING RELATING TO ANY SUCH DISPUTE AND FOR ANY COUNTERCLAIM WITH RESPECT THERETO.

Section 11.7 Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Signatures delivered by facsimile, portable document format or other electronic means (including services such as DocuSign) will be considered original signatures, and each Party shall thereafter promptly deliver original signatures to the other Party.

Section 11.8 Interpretation. The article, section and schedule headings contained in this Agreement are solely for the purpose of reference, are not part of the agreement of the Parties and shall not in any way affect the meaning or interpretation of this Agreement.

Section 11.9 Entire Agreement. This Agreement, the other Transaction Documents, the Intellectual Property License Agreement, and the exhibits, schedules, documents, certificates and instruments referred to therein, embody the entire agreement and understanding of the Parties in respect of the transactions contemplated by this Agreement. Each Party acknowledges that, in agreeing to enter into this Agreement, it has not relied on any representation, warranty, collateral contract or other assurance (except those in this Agreement or any other agreement entered into on the date of this Agreement between the Parties) made by or on behalf of any other Party at any time before the signature of this Agreement. Each Party waives all rights and remedies which, but for the immediately preceding sentence, might otherwise be available to it in respect of any such representation, warranty, collateral contract or other assurance.

Section 11.10 Construction of Agreement. The terms and provisions of this Agreement represent the results of negotiations between Owner and Operator, each of which has been represented by counsel of its own choosing, and neither of which has acted under duress or compulsion, whether legal, economic or otherwise. Accordingly, the terms and provisions of this Agreement shall be interpreted and construed in accordance with their usual and customary meanings, and Owner and Operator hereby waive the application in connection with the interpretation and construction of this Agreement of any rule of law to the effect that ambiguous or conflicting terms or provisions contained in this Agreement shall be interpreted or construed against the Party whose attorney prepared the executed draft or any earlier draft of this Agreement.

Section 11.11 Severability. If any term or other provision of this Agreement is invalid, illegal or incapable of being enforced by any rule of law or public policy, all other conditions and provisions of this Agreement shall nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated hereby is not affected in any manner materially adverse to any Party.

Section 11.12 Further Assurances. Each Party agrees to execute and deliver such additional documents and instruments and to perform such additional acts as may be necessary or appropriate to effectuate, carry out and perform all of the terms, provisions, and conditions of this Agreement and the transactions contemplated by this Agreement.

Section 11.13 Independent Contractor. Operator shall perform the Facility Services and act at all times as an independent contractor, and shall be solely responsible for the means, methods, techniques, sequences, and procedures employed for execution and completion of the Facility Services. Nothing in this Agreement shall be interpreted or applied so as to make the relationship of any of the Parties that of partners, joint venturers or anything other than the relationship of customer and independent contractor. Notwithstanding anything to the contrary herein, including Operator's obligation to perform on behalf of Owner certain of Owner's obligations under the Tariff, Interconnection Agreements, and Site Leases, neither Operator nor any of its employees, agents, subcontractors or Representatives shall be considered an employee, agent, subcontractor or Representative of, nor under the control of, Owner under this Agreement. Operator shall at all times maintain supervision, direction and control over its employees, agents, subcontractors and Representatives as is consistent with and necessary to preserve its independent contractor status, and Operator shall be responsible to Owner for the acts and omissions of each such employee or subcontractor.

Section 11.14 Service Providers. Operator may appoint one or more unrelated third party(ies), who is appropriately qualified, licensed, and financially responsible, to perform Facility Services throughout the Term. Operator shall submit such appointment of any Major Service Provider to Owner for its prior written approval, which approval shall not be unreasonably withheld or delayed. No such appointment nor the approval thereof by Owner, however, shall relieve Operator of any liability, obligation, or responsibility resulting from a breach of this Agreement. "Major Service Provider" means any Service Provider that Operator proposes to engage to perform any Facility Services for which the aggregate compensation to such Service Provider in any calendar year is expected to be greater than ten percent (10%) of the aggregate amount paid to Operator as Service Fees pursuant to this Agreement in the applicable calendar year. The Parties agree that each of the Major Service Providers set forth on Schedule 13.14 hereof are approved for all purposes by Owner as of the Agreement Date. Each subcontractor (of any tier, Service Providers, Major Service Providers, and Service Technicians) must be a reputable, qualified firm with an established record of successful performance in its trade, and shall obtain and maintain such insurance coverages having such terms as set forth in Annex B to the extent applicable to the work to be performed by such subcontractor. Operator shall not be relieved from its obligation to provide any services hereunder if a subcontractor agrees to provide any or all of such services. No subcontractor is intended to be or will be deemed a third-party beneficiary of this Agreement. Nothing contained herein shall create any contractual relationship between any subcontractor and Owner or obligate Owner to pay or cause the payment of any amounts to any subcontractor, including any payment due to any third party. Operator shall not permit any subcontractor to assert any Lien against any Bloom System, or attach any Lien other than a Permitted Lien. None of Operator's employees, subcontractors or any such subcontractor's employees will be or will be considered to be employees of Owner. To the extent that any Site Landlord has the right to request removal of any Operator or subcontractor personnel under a Site Lease, Operator shall cooperate with Owner in complying with the terms and conditions of such Site Lease including by, upon written notification by

Owner that the performance, conduct or behavior of any Person employed by Operator or one of its subcontractors is unacceptable to the applicable Site Landlord, promptly stopping such Person from performing any obligations hereunder and/or removing such Person from the applicable Site. Additionally, Owner may bring to Operator's attention any concerns regarding the performance, conduct or behavior of any Person employed by Operator or one of its subcontractors, which concerns Operator shall consider in good faith and thereafter take such action as Operator deems appropriate under the circumstances. Operator will be fully responsible for the payment of all wages, salaries, benefits and other compensation to its employees and for payment of any Taxes due because of its work hereunder.

Section 11.15 Rights to Deliverables. Owner agrees that Operator shall, except as expressly set forth herein, retain all rights, title and interest, including Intellectual Property rights, in any Training Materials provided to Owner in connection with the services performed hereunder. "Training Materials" means any and all materials, documentation, notebooks, forms, diagrams, manuals and other written materials and tangible objects, describing how to operate and maintain the Facilities or perform any of the Installation Services and/or Facility Services (if applicable), including any corrections, improvements and enhancements which are delivered by Operator to Owner, but excluding any Documentation or other data and reports delivered to Owner in respect of any Facilities.

Section 11.16 Limitation on Export. Owner agrees that it will not export, re-export, resell, ship or divert directly or indirectly any Facility or any part thereof in any form or technical data or Software furnished hereunder to any country prohibited by the United States Government or any other Governmental Authority, or for which an export license or other Governmental Approval is required, without first obtaining such license or approval.

Section 11.17 Time of Essence. Time is of the essence with respect to all matters contained in this Agreement.

Section 11.18 No Rights in Third Parties. Except as otherwise specified herein, (a) nothing in this Agreement nor any action taken hereunder shall be construed to create any duty, liability or standard of care to any Person that is not a Party, (b) no Person that is not a Party shall have any rights or interest, direct or indirect, in this Agreement or the services to be provided hereunder and (c) this Agreement is intended solely for the benefit of the Parties, and the Parties expressly disclaim any intent to create any rights in any third party as a third-party beneficiary to this Agreement or the services to be provided hereunder.

Section 11.19 No Modification or Alteration of DSGP Operating Agreement. Notwithstanding anything to the contrary herein and for the avoidance of doubt, (a) nothing in this Agreement shall affect or modify the rights or obligations of the members of Owner under the DSGP Operating Agreement, and (b) no Owner Manager shall have authority to take any action or agree to take any action that would violate the DSGP Operating Agreement or that would require the consent or approval of any member or the managing member of Owner under the DSGP Operating Agreement (unless such consent or approval is first obtained).

Section 11.20 Amendment and Restatement of First A&R MOMA. By their execution and delivery of this Agreement, the Parties hereby amend and restate in its entirety the First A&R MOMA. From and after the date hereof, (a) the Parties' mutual understanding of each of the matters set forth herein shall be governed by the terms of this Agreement, and (b) any reference to the First A&R MOMA in any other agreement(s) shall be understood to refer to this Agreement.

[remainder of page intentionally left blank]

IN WITNESS WHEREOF, Owner and Operator have caused this Second Amended and Restated Master Operations and Maintenance Agreement to be signed by their respective duly authorized officers as of the Agreement Date.

OWNER:

DIAMOND STATE GENERATION PARTNERS, LLC
a Delaware limited liability company

By: ____________________________
Name:
Title:

OPERATOR:

BLOOM ENERGY CORPORATION
a Delaware corporation

By: ______________________________
Name:
Title:

[Signature Page to Second Amended and Restated Master Operations and Maintenance Agreement]

Annex A

Minimum Power Product and Minimum kWh Example Calculations

Output Warranty
Assumptions

- Aggregate System Capacity of Bloom Systems in Project: 27,500 kW
- Hours in applicable Calendar Quarter: (8760 hours/year)*(1 year/4 Quarters) = 2,190 hours
- Hours subject to Exclusion under Section 4.8: 2.19 (0.1% of Hours in applicable Calendar Quarter as modeled)

Calculations

- *Minimum Power Product* = (27,500kW) * [*] = [*]kW
  Minimum kWh = ([*]kW) * ([*] - [*]) = [*] kWh

Annex B

Insurance

Insurance. At all times during the Term, without cost to Owner, Operator shall maintain in force and effect the following insurance with insurance companies rated “A-” or better, with a minimum size rating of “X” by AM Best’s Insurance Guide and Key Ratings (or an equivalent rating by another nationally recognized insurance rating agency of similar standing if AM Best’s Insurance Guide and Key Ratings shall no longer be published) or other companies reasonably satisfactory to Owner, which insurance shall not be subject to cancellation, termination or other material adverse changes unless the insurer delivers to Owner written notice of the cancellation, termination or change at least thirty (30) days in advance of the effective date of the cancellation, termination or material adverse change or if notice from the insurer to Owner of material adverse change is not available on commercially reasonable terms then Operator shall provide Owner with such notice as soon as reasonably possible after becoming aware of such change. For the avoidance of doubt, the insurance required hereunder shall only pertain to Operator’s Facility Services (including, for clarity, any removal or restoration services provided by Operator):

(a) Worker's Compensation Insurance as required by the laws of the state in which Operator’s employees are performing Facility Services;

(b) Employer's liability insurance with limits at policy inception not less than One Million Dollars ($1,000,000.00) per occurrence;

(c) Commercial General Liability Insurance, including bodily injury and property damage liability (arising from premises, operations, contractual liability endorsements, products liability, or completed operations) with limits not less than One Million Dollars ($1,000,000.00) per occurrence and Two Million Dollars ($2,000,000.00) annual aggregate limit at policy inception;

(d) If there is exposure, automobile liability insurance in accordance with prudent industry practice with a limit of not less than One Million Dollars ($1,000,000.00), combined single limit per occurrence;

(e) Umbrella liability insurance acting in excess of underlying employer’s liability, commercial general liability and automobile liability policies with limits not less than Fifteen Million Dollars ($15,000,000.00) per occurrence, except that any subcontractors shall be required to maintain such insurance with limits of not less than Three Million Dollars ($3,000,000.00);

(f) Professional errors and omission insurance with a limit of not less than One Million Dollars ($1,000,000.00) per occurrence; and

(g) Environmental/pollution liability insurance with a limit of not less than Ten Million Dollars ($10,000,000.00) per claim.

Operator shall cause Owner to be included as additional insured to all insurance policies required in accordance with the provisions of this Agreement except for worker's compensation. The required insurance must be written as a primary policy not contributing to or in excess of any policies carried by Owner, and each must contain a waiver of subrogation in favor of Owner.

Additionally, Operator shall procure and maintain any insurance coverages (if any) with respect to commercial general liability and excess liability required to be carried by Owner's contractors and service providers pursuant to a Site Lease pursuant to policies that comply with all requirements set forth in such Site Lease.

Additional Insurance. To the extent that a Material Contract (as defined in the ECCA) requires Operator to maintain additional insurance coverage, higher limits or any other insurance requirement because of Operator's undertakings pursuant to this Agreement ("Required Insurance"), Operator shall obtain and maintain the Required Insurance for as long as required under such Material Contract.

Operator shall provide Owner with evidence of compliance with these insurance requirements when requested by Owner from time to time on a reasonable basis.

Annex C

Sample Output Guaranty Calculation

Sample Output Guaranty Calculation

Assumptions		
Number of Bloom Systems	50	
System Capacity	250	kW
Output Guaranty	[*]%	
Days in Month	30	
Exclusion Hours	0	
Monthly Minimum kWh		
#VALUE!	[*]	kWh

Annex D

Sample Output Warranty Calculation

Sample Output Warranty Calculation

Assumptions		
Number of Bloom Systems	50	
System Capacity	250	kW
Output Guaranty	[*]%	
Days in Month	30	
Exclusion Hours	0	
Monthly Minimum kWh		
#VALUE!	[*]	kWh

Exhibit A

Parties' Managers

Operator: [*]

Owner: [*]

Exhibit B

Service Fees

Year	**Service Fees ($/kW/month)**
Manufacturer's Warranty Period	N/A
Warranty Year 2	$[*]
Warranty Year 3	$[*]
Warranty Year 4	$[*]
Warranty Year 5	$[*]
Warranty Year 6	$[*]
Warranty Year 7	$[*]
Warranty Year 8	$[*]
Warranty Year 9	$[*]
Warranty Year 10	$[*]
Warranty Year 11	$[*]
Warranty Year 12	$[*]
Warranty Year 13	$[*]
Warranty Year 14	$[*]
Warranty Year 15	$[*]
Warranty Year 16	$[*]
Warranty Year 17	$[*]
Warranty Year 18	$[*]
Warranty Year 19	$[*]
Warranty Year 20	$[*]
Warranty Year 21	$[*]
Warranty Year 22	$[*]
Warranty Year 23	$[*]
Warranty Year 24	$[*]
Warranty Year 25	$[*]
Warranty Year 26	$[*]
Warranty Year 27	$[*]
Warranty Year 28	$[*]
Warranty Year 29	$[*]
Warranty Year 30	$[*]

Exhibit C

Operator Corporate Safety Plan

At all times during the Term, Operator shall maintain at Operator's corporate headquarters and adhere to Operator's written corporate safety programs, which shall include the following programs:

- Contractor Environmental Health & Safety Program
- Injury and Illness Prevention Program
- Heat Illness Prevention Program
- RCRA Contingency Plan and Emergency Procedures
- SPCC Plan
- Emergency Action and Fire Prevention Plan
- Hazard Communication Program
- Corporate Electrical Standard – Specific Electrical Safe Work Practices
- Electrical Safety Awareness
- Lockout/Tagout
- Fall Protection Program (Working at Heights)
- Ladder Safety Program
- Powered Industrial Trucks (PIT)
- Hoist Safety Program
- Personal Protective Equipment (PPE)
- Respiratory Protection Program
- Hearing Conservation Program
- Hand and/or Powered Tools Safety Program
- Hot Work Process
- First Aid / CPR Program

(the foregoing, collectively, the "Operator Corporate Safety Plan").

Exhibit D

Operator Subcontractor Quality Plan

Operator will adhere to the following standards and processes as applicable when engaging subcontractors for performance under this Agreement.

- General contractors will be subject to the terms and conditions set forth in The American Institute of Architects Document A107 – 2007 as amended in certain cases
- General contractors are required to complete a Bloom Energy Contractor Qualification Training Program
- General contractor superintendents and foremen must be certified and qualified by Operator to be on site
- Standard safety protocols will be observed at all times:
  - Site superintendents are OSHA30 certified
  - Operator superintendents ensure general contractors follow all local and state OSHA and owner requirements
  - Confirmation of "Injury and Illness Prevention Program"
  - Operator included in the ISN program – 3rd party safety evaluation
- A project superintendent assigned by Operator will review subcontractor work according to a standard site verification check list
- Contractors will submit Contractor Quality Guarantees for each site providing written verification of points of assurance including torques per site, Megger testing and line flushing
- Prestart verification conducted for all sites to review and confirm the quality of subcontractor work
- All incidents are logged in a database and reviewed on an ongoing basis by Operator quality management
- Quarterly business reviews conducted with general contractors to formally review incident data and mitigate process and workmanship issues

Exhibit E

Environmental Compliance Duties

Without limiting any other obligations of Operator in respect of Environmental Requirements and Legal Requirements, Operator shall perform under this Agreement in compliance with the following:

- Comply with all terms, conditions and limitations of all Permits, including the following related to air Permits:
  - Records of daily, monthly and annual natural gas fuel consumption by the fuel cells
  - Records of the sulfur content of the natural gas utilized to operate the fuel cells
  - Documentation that the desulfurization canisters are operated and maintained according to manufacturer's recommendations and good engineering practices
  - Records of all routine and non-routine maintenance at the Facility relating to environmental health and safety
  - Calculate and record monthly the 12-month rolling total emissions for nitrogen oxide, carbon monoxide, volatile organic compounds and sulfur dioxide
- Comply with the Spill Prevention Control and Countermeasure (SPCC) regulations including the following:
  - Maintain an accurate and current SPCC Plan
  - Compliance with the spill response procedure
  - Maintain accurate records of spill logs
  - Conducting routine inspections and maintaining accurate records of the inspections
- Comply with the Resource Conservation and Recovery Act (RCRA) regulations and any applicable State and local laws and regulations.
- Sites classified as a Large Quantity Generator of hazardous waste shall comply with the RCRA regulations and any applicable State and local laws and regulations including the following:
  - Accurate account of quantity limits of hazardous waste generated per month
  - EPA ID Number
  - Ensure hazardous waste is removed within the appropriate time limits
  - Compliance of storage and management of containers, tanks, drip pads or containment buildings

- Conduct hazardous waste management and emergency procedures training for appropriate personnel
- Maintain the Contingency Plan and Emergency Procedures plan
- Hazardous waste should be packaged and labeled properly for shipment off site to an approved RCRA facility for treatment, storage, and disposal
- Maintain accurate tracking of hazardous waste transportation
- Preparation and submittal of Biennial Reports
- Reporting of required signed manifests not received back

Maintain accurate records of waste testing, manifests, biennial reports and exception reports

SCHEDULE 3.2

OPERATION AND MAINTENANCE PROCEDURES

Operator will perform the following operation and maintenance activities for each Facility, to the extent necessary to cause such Facility to perform in accordance with the Warranty Specifications:

- Annual maintenance activities:
  - [*]
  - [*]
  - [*]
  - [*]
  - [*]
  - [*]
  - [*]
  - [*]
  - [*]
  - [*]
  - [*]
  - [*]
  - [*]

- Site obligations:
  - An e-mail announcement of a service appointment will be sent to address(es) specified by the client informing of a service visit in advance of a service visit
  - Field Service personnel will sign in at a security office as required by client
  - Field Service personnel will safely and securely maintain and repair the systems as needed in accordance with our established and released procedures
  - Bloom HR and EH&S will work with clients to fulfill requirements for certification of drug testing, training, and other Environmental Health & Safety (EH&S) procedures
- Site visit protocols:
  - Works with customers and Product Development to resolve issues
  - Provides detailed documentation for each maintenance element performed
  - Inspection of installed equipment to ensure peak performance
  - Inspection of all components to ensure proper operation within product and environmental specifications

- Clearly and professionally interact with customer regarding status of site visits, performance of their systems and general fuel cell education

- Spare Parts
  - Bloom Energy Product Support maintains a list of all spare parts including field replaceable units (FRUs) and consumables for each of its commercial products and BOF
  - Spare parts are stocked in localized third party logistics depots in each service zone
  - The most common and most critical parts are stocked in each local depot and replenished on a weekly schedule
  - Parts not stocked in localized depots are dispatched from our Milpitas, CA warehouse via FedEx or other carriers and couriers
- Failure Response Protocol:

  [*]

- Emergency Response Protocol:
  - Contact lists of BE personnel to be contacted during normal business hours and during off hours (24-7-365 emergency escalation path) are provided for each region where Bloom Systems are located in order to remedy situations posing a risk to persons or property
  - Remote shutdown from Bloom RMCC if required
  - Emergency power off button provided onsite
- Remote monitoring:
  - 24/7/365 performance monitoring and control of fleet
  - 1st level troubleshooting
  - Cross-functional interface with engineering, software, controls, quality
  - Optimize performance
  - Support new customer site start-ups
  - Customer performance analysis – daily
- Standards Compliance:
  - Complies with Rule 21 interconnection
  - ANSI/CSA FC 1: Stationary Fuel Cell Power Systems – Safety
  - IEEE 1547 – Standard for Interconnecting Distributed Resources with Electric Power Systems
  - NFPA 853 – The Standard for Installation of Stationary Fuel Cell Power Systems
  - NFPA 70 – The National Electrical Code
  - NFPA 54 – The National Fuel Gas Code

- Subcontracted Services. The following may in some cases be performed by subcontractors:
  - Water DI system replenishment
  - STS and transfer switch maintenance and repair
  - Some annual maintenance and upgrade work
  - Filter delivery, replacement, removal
  - High Voltage transformer and switchgear maintenance
  - Circuit breaker and similar maintenance
  - Some fuel cell module performance upgrades
  - NG conditioning canister replacement
- Management Staff:
  - Customer Installations Group (CIG) – Turnkey design, engineering, procurement, permitting and installation
  - Services – Commissioning, operations and monitoring of Bloom Systems
  - Customer Experience – Interface with customer
  - PPA Operations – Certain administrative duties
- All Bloom Systems are instrumented to securely record over 1000 data points per Bloom System and stored in a Data Historian that resides in a Secure Co-located Data Center and Backed Up for data recovery
- CIG and Service employees are subject to drug tests, background checks and other screening protocols based on customer site requirements
- Bloom Energy maintains a Code of Safe Practices and ensures that copies are provided to all applicable field service technicians and includes:
  - Injury and illness prevention program
  - Required Personal Protection Equipment (PPE)
  - Corporate EH&S Standard
  - Proper use of Powered Industrial Trucks
  - Contracted Crane Operations
  - Ladder safety program
  - Electrical Safety and Lock-Out Tag-Out (LOTO)
  - Fall protection
  - First Aid/CPR program
  - Contractor EH&S program
  - Bloom Energy Safety Commitment

SCHEDULE 5.1(A)(VII)

CERTAIN REPORTING REQUIREMENTS

The following data will be recorded by Operator for 1 minute intervals and transmitted by Operator to Owner pursuant to a secure file transfer protocol (FTP) on an hourly basis.

Facility Level Data

Description	CSV Tag Name	Data Type	Scale	Data Format
Total KW Stamp total power	Stamp_Total_Power	Analog	10	KW
Total KWh Cumulative Stamp Energy Output	Stamp_Totalizer_Energy	Analog	1	KWH
Fuel Consumption Cumulative Stamp Fuel Usage	Stamp_Totalizer_Fuel	Analog	100	MCF
Fuel Flow Stamp Total Fuel Flow	Stamp_Total_Fuel_Flow	Analog	10	SCFM
Efficiency Efficiency of the entire site based on fuel consumption, fuel heating value, and energy production.	Stamp_Efficiency	Analog	10	%
Fuel Pressure Stamp Total Fuel Pressure	Stamp_Fuel_Pressure	Analog	10	PSI
Water Pressure Stamp Water Pressure	Stamp_Water_Pressure	Analog	10	PSI
Run Time Stamp Run Hours	Stamp_Run_Time	Analog	100	Days
EPO Status Emergency Power Off Status	EPO_Status	Digital	-	

Bloom System Data

Description	CSV Tag Name	Data Type	Scale	Data Format
ES0# KW Energy Server Total Power	Stamp_Total_Power	Analog	10	KW

SCHEDULE 13.14
MAJOR SERVICE PROVIDERS

- [*]
- [*]
- [*]

Exhibit 10.37

FIRST AMENDMENT
TO
REPURCHASE AGREEMENT

THIS FIRST AMENDMENT TO REPURCHASE AGREEMENT (this "**Amendment**"), dated December 23, 2019 (the "**Effective Date**"), is entered into by and between BLOOM ENERGY CORPORATION, a Delaware corporation ("**Buyer**"), and DIAMOND STATE GENERATION PARTNERS, LLC, a Delaware limited liability company ("**Seller**"), to amend that certain Repurchase Agreement, dated June 14, 2019 (the "**Repurchase Agreement**"), by and between Buyer and Seller. Buyer and Seller are each at times referenced herein individually as a "**Party**" and together as the "**Parties**".

WHEREAS, under the Repurchase Agreement, Buyer agreed to purchase from Seller and Seller agreed to sell to Buyer certain fuel cell generation systems installed at the Project (as defined in the Repurchase Agreement); and

WHEREAS, the Parties wish to amend the Repurchase Agreement regarding the matters set out herein and on the terms and subject to the conditions set forth in this Amendment.

NOW, THEREFORE, in consideration of the premises, the mutual covenants and agreements contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged by each of the Parties, the Parties, intending to be legally bound, hereby agree as follows.

1. **Terms and Abbreviations.** All capitalized terms and abbreviations used in this Amendment that are not specifically defined herein shall have the meaning as set forth in the Repurchase Agreement.

2. **Amendments.** Pursuant to Section 9.1 of the Repurchase Agreement, the Parties hereby amend the Repurchase Agreement as follows:

(a) The second recital of the Repurchase Agreement is hereby deleted in its entirety and replaced with the following:

> "WHEREAS, Seller and Buyer entered into (i) that certain Fuel Cell System Supply and Installation Agreement, dated as of the Agreement Date and (ii) that certain Fuel Cell System Supply and Installation Agreement, dated as of the date hereof (collectively, the "<u>New System CapEx Agreement</u>"), pursuant to which, among other things, (a) Buyer (as "<u>Seller</u>" under such New System CapEx Agreement) will sell to Seller (as "<u>Buyer</u>" under such New System CapEx Agreement) and Seller will purchase from Buyer, new Bloom Systems with aggregate nameplate capacity of up to 27.5 MW (such Bloom Systems, the "<u>New Systems</u>") and all shared infrastructure BOF not already existing at the applicable Site, and (b) Buyer will design, engineer,

procure, construct, and commission each of the New Systems and such shared infrastructure BOF at the Sites; and"

(b) The definition of "Interim Period" in Section 1.1 of the Repurchase Agreement is hereby deleted in its entirety and replaced with the following:

"Interim Period" means, with respect to each Existing System that is the subject of a Sale Notice, the period between the delivery of such Sale Notice and the date such Existing System is removed from the Site."

(c) Section 2.4 of the Repurchase Agreement is hereby deleted in its entirety and replaced with the following:

"Title and all rights to each Sale System shall remain with Seller until (a) Buyer has paid Seller the portion of the Purchase Price set forth in Section 2.2(e) for such Sale System, and (b) Buyer has caused such Sale System to cease exporting power (the "Transfer Date"). On the Transfer Date, legal and beneficial title and all rights to the applicable Sale System(s) shall automatically pass to Buyer. Seller shall promptly thereafter deliver to Buyer a Bill of Sale evidencing the transfer of title to the applicable Sale System(s) to Buyer as of such Transfer Date; provided, no delay or failure to deliver such Bill of Sale shall affect the transfer of title of the applicable Sale System(s)."

3. Date of Effectiveness; Limited Effect. This Amendment shall become effective on the Effective Date. Except as expressly provided in this Amendment, all of the terms and provisions of the Repurchase Agreement are and shall remain in full force and effect and are hereby ratified and confirmed by the Parties. Without limiting the generality of the foregoing, the amendments contained herein shall not be construed as an amendment to or waiver of any other provision of the Repurchase Agreement or as a waiver of or consent to any further or future action on the part of either Party. On and after the Effective Date, each reference in the Repurchase Agreement to "this Agreement," "hereunder," "hereof," "herein," or words of like import will mean and be a reference to the Repurchase Agreement as amended by this Amendment. If there is a conflict between this Amendment and the Repurchase Agreement, the terms of this Amendment shall prevail.

4. **Construction and Term.** This Amendment shall, from the date hereof, be read and construed together with the Repurchase Agreement, and as amended hereby, and this Amendment shall continue in full force and effect for the remainder of the term of the Repurchase Agreement in accordance with the terms thereof and hereof.

5. Governing Law and Venue. THIS AMENDMENT SHALL BE GOVERNED BY AND INTERPRETED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT GIVING EFFECT TO ANY CONFLICTS OF LAW OR OTHER PRINCIPLES THEREOF THAT WOULD RESULT IN THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION (OTHER THAN SECTION 5-1401 OF THE NEW YORK GENERAL

OBLIGATIONS LAW). THE PARTIES HEREBY IRREVOCABLY SUBMIT TO THE EXCLUSIVE JURISDICTION OF THE COURTS OF THE STATE OF NEW YORK AND OF THE UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF NEW YORK WITH RESPECT TO ANY DISPUTE ARISING OUT OF OR RELATING TO THIS AMENDMENT. EACH PARTY IRREVOCABLY AND UNCONDITIONALLY WAIVES TRIAL BY JURY IN ANY ACTION, SUIT OR PROCEEDING RELATING TO ANY SUCH DISPUTE AND FOR ANY COUNTERCLAIM WITH RESPECT THERETO.

6. **Costs.** Each Party shall pay its own costs and expenses in connection with this Amendment (including the fees and expenses of its advisors and legal counsel).

7. **Headings.** The article, section and schedule headings contained in this Amendment are solely for the purpose of reference, are not part of the agreement of the Parties and shall not in any way affect the meaning or interpretation of this Amendment.

8. **Further Documents.** Each Party agrees to execute and deliver such reasonable additional documents and instruments and to perform such reasonable additional acts as may be necessary or appropriate to effectuate, carry out and perform all of the terms, provisions, and conditions of this Amendment and the transactions contemplated by this Amendment.

9. **Successors and Assigns.** This Amendment shall inure to the benefit of and be binding upon the heirs, executors, administrators, successors and permitted assigns of the Parties.

10. **Counterparts.** This Amendment may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Signatures delivered by facsimile, portable document format (.PDF) or other electronic means (including services such as DocuSign) will be considered original signatures.

[*Signature pages follow.*]

IN WITNESS WHEREOF, the Parties have each duly executed this Amendment on the Effective Date.

SELLER:

DIAMOND STATE GENERATION PARTNERS, LLC
a Delaware limited liability company

By: ___________________________
Name:
Title:

BUYER:

BLOOM ENERGY CORPORATION
a Delaware corporation

By: ___________________________
Name:
Title:

[Signature Page to First Amendment to Repurchase Agreement]

Bloomenergy Exhibit 10.38

April 16, 2019

Chris White
[address]

Dear Chris,

I am pleased to offer you the position of EVP, Chief Sales Officer with Bloom Energy Corporation (the "Company"). In this full-time, salaried (exempt) position, you will report to KR Sridhar, Founder, Chairman and CEO and will be based out of our San Jose Corporate Headquarters. Your annual starting salary will be **$400,000**, less applicable withholdings and deductions, and you will be paid every other Friday in accordance with the Company's normal payroll practices. You are eligible to participate in the Company's Sales Incentive plan structured as **50%** base salary, **50%** target incentive compensation (for a total target cash compensation of **$ 800,000**). Bloom will guarantee the remainder of the FY2019 incentive portion. You will receive a sign-on bonus in the amount of **$250,000 (includes housing allowance and relocation)**, less applicable withholdings and deductions, payable along with your first paycheck. You agree to relocate to the Bay Area no later than six months from your date of hire.

We will recommend that the Company's Board of Directors grant you a non-qualified option to purchase **225,000** shares of the Company's Class A Common Stock pursuant to the 2018 Equity Incentive Plan ("Plan"). The exercise price will be the closing price of the Class A Common Stock on the date of grant. Upon approval, the stock options will be granted on the 15th day (or the next trading day) of the month following your date of hire. Twenty-Five percent (25%) of the stock options granted will vest on the first year anniversary of the grant date. The remaining will vest at a rate of 1/36th per month until the option is fully vested over four years. The grant is subject to your continued employment and the Company's standard terms and conditions.

We will recommend that the Company's Board of Directors grant you Restricted Stock Units ("RSUs") for **275,000** shares of the Company's Class A Common Stock pursuant to the 2018 Equity Incentive Plan ("Plan"). Upon approval, the RSUs will be granted on the 15th day (or the next trading day) of the month following your date of hire. Twenty-Five percent (25%) of the shares subject to RSUs shall vest on the one-year anniversary of the grant date and the remaining shares shall vest quarterly over the next three years until the RSU is fully vested after four years from the grant date. The grant is subject to your continued employment and the Company's standard terms and conditions.

You will also be eligible to receive benefits that the Company generally provides to its employees, consistent with the eligibility terms of those programs. A more detailed description of these benefits will be provided to you upon joining the Company.

Your offer of employment is conditioned upon a satisfactory (in the Company's discretion) reference check, background check, and upon proof of your right to work in the US. Your employment with the Company is further subject to the terms and conditions specified in "Attachment A" to this letter. This offer of employment is valid for seven days.

This letter and Attachment A set forth the terms of your employment with the Company and supersede any prior representations or agreements including, but not limited to, any representations made during your recruitment, interviews or pre-employment negotiations, whether written or oral. This letter and its attachments may not be modified or amended except by a written agreement signed by the Sr. Director, Human Resources and you.

We are very excited about you joining our team and look forward to a mutually rewarding relationship.

By signing below you are accepting the Company's offer of employment pursuant to the terms and conditions specified in this letter and in Attachment A. After signing and dating this letter below, please return all pages by email or by confidential fax (408-543-XXXX).

Sincerely, Agreed to and accepted by:

/s/ KR Sridhar /s/ Chris White

KR Sridhar Chris White

Founder, Chairman and CEO Date: May 9, 2019

Bloom Energy Corporation Start Date: June 3, 2019

ATTACHMENT A

In addition to the terms outlined in the attached offer letter, your employment at Bloom Energy is conditioned upon the following.

At-Will Employment. You will be an "at will" employee of the Company. This means that either you or the Company may terminate your employment at any time, for any reason or no reason, with our without cause or notice. Regular employment at the Company is for no specified period of time and the Company makes no guarantee or contract of continued employment. Although your job duties, title, compensation, and benefits, as well as the Company's personnel policies, may change from time to time, the "at will" nature of your employment may not be changed except in an express written agreement signed by you and the President of the Company. In the event that you choose to resign from the Company, we request that you give us at least two weeks' notice.

Stock Options/RSUs. If approved by the Board, your stock options and/or RSUs will be subject to the terms and conditions of the Company's 2018 Equity Incentive Plan and the equity award agreement. You will be provided with a copy of the Equity Incentive Plan and your equity award agreement following the Board's approval of your grant. No right to any stock is earned or accrued until such time that vesting occurs, nor does the grant confer any right to continued vesting or employment. All grants are subject to the Company's Insider Trading Policy, trading window and will be subject to the participant's continuous employment.

Sales Incentive. Your incentive compensation will be earned and paid in accordance with the Company's sales incentive plan. You will receive a copy of the sales incentive plan within ten (10) days of your start date.

Sign-Bonus. In consideration of the bonus investment made by the Company, you agree to refund the full amount to the Company in the event that, prior to the first anniversary of receipt of such bonuses, you voluntarily terminate your employment or are terminated by the Company for cause.

References. The Company reserves the right to conduct background investigations and/or reference checks on all of its potential employees. Your job offer, therefore, is contingent upon a clearance of such a background investigation and/or reference check, if any.

Right to Work. For purposes of federal immigration law, you will be required to provide to the Company documentary evidence of your identity and eligibility for employment in the United States. Such documentation must be provided to us within three (3) business days of your date of hire, or our employment relationship with you may be terminated.

Prior Employment. We also ask that, if you have not already done so, you disclose to the Company any and all agreements relating to your prior employment that may affect your eligibility to be employed by the Company or limit the manner in which you may be employed. It is the Company's understanding that any such agreements will not prevent you from performing the duties of your position and you represent that such is the case. Moreover, you agree that, during the term of your employment with the Company, you will not engage in any other employment, occupation, consulting or other business activity directly related to the business in which the Company is now involved or becomes involved during the term of your employment, nor will you engage in any other activities that conflict with your obligations to the Company. Similarly, you agree not to bring any third party confidential information to the Company, including that of your former employer, and that in performing your duties for the Company you will not in any way utilize any such information.

Company Policies. As a Company employee, you will be expected to abide by the Company’s policies. Specifically, you will be required to sign an acknowledgment that you have read and that you understand the Company’s policies which are included in the Company Handbook.

Intellectual Property. As a condition of your employment, you are also required to sign and comply with the Company’s “Employment, Confidential Information, Invention Assignment and Arbitration Agreement,” which requires, among other provisions, the assignment of patent rights to any invention made during your employment at the Company, and non-disclosure of Company proprietary information. Please note that we must receive your signed Agreement on your first day of employment.

Arbitration. (a) Any dispute or controversy between you and the Company arising out of or relating solely to your employment relationship with the Company, including any dispute or allegation regarding the enforceability, unconscionability, interpretation, construction or breach of this Agreement, will be settled by final and binding arbitration through Judicial Arbitration and Mediation Services (“JAMS”) by a single arbitrator to be held in Santa Clara County, California, in accordance with the JAMS rules for resolution of employment disputes then in effect, except as provided herein. This means that we both give up the right to have disputes decided in court by a jury; instead, a neutral arbitrator whose decision is final and binding will resolve it, subject to judicial review as provided by law. The arbitrator selected shall have the authority to grant any party all remedies otherwise available by law, including injunctions, but shall not have the power to grant any remedy that would not be available in a state or federal court in California. The arbitrator shall be bound by and shall strictly enforce the terms of this section and may not limit, expand or otherwise modify its terms. The arbitrator shall make a good faith effort to apply the substantive law (and the law of remedies, if applicable) of the state of California, or federal law, or both, as applicable, without reference to its conflicts of laws provisions, but an arbitration decision shall not be subject to review because of errors of law. The arbitrator is without jurisdiction to apply any different substantive law. The arbitrator shall have the authority to hear and rule on dispositive motions (such as motions for summary adjudication or summary judgment). The arbitrator shall have the powers granted by California law and the rules of JAMS which conducts the arbitration, except as modified or limited herein.

(b) Notwithstanding anything to the contrary in the rules of JAMS, the arbitration shall provide (i) for written discovery and depositions as provided in California Code of Civil Procedure Section 1283.05 and (ii) for a written decision by the arbitrator that includes the essential findings and conclusions upon which the decision is based which shall be issued no later than thirty (30) days after a dispositive motion is heard and/or an arbitration hearing has completed. Except in disputes where you assert a claim otherwise under a state or federal statute prohibiting discrimination in employment ("a Statutory Discrimination Claim"), the Company shall pay all fees and administrative costs charged by the arbitrator and JAMS. In disputes where you assert a Statutory Discrimination Claim against the Company, you are required to pay the American Arbitration Association's filing fee only to the extent such filing fee does not exceed the fee to file a complaint in state or federal court. The Company shall pay the balance of the arbitrator's fees and administrative costs.

(c) You and the Company shall have the same amount of time to file any claim against any other party as such party would have if such a claim had been filed in state or federal court. In conducting the arbitration, the arbitrator shall follow the rules of evidence of the State of California (including but not limited to all applicable privileges), and the award of the arbitrator must follow California and/or federal law, as applicable.

(d) The arbitrator shall be selected by the mutual agreement of the parties. If the parties cannot agree on an arbitrator, the parties shall alternately strike names from a list provided by JAMS until only one name remains.

(e) The decision of the arbitrator will be final, conclusive and binding on the parties to the arbitration. The prevailing party in the arbitration, as determined by the arbitrator, shall be entitled to recover her or its reasonable attorneys' fees and costs, including the costs or fees charged by the arbitrator and JAMS. In disputes where you assert a Statutory Discrimination Claim, reasonable attorneys' fees shall be awarded by the arbitrator based on the same standard as such fees would be awarded if the Statutory Discrimination Claim had been asserted in state or federal court. Judgment may be entered on the arbitrator's decision in any court having jurisdiction.

(f) In the event of (1) a California Private Attorney General Action claim or (2) any claim determined by the arbitrator to be not properly in arbitration pursuant to applicable law, such claim(s) shall be brought as a civil action and shall be stayed pending resolution of all claims that are properly in arbitration.

ATTACHMENT B

CHANGE IN CONTROL AND SEVERANCE AGREEMENT

This Change in Control and Severance Agreement (the "**Agreement**") is entered into by Chris White (the "**Executive**") and Bloom Energy Corporation, a Delaware corporation (the "**Company**"), on April 16, 2019, and is effective as of June 1, 2019 (the "**Effective Date**").

1. **Term of Agreement.**

Except to the extent renewed as set forth in this Section 1, this Agreement shall terminate the earlier of the first (1st) anniversary of the Effective Date (the "**Expiration Date**") or the date the Executive's employment with the Company terminates for a reason other than a Qualifying Termination or CIC Qualifying Termination; *provided however*, if a definitive agreement relating to a Change in Control has been signed by the Company on or before the Expiration Date, then this Agreement shall remain in effect through the earlier of:

(a) The date the Executive's employment with the Company terminates for a reason other than a Qualifying Termination or CIC Qualifying Termination, or

(b) The date the Company has met all of its obligations under this Agreement following a termination of the Executive's employment with the Company due to a Qualifying Termination or CIC Qualifying Termination.

This Agreement shall renew automatically and continue in effect for one (1) year periods measured from the initial Expiration Date and each subsequent Expiration Date, unless the Company provides Executive notice of non-renewal at least two weeks prior to the date on which this Agreement would otherwise renew. For the avoidance of doubt, and notwithstanding anything to the contrary in Section 2 or 3 below, the Company's non-renewal of this Agreement shall not constitute a Qualifying Termination or CIC Qualifying Termination, as applicable.

2. **Qualifying Termination**. If the Executive is subject to a Qualifying Termination, then, subject to Sections 4, 9, and 10 below, Executive will be entitled to the following benefits:

(a) **Severance Benefits**. The Company shall pay the Executive (i) nine (9) months' worth of (x) his or her monthly base salary and (ii) the prorated portion of Executive's then-current target bonus opportunity for the portion of the current year that Executive served prior to the Separation (calculated based on the number of full or partial months to date in the bonus year multiplied by 1/12 of the annual target bonus opportunity) (or such other bonus amount that reflects the progress toward meeting goals and objectives for the target bonus for such period, as determined by the Board in its reasonable discretion). The Executive will receive his or her severance payment in a cash lump-sum in accordance with the Company's standard payroll procedures, which payment will be made no later than the first regular payroll date occurring after the sixtieth (60th) day following the Separation.

(b) **Continued Employee Benefits**. If Executive timely elects continued coverage under the Consolidated Omnibus Budget Reconciliation Act ("**COBRA**"), the Company shall pay the full amount of Executive's COBRA premiums on behalf of the Executive for the Executive's continued coverage under the Company's health, dental and vision plans, including coverage for the Executive's eligible dependents, for the same period that the Executive is paid severance benefits pursuant to Section 2(a) following the Executive's Separation or, if earlier, until Executive is eligible to be covered under another substantially equivalent medical insurance plan by a subsequent employer.

3. **CIC Qualifying Termination**. If the Executive is subject to a CIC Qualifying Termination, then, subject to Sections 4, 9, and 10 below, Executive will be entitled to the following benefits:

(a) **Severance Payments**. The Company or its successor shall pay the Executive (i) his or her annual base salary and (ii) then-current annual target bonus opportunity. Such payment shall be paid in a cash lump sum payment in accordance with the Company's standard payroll procedures, which payment will be made no later than the first regular payroll date occurring after the sixtieth (60^{th}) day following the Separation.

(b) **Continued Employee Benefits**. Continuation of COBRA on the same terms as set forth in Section 2(b) above for the same period that the Executive is paid severance benefits pursuant to Section 3(a) following the Executive's Separation or, if earlier, until Executive is eligible to be covered under another substantially equivalent medical insurance plan by a subsequent employer.

(c) **Equity**. Each of Executive's then outstanding Equity Awards, including awards that would otherwise vest only upon satisfaction of performance criteria, shall accelerate and become vested and exercisable as to 100% of the then-unvested shares subject to the Equity Award, provided, however, that the vesting of any performance-based awards shall be as if all applicable performance criteria were achieved at target levels. Subject to satisfaction of the Release Conditions, the accelerated vesting described in this Section 3(c) shall be effective as of the Separation.

4. **General Release**. Any other provision of this Agreement notwithstanding, the benefits under Section 2 and 3 shall not apply unless the Executive (i) has executed a general release of all known and unknown claims that he or she may then have against the Company or persons affiliated with the Company and such release has become effective and (ii) has agreed not to prosecute any legal action or other proceeding based upon any of such claims. The release must be in the form prescribed by the Company, without alterations (this document effecting the foregoing, the "**Release**"). The Company will deliver the form of Release to the Executive within ten (10) days after the Executive's Separation. The Executive must execute and return the Release within the time period specified in the form.

5 . **Accrued Compensation and Benefits**. Notwithstanding anything to the contrary in Section 2 and Section 3 above, in connection with any termination of employment (whether or not a Qualifying Termination or CIC Qualifying Termination), the Company shall pay Executive's earned but unpaid base salary and other vested but unpaid cash entitlements for the period through and including the termination of employment, including unreimbursed documented business expenses incurred by Executive through and including the date of termination (collectively "**Accrued Compensation and Expenses**"), as required by law and the applicable Company plan or policy. In addition, Executive shall be entitled to any other vested benefits earned by Executive for the period through and including the termination date of Executive's employment under any other employee benefit plans and arrangements maintained by the Company, in accordance with the terms of such plans and arrangements, except as modified herein (collectively "**Accrued Benefits**"). Any Accrued Compensation and Expenses to which the Executive is entitled shall be paid to the Executive in cash as soon as administratively practicable after the termination and, in any event, no later than two and one-half (2-1/2) months after the end of the taxable year of the Executive in which the termination occurs or at such earlier time as may be required by Section 10 below or to such lesser extent as may be mandated by Section 9 below. Any Accrued Benefits to which the Executive is entitled shall be paid to the Executive as provided in the relevant plans and arrangements.

6. **Covenants.**

(a) **Invention Assignment and Confidentiality Agreement**. The Executive agrees and acknowledges that the Executive is bound by the Employment, Confidential Information, Invention Assignment and Arbitration Agreement entered into by and between the Executive and the Company (the "**Confidentiality Agreement**"), including but not limited to the Executive's confidentiality and non-solicitation obligations thereunder.

(b) **Non-Disparagement**. The Executive further agrees that following his or her Separation, he or she shall not in any way or by any means disparage the Company, the members of the Board or the Company's officers and employees. Notwithstanding the foregoing, the Executive is not prohibited from cooperating with a government agency or testifying truthfully in any government inquiry or other proceeding or in which Executive is required to testify pursuant to subpoena or other valid legal process.

7. **Definitions.**

(a) "**Board**" means the Company's board of directors.

(b) "**Cause**" means the Executive's (a) willful failure substantially to perform his or her duties and responsibilities to the Company or deliberate violation of a Company policy; (b) commission of any act of fraud, embezzlement, dishonesty or any other willful misconduct that has caused or is reasonably expected to result in material injury to the Company; (c) unauthorized use or disclosure of any proprietary information or trade secrets of the Company or any other party to whom the Executive owes an obligation of nondisclosure as a result of his or her relationship with the Company; (d) misappropriation of a business opportunity of the Company; (e) provision of material aid to a competitor of the Company; or (f) willful breach of any of his or her obligations under any written agreement or covenant with the Company. The determination as to whether the Executive has been terminated for Cause shall be made in good faith by the Company and shall be final and binding on the Executive. The term "Company" will be interpreted to include any subsidiary or parent of the Company, as appropriate. Notwithstanding the foregoing, the definition of "Cause" may, in part or in whole, be modified or replaced in each individual employment agreement or agreement with the Executive governing the Executive's Equity Awards, provided that such document expressly supersedes the definition provided in this Section 7(b).

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

(d) "**Change in Control**." For all purposes under this Agreement, a Change in Control shall mean a "Corporate Transaction," as such term is defined in the Plan, provided that the transaction (including any series of transactions) also qualifies as a change in control event under U.S. Treasury Regulation 1.409A-3(i)(5).

(e) "**CIC Qualifying Termination**" means a Separation in connection with the consummation of a Change in Control, including at the request of the prospective acquirer whose proposed acquisition would constitute a Change in Control upon its completion, or within three (3) months prior to or within twelve (12) months following the consummation of a Change in Control, resulting from (A) the Company or its successor terminating the Executive's employment for any reason other than Cause or (B) the Executive voluntarily resigning his or her employment for Good Reason. A termination or resignation due to the Executive's death or disability shall not constitute a CIC Qualifying Termination.

(f) "**Equity Awards**" means all options to purchase shares of Company common stock as well as any and all other stock-based awards granted to the Executive, including but not limited to stock bonus awards, restricted stock, restricted stock units or stock appreciation rights.

(g) "**Good Reason**" means, without the Executive's consent, (i) a material diminution in the Executive's authority, duties or responsibilities, including a material change in Executive's reporting responsibilities, such that Executive is required to report to a person whose duties, responsibilities and authority are materially less than those of the person to whom Executive was reporting immediately prior to such change and/or a material reduction in the level of management to which Executive reports, (ii) a reduction in Executive's annual base salary or annual target bonus, (iii) a requirement that Executive relocate Executive's principal place of work to a location that increases the Executive's one-way commute by more than fifty (50) miles from Executive's then-current work location, or (iv) a material breach of this Agreement by the Company. For the Executive to receive the benefits under this Agreement as a result of a voluntary resignation under this subsection (g), all of the following requirements must be satisfied: (1) the Executive must provide notice to the Company of his or her intent to assert Good Reason within sixty (60) days of the initial existence of one or more of the conditions set forth in subclauses (i) through (iv); (2) the Company will have thirty (30) days (the "**Company Cure Period**") from the date of such notice to remedy the condition and, if it does so, the Executive may withdraw his or her resignation or may resign with no benefits under this Agreement; and (3) any termination of employment under this provision must occur within ten (10) days of the earlier of expiration of the Company Cure Period or written notice from the Company that it will not undertake to cure the condition set forth in subclauses (i) through (iv). Should the Company remedy the condition as set forth above and then one or more of the conditions arises again, the Executive may assert Good Reason again subject to all of the conditions set forth herein.

(h) "**Plan**" means the Company's 2018 Equity Incentive Plan, as may be amended from time to time.

(i) "**Release Conditions**" mean the following conditions occurring within sixty (60) days following the Separation: (i) the Company has received the Executive's executed Release and (ii) any rescission period applicable to the Executive's executed Release has expired.

(j) "**Qualifying Termination**" means a Separation that is not a CIC Qualifying Termination, but which results from the Company terminating the Executive's employment for any reason other than Cause. A termination or resignation due to the Executive's death or disability shall not constitute a Qualifying Termination

(k) "**Separation**" means a "separation from service," as defined in the regulations under Section 409A of the Code.

8. **Successors.**

(a) **Company's Successors**. The Company shall require any successor (whether direct or indirect and whether by purchase, lease, merger, consolidation, liquidation or otherwise) to all or substantially all of the Company's business and/or assets, by an agreement in substance and form satisfactory to the Executive, to assume this Agreement and to agree expressly to perform this Agreement in the same manner and to the same extent as the Company would be required to perform it in the absence of a succession. For all purposes under this Agreement, the term "Company" shall include any successor to the Company's business and/or assets or which becomes bound by this Agreement by operation of law.

(b) **Executive's Successors**. This Agreement and all rights of the Executive hereunder shall inure to the benefit of, and be enforceable by, the Executive's personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees and legatees.

9. **Golden Parachute Taxes.**

(a) **Best After-Tax Result**. In the event that any payment or benefit received or to be received by Executive pursuant to this Agreement or otherwise ("**Payments**") would (i) constitute a "parachute payment" within the meaning of Section 280G of the Code and (ii) but for this subsection (a), be subject to the excise tax imposed by Section 4999 of the Code, any successor provisions, or any comparable federal, state, local or foreign excise tax ("**Excise Tax**"), then, subject to the provisions of Section 10, such Payments shall be either (A) provided in full pursuant to the terms of this Agreement or any other applicable agreement, or (B) provided as to such lesser extent which would result in the Payments being $1.00 less than the amount at which any portion of the Payments would be subject to the Excise Tax ("**Reduced Amount**"), whichever of the foregoing amounts, taking into account the applicable federal, state, local and foreign income, employment and other taxes and the Excise Tax (including, without limitation, any interest or penalties on such taxes), results in the receipt by Executive, on an after-tax basis, of the greatest amount of payments and benefits provided for hereunder or otherwise, notwithstanding that all or some portion of such Payments may be subject to the Excise Tax. Unless the Company and Executive otherwise agree in writing, any determination required under this Section shall be made by independent tax counsel designated by the Company and reasonably acceptable to Executive ("**Independent Tax Counsel**"), whose determination shall be conclusive and binding upon Executive and the Company for all purposes. For purposes of making the calculations required under this Section, Independent Tax Counsel may make reasonable assumptions and approximations concerning applicable taxes and may rely on reasonable, good faith interpretations concerning the application of Sections 280G and 4999 of the Code; provided that Independent Tax Counsel shall assume that Executive pays all taxes at the highest marginal rate. The Company and Executive shall furnish to Independent Tax Counsel such information and documents as Independent Tax Counsel may reasonably request in order to make a determination under this Section. The Company shall bear all costs that Independent Tax Counsel may reasonably incur in connection with any calculations contemplated by this Section. In the event that Section 9(a)(ii)(B) above applies, then based on the information provided to Executive and the Company by Independent Tax Counsel, Executive may, in Executive's sole discretion and within thirty (30) days of the date on which Executive is provided with the information prepared by Independent Tax Counsel, determine which and how much of the Payments (including the accelerated vesting of equity compensation awards) to be otherwise received by Executive shall be eliminated or reduced (as long as after such determination the value (as calculated by Independent Tax Counsel in accordance with the provisions of Sections 280G and 4999 of the Code) of the amounts payable or distributable to Executive equals the Reduced Amount). If the Internal Revenue Service (the "**IRS**") determines that any Payment is subject to the Excise Tax, then Section 9(b) hereof shall apply, and the enforcement of Section 9(b) shall be the exclusive remedy to the Company.

(b) **Adjustments**. If, notwithstanding any reduction described in Section 9(a) hereof (or in the absence of any such reduction), the IRS determines that Executive is liable for the Excise Tax as a result of the receipt of one or more Payments, then Executive shall be obligated to surrender or pay back to the Company, within one-hundred twenty (120) days after a final IRS determination, an amount of such payments or benefits equal to the "**Repayment Amount**." The Repayment Amount with respect to such Payments shall be the smallest such amount, if any, as shall be required to be surrendered or paid to the Company so that Executive's net proceeds with respect to such Payments (after taking into account the payment of the Excise Tax imposed on such Payments) shall be maximized. Notwithstanding the foregoing, the Repayment Amount with respect to such Payments shall be zero (0) if a Repayment Amount of more than zero (0) would not eliminate the Excise Tax imposed on such Payments or if a Repayment Amount of more than zero would not maximize the net amount received by Executive from the Payments. If the Excise Tax is not eliminated pursuant to this Section 9(b), Executive shall pay the Excise Tax.

10. **Miscellaneous Provisions.**

(a) **Section 409A**. To the extent (i) any payments to which Executive becomes entitled under this Agreement, or any agreement or plan referenced herein, in connection with Executive's termination of employment with the Company constitute deferred compensation subject to Section 409A of the Code and (ii) Executive is deemed at the time of such termination of employment to be a "specified" employee under Section 409A of the Code, then such payment or payments shall not be made or commence until the earlier of (i) the expiration of the six (6)-month period measured from the Executive's Separation; or (ii) the date of Executive's death following such Separation; provided, however, that such deferral shall only be effected to the extent required to avoid adverse tax treatment to Executive, including (without limitation) the additional twenty percent (20%) tax for which Executive would otherwise be liable under Section 409A(a)(1)(B) of the Code in the absence of such deferral. Upon the expiration of the applicable deferral period, any payments which would have otherwise been made during that period (whether in a single sum or in installments) in the absence of this paragraph shall be paid to Executive or Executive's beneficiary in one lump sum (without interest). Except as otherwise expressly provided herein, to the extent any expense reimbursement or the provision of any in-kind benefit under this Agreement (or otherwise referenced herein) is determined to be subject to (and not exempt from) Section 409A of the Code, the amount of any such expenses eligible for reimbursement, or the provision of any in-kind benefit, in one calendar year shall not affect the expenses eligible for reimbursement or in kind benefits to be provided in any other calendar year, in no event shall any expenses be reimbursed after the last day of the calendar year following the calendar year in which Executive incurred such expenses, and in no event shall any right to reimbursement or the provision of any in-kind benefit be subject to liquidation or exchange for another benefit. To the extent that any provision of this Agreement is ambiguous as to its exemption or compliance with Section 409A, the provision will be read in such a manner so that all payments hereunder are exempt from Section 409A to the maximum permissible extent, and for any payments where such construction is not tenable, that those payments comply with Section 409A to the maximum permissible extent. To the extent any payment under this Agreement may be classified as a "short-term deferral" within the meaning of Section 409A, such payment shall be deemed a short-term deferral, even if it may also qualify for an exemption from Section 409A under another provision of Section 409A. Payments pursuant to this Agreement (or referenced in this Agreement) are intended to constitute separate payments for purposes of Section 1.409A-2(b)(2) of the regulations under Section 409A.

(b) **Other Arrangements**. This Agreement supersedes any and all cash severance arrangements and vesting acceleration arrangements under any offer letter or employment agreement, agreement governing Equity Awards, severance and salary continuation arrangements, programs and plans which were previously offered by the Company to the Executive, including change in control severance arrangements and vesting acceleration arrangements pursuant to an agreement governing Equity Awards, employment agreement or offer letter, and Executive hereby waives Executive's rights to such other benefits. In no event shall any individual receive cash severance benefits under both this Agreement and any other severance pay or salary continuation program, plan or other arrangement with the Company or its subsidiaries. For the avoidance of doubt, in no event shall Executive receive payment under both Section 2 and Section 3 with respect to Executive's Separation.

(c) **Dispute Resolution**. To ensure rapid and economical resolution of any and all disputes that might arise in connection with this Agreement, Executive and the Company agree that any and all disputes, claims, and causes of action, in law or equity, arising from or relating to this Agreement or its enforcement, performance, breach, or interpretation, will be resolved solely and exclusively by final, binding, and confidential arbitration, by a single arbitrator, in Santa Clara County, and conducted by Judicial Arbitration & Mediation Services, Inc. ("**JAMS**") under its then-existing employment rules and procedures. Nothing in this section, however, is intended to prevent either party from obtaining injunctive relief in court to prevent irreparable harm pending the conclusion of any such arbitration. Each party to an arbitration or litigation hereunder shall be responsible for the payment of its own attorneys' fees.

(d) **Notice**. Notices and all other communications contemplated by this Agreement shall be in writing and shall be deemed to have been duly given when personally delivered or when mailed by U.S. registered or certified mail, return receipt requested and postage prepaid or deposited with Federal Express Corporation, with shipping charges prepaid. In the case of the Executive, mailed notices shall be addressed to him or her at the home address which he or she most recently communicated to the Company in writing. In the case of the Company, mailed notices shall be addressed to its corporate headquarters, and all notices shall be directed to the attention of its Secretary.

(e) **Waiver**. No provision of this Agreement shall be modified, waived or discharged unless the modification, waiver or discharge is agreed to in writing and signed by the Executive and by an authorized officer of the Company (other than the Executive). No waiver by either party of any breach of, or of compliance with, any condition or provision of this Agreement by the other party shall be considered a waiver of any other condition or provision or of the same condition or provision at another time.

(f) **Withholding Taxes**. All payments made under this Agreement shall be subject to reduction to reflect taxes or other charges required to be withheld by law.

(g) **Severability**. The invalidity or unenforceability of any provision or provisions of this Agreement shall not affect the validity or enforceability of any other provision hereof, which shall remain in full force and effect.

(h) **No Retention Rights**. Nothing in this Agreement shall confer upon the Executive any right to continue in service for any period of specific duration or interfere with or otherwise restrict in any way the rights of the Company or any subsidiary or parent of the Company or of the Executive, which rights are hereby expressly reserved by each, to terminate his or her service at any time and for any reason, with or without Cause.

(i) **Choice of Law**. The validity, interpretation, construction and performance of this Agreement shall be governed by the laws of the State of California (other than its choice-of-law provisions).

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, each of the parties has executed this Agreement, in the case of the Company by its duly authorized officer, as of the day and year first above written.

EXECUTIVE	BLOOM ENERGY CORPORATION
/s/ Chris White	/s/ Shawn Soderberg
Name: Chris White	By: Shawn Soderberg EVP General Counsel and Secretary

Bloomenergy Exhibit 10.40

December 2, 2018

Hari Pillai
[address]

Dear Hari.

We are pleased to conditionally offer you the position of Executive Vice President, Customer Installations Group with Bloom Energy Corporation (the "Company"). In this full-time, salaried (exempt) position, you will report to KR Sridhar, Founder, Chairman and CEO and will be based out of our San Jose Corporate Headquarters. Your annual starting salary will be **$400,000**, less applicable withholdings and deductions, and you will be paid every other Friday in accordance with the Company's normal payroll practices. You are eligible to receive a discretionary bonus which is a **60%** target of your eligible compensation (Target Total Cash Compensation: $**840,000**). The Incentive Plan payout is based on achievement of Company metrics and individual performance. The Incentive Plan is measured and administered every quarter with an annual component at the end of each year (5 eligible payouts per year). In addition, you will participate in a Change-in-Control agreement which is attached to this offer letter.

We will recommend that the Company's Board of Directors grant you an option to purchase **100,000** shares of the Company's Common Stock at a share price equal to the Common Stock's fair market value on the date of grant. The vest commencement date of the shares subject to this grant will be the date your employment commences. The grant is subject to your continued employment and the Company's standard terms and conditions.

We will recommend that the Company's Board of Directors grant you 15,000 RSUs. These RSUs vest in annual increments from the vesting commencement date over four years. The vest commencement date of the shares subject to the grant will be the date your employment commences. The grant is subject to your continued employment and the Company's standard terms and conditions.

You will also be eligible to receive benefits that the Company generally provides to its employees, including health care and out employee stock purchase plan (ESPP), consistent with the eligibility terms of those programs. A more detailed description of these benefits will be provided to you upon joining the Company.

Your offer of employment is conditioned upon a satisfactory (in the Company's discretion) reference check, background check, and upon proof of your right to work in the US. Your employment with the Company is further subject to the terms and conditions specified in "Attachment A" and "Attachment B" to this letter.

This letter and Attachment A and B set forth the terms of your employment with the Company and supersede any prior representations or agreements including, but not limited to, any representations made during your recruitment, interviews or pre-employment negotiations, whether written or oral. This letter and its attachments may not be modified or amended except by a written agreement signed by me and you.

We are very excited about you joining our team and look forward to a mutually rewarding relationship.

By signing below you are accepting the Company's offer of employment pursuant to the terms and conditions specified in this letter and in Attachment A and B. After signing and dating this letter below, please return all pages by email or by confidential fax (408-543-XXXX).

Sincerely, Agreed to and accepted by:

/s/ Grace Jones /s/ Hari Pillai

Grace Jones Hari Pillai

Senior Director, Human Resources Date: 12/3/18

Bloom Energy Corporation Start Date: 12/27/18

ATTACHMENT A

In addition to the terms outlined in the attached offer letter, your employment at Bloom Energy is conditioned upon the following.

At-Will Employment. You will be an "at will" employee of the Company. This means that either you or the Company may terminate your employment at any time, for any reason or no reason, with our without cause or notice. Regular employment at the Company is for no specified period of time and the Company makes no guarantee or contract of continued employment. Although your job duties, title, compensation, and benefits, as well as the Company's personnel policies, may change from time to time, the "at will" nature of your employment may not be changed except in an express written agreement signed by you and the President of the Company. In the event that you choose to resign from the Company, we request that you give us at least two weeks' notice.

Stock Options/RSUs. If approved by the Board, your stock options and/or RSUs will be subject to the terms and conditions of the Company's 2018 Equity Incentive Plan and the equity award agreement. You will be provided with a copy of the Equity Incentive Plan and your equity award agreement following the Board's approval of your grant. No right to any stock is earned or accrued until such time that vesting occurs, nor does the grant confer any right to continued vesting or employment. All grants are subject to the Company's Insider Trading Policy, trading window and will be subject to the participant's continuous employment.

Incentive Plan (Bonus). Pursuant to the terms of Bloom Energy's Employee Incentive Plan, your eligible compensation is defined as your annual base pay at the end of the eligible period, times the bonus target percent divided by 5 (the number of Incentive opportunities in a year). This calculation will be adjusted to include ay proration based on start date of Leave of Absence in an eligible period. You must be on active status for at least 30 days of the quarter to be eligible for a bonus and at least 30 days of the year to be eligible for the annual bonus. To be eligible for the bonus, you must also be employed by BE on the date of payout. Your bonus is subject to the discretion and approval of the Board of Directors and will be paid in accordance with the Company's normal bonus payment practices.

References. The Company reserves the right to conduct background investigations and/or reference checks on all of its potential employees. Your job offer, therefore, is contingent upon a clearance of such a background investigation and/or reference check, if any.

Right to Work. For purposes of federal immigration law, you will be required to provide to the Company documentary evidence of your identity and eligibility for employment in the United States. Such documentation must be provided to us within three (3) business days of your date of hire, or our employment relationship with you may be terminated.

Prior Employment. We also ask that, if you have not already done so, you disclose to the Company any and all agreements relating to your prior employment that may affect your eligibility to be employed by the Company or limit the manner in which you may be employed. It is the Company's understanding that any such agreements will not prevent you from performing the duties of your position and you represent that such is the case. Moreover, you agree that, during the term of your employment with the Company, you will not engage in any other employment, occupation, consulting or other business activity directly related to the business in which the Company is now involved or becomes involved during the term of your employment, nor will you engage in any other activities that conflict with your obligations to the Company. Similarly, you agree not to bring any third party confidential information to the Company, including that of your former employer, and that in performing your duties for the Company you will not in any way utilize any such information.

Company Policies. As a Company employee, you will be expected to abide by the Company's policies. Specifically, you will be required to sign an acknowledgment that you have read and that you understand the Company's policies which are included in the Company Handbook.

Intellectual Property. As a condition of your employment, you are also required to sign and comply with the Company's "Employment, Confidential Information, Invention Assignment and Arbitration Agreement," which requires, among other provisions, the assignment of patent rights to any invention made during your employment at the Company, and non-disclosure of Company proprietary information. Please note that we must receive your signed Agreement on your first day of employment.

Arbitration. (a) Any dispute or controversy between you and the Company arising out of or relating solely to your employment relationship with the Company, including any dispute or allegation regarding the enforceability, unconscionability, interpretation, construction or breach of this Agreement, will be settled by final and binding arbitration through Judicial Arbitration and Mediation Services ("JAMS") by a single arbitrator to be held in Santa Clara County, California, in accordance with the JAMS rules for resolution of employment disputes then in effect, except as provided herein. This means that we both give up the right to have disputes decided in court by a jury; instead, a neutral arbitrator whose decision is final and binding will resolve it, subject to judicial review as provided by law. The arbitrator selected shall have the authority to grant any party all remedies otherwise available by law, including injunctions, but shall not have the power to grant any remedy that would not be available in a state or federal court in California. The arbitrator shall be bound by and shall strictly enforce the terms of this section and may not limit, expand or otherwise modify its terms. The arbitrator shall make a good faith effort to apply the substantive law (and the law of remedies, if applicable) of the state of California, or federal law, or both, as applicable, without reference to its conflicts of laws provisions, but an arbitration decision shall not be subject to review because of errors of law. The arbitrator is without jurisdiction to apply any different substantive law. The arbitrator shall have the authority to hear and rule on dispositive motions (such as motions for summary adjudication or summary judgment). The arbitrator shall have the powers granted by California law and the rules of JAMS which conducts the arbitration, except as modified or limited herein.

(b) Notwithstanding anything to the contrary in the rules of JAMS, the arbitration shall provide (i) for written discovery and depositions as provided in California Code of Civil Procedure Section 1283.05 and (ii) for a written decision by the arbitrator that includes the essential findings and conclusions upon which the decision is based which shall be issued no later than thirty (30) days after a dispositive motion is heard and/or an arbitration hearing has completed. Except in disputes where you assert a claim otherwise under a state or federal statute prohibiting discrimination in employment ("a Statutory Discrimination Claim"), the Company shall pay all fees and administrative costs charged by the arbitrator and JAMS. In disputes where you assert a Statutory Discrimination Claim against the Company, you are required to pay the American Arbitration Association's filing fee only to the extent such filing fee does not exceed the fee to file a complaint in state or federal court. The Company shall pay the balance of the arbitrator's fees and administrative costs.

(c) You and the Company shall have the same amount of time to file any claim against any other party as such party would have if such a claim had been filed in state or federal court. In conducting the arbitration, the arbitrator shall follow the rules of evidence of the State of California (including but not limited to all applicable privileges), and the award of the arbitrator must follow California and/or federal law, as applicable.

(d) The arbitrator shall be selected by the mutual agreement of the parties. If the parties cannot agree on an arbitrator, the parties shall alternately strike names from a list provided by JAMS until only one name remains.

(e) The decision of the arbitrator will be final, conclusive and binding on the parties to the arbitration. The prevailing party in the arbitration, as determined by the arbitrator, shall be entitled to recover her or its reasonable attorneys' fees and costs, including the costs or fees charged by the arbitrator and JAMS. In disputes where you assert a Statutory Discrimination Claim, reasonable attorneys' fees shall be awarded by the arbitrator based on the same standard as such fees would be awarded if the Statutory Discrimination Claim had been asserted in state or federal court. Judgment may be entered on the arbitrator's decision in any court having jurisdiction.

(f) In the event of (1) a California Private Attorney General Action claim or (2) any claim determined by the arbitrator to be not properly in arbitration pursuant to applicable law, such claim(s) shall be brought as a civil action and shall be stayed pending resolution of all claims that are properly in arbitration.

Exhibit 10.41

ATTACHMENT B

CHANGE IN CONTROL AND SEVERANCE AGREEMENT

This Change in Control and Severance Agreement (the "**Agreement**") is entered into by Hari Pillai (the "**Executive**") and Bloom Energy Corporation, a Delaware corporation (the "**Company**"), on December 3, 2018, and is effective as of January 1, 2019 (the "**Effective Date**").

1. **Term of Agreement.**

Except to the extent renewed as set forth in this Section 1, this Agreement shall terminate the earlier of the first (1st) anniversary of the Effective Date (the "**Expiration Date**") or the date the Executive's employment with the Company terminates for a reason other than a Qualifying Termination or CIC Qualifying Termination; *provided however*, if a definitive agreement relating to a Change in Control has been signed by the Company on or before the Expiration Date, then this Agreement shall remain in effect through the earlier of:

(a) The date the Executive's employment with the Company terminates for a reason other than a Qualifying Termination or CIC Qualifying Termination, or

(b) The date the Company has met all of its obligations under this Agreement following a termination of the Executive's employment with the Company due to a Qualifying Termination or CIC Qualifying Termination.

This Agreement shall renew automatically and continue in effect for one (1) year periods measured from the initial Expiration Date and each subsequent Expiration Date, unless the Company provides Executive notice of non-renewal at least two weeks prior to the date on which this Agreement would otherwise renew. For the avoidance of doubt, and notwithstanding anything to the contrary in Section 2 or 3 below, the Company's non-renewal of this Agreement shall not constitute a Qualifying Termination or CIC Qualifying Termination, as applicable.

2. **Qualifying Termination**. If the Executive is subject to a Qualifying Termination, then, subject to Sections 4, 9, and 10 below, Executive will be entitled to the following benefits:

(a) **Severance Benefits**. The Company shall pay the Executive (i) nine (9) months' worth of (x) his or her monthly base salary and (ii) the prorated portion of Executive's then-current target bonus opportunity for the portion of the current year that Executive served prior to the Separation (calculated based on the number of full or partial months to date in the bonus year multiplied by 1/12 of the annual target bonus opportunity) (or such other bonus amount that reflects the progress toward meeting goals and objectives for the target bonus for such period, as determined by the Board in its reasonable discretion). The Executive will receive his or her severance payment in a cash lump-sum in accordance with the Company's standard payroll procedures, which payment will be made no later than the first regular payroll date occurring after the sixtieth (60^{th}) day following the Separation.

(b) **Continued Employee Benefits**. If Executive timely elects continued coverage under the Consolidated Omnibus Budget Reconciliation Act ("**COBRA**"), the Company shall pay the full amount of Executive's COBRA premiums on behalf of the Executive for the Executive's continued coverage under the Company's health, dental and vision plans, including coverage for the Executive's eligible dependents, for the same period that the Executive is paid severance benefits pursuant to Section 2(a) following the Executive's Separation or, if earlier, until Executive is eligible to be covered under another substantially equivalent medical insurance plan by a subsequent employer.

3. **CIC Qualifying Termination**. If the Executive is subject to a CIC Qualifying Termination, then, subject to Sections 4, 9, and 10 below, Executive will be entitled to the following benefits:

(a) **Severance Payments**. The Company or its successor shall pay the Executive (i) his or her annual base salary and (ii) then-current annual target bonus opportunity. Such payment shall be paid in a cash lump sum payment in accordance with the Company's standard payroll procedures, which payment will be made no later than the first regular payroll date occurring after the sixtieth (60^{th}) day following the Separation.

(b) **Continued Employee Benefits**. Continuation of COBRA on the same terms as set forth in Section 2(b) above for the same period that the Executive is paid severance benefits pursuant to Section 3(a) following the Executive's Separation or, if earlier, until Executive is eligible to be covered under another substantially equivalent medical insurance plan by a subsequent employer.

(c) **Equity**. Each of Executive's then outstanding Equity Awards, including awards that would otherwise vest only upon satisfaction of performance criteria, shall accelerate and become vested and exercisable as to 100% of the then-unvested shares subject to the Equity Award, provided, however, that the vesting of any performance-based awards shall be as if all applicable performance criteria were achieved at target levels. Subject to satisfaction of the Release Conditions, the accelerated vesting described in this Section 3(c) shall be effective as of the Separation.

4. **General Release**. Any other provision of this Agreement notwithstanding, the benefits under Section 2 and 3 shall not apply unless the Executive (i) has executed a general release of all known and unknown claims that he or she may then have against the Company or persons affiliated with the Company and such release has become effective and (ii) has agreed not to prosecute any legal action or other proceeding based upon any of such claims. The release must be in the form prescribed by the Company, without alterations (this document effecting the foregoing, the "**Release**"). The Company will deliver the form of Release to the Executive within ten (10) days after the Executive's Separation. The Executive must execute and return the Release within the time period specified in the form.

5. **Accrued Compensation and Benefits**. Notwithstanding anything to the contrary in Section 2 and Section 3 above, in connection with any termination of employment (whether or not a Qualifying Termination or CIC Qualifying Termination), the Company shall pay Executive's earned but unpaid base salary and other vested but unpaid cash entitlements for the period through and including the termination of employment, including unreimbursed documented business expenses incurred by Executive through and including the date of termination (collectively "**Accrued Compensation and Expenses**"), as required by law and the applicable Company plan or policy. In addition, Executive shall be entitled to any other vested benefits earned by Executive for the period through and including the termination date of Executive's employment under any other employee benefit plans and arrangements maintained by the Company, in accordance with the terms of such plans and arrangements, except as modified herein (collectively "**Accrued Benefits**"). Any Accrued Compensation and Expenses to which the Executive is entitled shall be paid to the Executive in cash as soon as administratively practicable after the termination and, in any event, no later than two and one-half (2-1/2) months after the end of the taxable year of the Executive in which the termination occurs or at such earlier time as may be required by Section 10 below or to such lesser extent as may be mandated by Section 9 below. Any Accrued Benefits to which the Executive is entitled shall be paid to the Executive as provided in the relevant plans and arrangements.

6. **Covenants.**

(a) **Invention Assignment and Confidentiality Agreement**. The Executive agrees and acknowledges that the Executive is bound by the Employment, Confidential Information, Invention Assignment and Arbitration Agreement entered into by and between the Executive and the Company (the "**Confidentiality Agreement**"), including but not limited to the Executive's confidentiality and non-solicitation obligations thereunder.

(b) **Non-Disparagement**. The Executive further agrees that following his or her Separation, he or she shall not in any way or by any means disparage the Company, the members of the Board or the Company's officers and employees. Notwithstanding the foregoing, the Executive is not prohibited from cooperating with a government agency or testifying truthfully in any government inquiry or other proceeding or in which Executive is required to testify pursuant to subpoena or other valid legal process.

7. **Definitions.**

(a) "**Board**" means the Company's board of directors.

(b) "**Cause**" means the Executive's (a) willful failure substantially to perform his or her duties and responsibilities to the Company or deliberate violation of a Company policy; (b) commission of any act of fraud, embezzlement, dishonesty or any other willful misconduct that has caused or is reasonably expected to result in material injury to the Company; (c) unauthorized use or disclosure of any proprietary information or trade secrets of the Company or any other party to whom the Executive owes an obligation of nondisclosure as a result of his or her relationship with the Company; (d) misappropriation of a business opportunity of the Company; (e) provision of material aid to a competitor of the Company; or (f) willful breach of any of his or her obligations under any written agreement or covenant with the Company. The determination as to whether the Executive has been terminated for Cause shall be made in good faith by the Company and shall be final and binding on the Executive. The term "Company" will be interpreted to include any subsidiary or parent of the Company, as appropriate. Notwithstanding the foregoing, the definition of "Cause" may, in part or in whole, be modified or replaced in each individual employment agreement or agreement with the Executive governing the Executive's Equity Awards, provided that such document expressly supersedes the definition provided in this Section 7(b).

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

(d) "**Change in Control**." For all purposes under this Agreement, a Change in Control shall mean a "Corporate Transaction," as such term is defined in the Plan, provided that the transaction (including any series of transactions) also qualifies as a change in control event under U.S. Treasury Regulation 1.409A-3(i)(5).

(e) "**CIC Qualifying Termination**" means a Separation in connection with the consummation of a Change in Control, including at the request of the prospective acquirer whose proposed acquisition would constitute a Change in Control upon its completion, or within three (3) months prior to or within twelve (12) months following the consummation of a Change in Control, resulting from (A) the Company or its successor terminating the Executive's employment for any reason other than Cause or (B) the Executive voluntarily resigning his or her employment for Good Reason. A termination or resignation due to the Executive's death or disability shall not constitute a CIC Qualifying Termination.

(f) "**Equity Awards**" means all options to purchase shares of Company common stock as well as any and all other stock-based awards granted to the Executive, including but not limited to stock bonus awards, restricted stock, restricted stock units or stock appreciation rights.

(g) "**Good Reason**" means, without the Executive's consent, (i) a material diminution in the Executive's authority, duties or responsibilities, including a material change in Executive's reporting responsibilities, such that Executive is required to report to a person whose duties, responsibilities and authority are materially less than those of the person to whom Executive was reporting immediately prior to such change and/or a material reduction in the level of management to which Executive reports, (ii) a reduction in Executive's annual base salary or annual target bonus, (iii) a requirement that Executive relocate Executive's principal place of work to a location that increases the Executive's one-way commute by more than fifty (50) miles from Executive's then-current work location, or (iv) a material breach of this Agreement by the Company. For the Executive to receive the benefits under this Agreement as a result of a voluntary resignation under this subsection (g), all of the following requirements must be satisfied: (1) the Executive must provide notice to the Company of his or her intent to assert Good Reason within sixty (60) days of the initial existence of one or more of the conditions set forth in subclauses (i) through (iv); (2) the Company will have thirty (30) days (the "**Company Cure Period**") from the date of such notice to remedy the condition and, if it does so, the Executive may withdraw his or her resignation or may resign with no benefits under this Agreement; and (3) any termination of employment under this provision must occur within ten (10) days of the earlier of expiration of the Company Cure Period or written notice from the Company that it will not undertake to cure the condition set forth in subclauses (i) through (iv). Should the Company remedy the condition as set forth above and then one or more of the conditions arises again, the Executive may assert Good Reason again subject to all of the conditions set forth herein.

(h) "**Plan**" means the Company's 2018 Equity Incentive Plan, as may be amended from time to time.

(i) "**Release Conditions**" mean the following conditions occurring within sixty (60) days following the Separation: (i) the Company has received the Executive's executed Release and (ii) any rescission period applicable to the Executive's executed Release has expired.

(j) "**Qualifying Termination**" means a Separation that is not a CIC Qualifying Termination, but which results from the Company terminating the Executive's employment for any reason other than Cause. A termination or resignation due to the Executive's death or disability shall not constitute a Qualifying Termination

(k) "**Separation**" means a "separation from service," as defined in the regulations under Section 409A of the Code.

8. **Successors.**

(a) **Company's Successors**. The Company shall require any successor (whether direct or indirect and whether by purchase, lease, merger, consolidation, liquidation or otherwise) to all or substantially all of the Company's business and/or assets, by an agreement in substance and form satisfactory to the Executive, to assume this Agreement and to agree expressly to perform this Agreement in the same manner and to the same extent as the Company would be required to perform it in the absence of a succession. For all purposes under this Agreement, the term "Company" shall include any successor to the Company's business and/or assets or which becomes bound by this Agreement by operation of law.

(b) **Executive's Successors**. This Agreement and all rights of the Executive hereunder shall inure to the benefit of, and be enforceable by, the Executive's personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees and legatees.

9. **Golden Parachute Taxes.**

(a) **Best After-Tax Result**. In the event that any payment or benefit received or to be received by Executive pursuant to this Agreement or otherwise ("**Payments**") would (i) constitute a "parachute payment" within the meaning of Section 280G of the Code and (ii) but for this subsection (a), be subject to the excise tax imposed by Section 4999 of the Code, any successor provisions, or any comparable federal, state, local or foreign excise tax ("**Excise Tax**"), then, subject to the provisions of Section 10, such Payments shall be either (A) provided in full pursuant to the terms of this Agreement or any other applicable agreement, or (B) provided as to such lesser extent which would result in the Payments being $1.00 less than the amount at which any portion of the Payments would be subject to the Excise Tax ("**Reduced Amount**"), whichever of the foregoing amounts, taking into account the applicable federal, state, local and foreign income, employment and other taxes and the Excise Tax (including, without limitation, any interest or penalties on such taxes), results in the receipt by Executive, on an after-tax basis, of the greatest amount of payments and benefits provided for hereunder or otherwise, notwithstanding that all or some portion of such Payments may be subject to the Excise Tax. Unless the Company and Executive otherwise agree in writing, any determination required under this Section shall be made by independent tax counsel designated by the Company and reasonably acceptable to Executive ("**Independent Tax Counsel**"), whose determination shall be conclusive and binding upon Executive and the Company for all purposes. For purposes of making the calculations required under this Section, Independent Tax Counsel may make reasonable assumptions and approximations concerning applicable taxes and may rely on reasonable, good faith interpretations concerning the application of Sections 280G and 4999 of the Code; provided that Independent Tax Counsel shall assume that Executive pays all taxes at the highest marginal rate. The Company and Executive shall furnish to Independent Tax Counsel such information and documents as Independent Tax Counsel may reasonably request in order to make a determination under this Section. The Company shall bear all costs that Independent Tax Counsel may reasonably incur in connection with any calculations contemplated by this Section. In the event that Section 9(a)(ii)(B) above applies, then based on the information provided to Executive and the Company by Independent Tax Counsel, Executive may, in Executive's sole discretion and within thirty (30) days of the date on which Executive is provided with the information prepared by Independent Tax Counsel, determine which and how much of the Payments (including the accelerated vesting of equity compensation awards) to be otherwise received by Executive shall be eliminated or reduced (as long as after such determination the value (as calculated by Independent Tax Counsel in accordance with the provisions of Sections 280G and 4999 of the Code) of the amounts payable or distributable to Executive equals the Reduced Amount). If the Internal Revenue Service (the "**IRS**") determines that any Payment is subject to the Excise Tax, then Section 9(b) hereof shall apply, and the enforcement of Section 9(b) shall be the exclusive remedy to the Company.

(b) **Adjustments**. If, notwithstanding any reduction described in Section 9(a) hereof (or in the absence of any such reduction), the IRS determines that Executive is liable for the Excise Tax as a result of the receipt of one or more Payments, then Executive shall be obligated to surrender or pay back to the Company, within one-hundred twenty (120) days after a final IRS determination, an amount of such payments or benefits equal to the "**Repayment Amount**." The Repayment Amount with respect to such Payments shall be the smallest such amount, if any, as shall be required to be surrendered or paid to the Company so that Executive's net proceeds with respect to such Payments (after taking into account the payment of the Excise Tax imposed on such Payments) shall be maximized. Notwithstanding the foregoing, the Repayment Amount with respect to such Payments shall be zero (0) if a Repayment Amount of more than zero (0) would not eliminate the Excise Tax imposed on such Payments or if a Repayment Amount of more than zero would not maximize the net amount received by Executive from the Payments. If the Excise Tax is not eliminated pursuant to this Section 9(b), Executive shall pay the Excise Tax.

10. **Miscellaneous Provisions.**

(a) **Section 409A**. To the extent (i) any payments to which Executive becomes entitled under this Agreement, or any agreement or plan referenced herein, in connection with Executive's termination of employment with the Company constitute deferred compensation subject to Section 409A of the Code and (ii) Executive is deemed at the time of such termination of employment to be a "specified" employee under Section 409A of the Code, then such payment or payments shall not be made or commence until the earlier of (i) the expiration of the six (6)-month period measured from the Executive's Separation; or (ii) the date of Executive's death following such Separation; provided, however, that such deferral shall only be effected to the extent required to avoid adverse tax treatment to Executive, including (without limitation) the additional twenty percent (20%) tax for which Executive would otherwise be liable under Section 409A(a)(1)(B) of the Code in the absence of such deferral. Upon the expiration of the applicable deferral period, any payments which would have otherwise been made during that period (whether in a single sum or in installments) in the absence of this paragraph shall be paid to Executive or Executive's beneficiary in one lump sum (without interest). Except as otherwise expressly provided herein, to the extent any expense reimbursement or the provision of any in-kind benefit under this Agreement (or otherwise referenced herein) is determined to be subject to (and not exempt from) Section 409A of the Code, the amount of any such expenses eligible for reimbursement, or the provision of any in-kind benefit, in one calendar year shall not affect the expenses eligible for reimbursement or in kind benefits to be provided in any other calendar year, in no event shall any expenses be reimbursed after the last day of the calendar year following the calendar year in which Executive incurred such expenses, and in no event shall any right to reimbursement or the provision of any in-kind benefit be subject to liquidation or exchange for another benefit. To the extent that any provision of this Agreement is ambiguous as to its exemption or compliance with Section 409A, the provision will be read in such a manner so that all payments hereunder are exempt from Section 409A to the maximum permissible extent, and for any payments where such construction is not tenable, that those payments comply with Section 409A to the maximum permissible extent. To the extent any payment under this Agreement may be classified as a "short-term deferral" within the meaning of Section 409A, such payment shall be deemed a short-term deferral, even if it may also qualify for an exemption from Section 409A under another provision of Section 409A. Payments pursuant to this Agreement (or referenced in this Agreement) are intended to constitute separate payments for purposes of Section 1.409A-2(b)(2) of the regulations under Section 409A.

(b) **Other Arrangements**. This Agreement supersedes any and all cash severance arrangements and vesting acceleration arrangements under any offer letter or employment agreement, agreement governing Equity Awards, severance and salary continuation arrangements, programs and plans which were previously offered by the Company to the Executive, including change in control severance arrangements and vesting acceleration arrangements pursuant to an agreement governing Equity Awards, employment agreement or offer letter, and Executive hereby waives Executive's rights to such other benefits. In no event shall any individual receive cash severance benefits under both this Agreement and any other severance pay or salary continuation program, plan or other arrangement with the Company or its subsidiaries. For the avoidance of doubt, in no event shall Executive receive payment under both Section 2 and Section 3 with respect to Executive's Separation.

(c) **Dispute Resolution**. To ensure rapid and economical resolution of any and all disputes that might arise in connection with this Agreement, Executive and the Company agree that any and all disputes, claims, and causes of action, in law or equity, arising from or relating to this Agreement or its enforcement, performance, breach, or interpretation, will be resolved solely and exclusively by final, binding, and confidential arbitration, by a single arbitrator, in Santa Clara County, and conducted by Judicial Arbitration & Mediation Services, Inc. ("**JAMS**") under its then-existing employment rules and procedures. Nothing in this section, however, is intended to prevent either party from obtaining injunctive relief in court to prevent irreparable harm pending the conclusion of any such arbitration. Each party to an arbitration or litigation hereunder shall be responsible for the payment of its own attorneys' fees.

(d) **Notice**. Notices and all other communications contemplated by this Agreement shall be in writing and shall be deemed to have been duly given when personally delivered or when mailed by U.S. registered or certified mail, return receipt requested and postage prepaid or deposited with Federal Express Corporation, with shipping charges prepaid. In the case of the Executive, mailed notices shall be addressed to him or her at the home address which he or she most recently communicated to the Company in writing. In the case of the Company, mailed notices shall be addressed to its corporate headquarters, and all notices shall be directed to the attention of its Secretary.

(e) **Waiver**. No provision of this Agreement shall be modified, waived or discharged unless the modification, waiver or discharge is agreed to in writing and signed by the Executive and by an authorized officer of the Company (other than the Executive). No waiver by either party of any breach of, or of compliance with, any condition or provision of this Agreement by the other party shall be considered a waiver of any other condition or provision or of the same condition or provision at another time.

(f) **Withholding Taxes**. All payments made under this Agreement shall be subject to reduction to reflect taxes or other charges required to be withheld by law.

(g) **Severability**. The invalidity or unenforceability of any provision or provisions of this Agreement shall not affect the validity or enforceability of any other provision hereof, which shall remain in full force and effect.

(h) **No Retention Rights**. Nothing in this Agreement shall confer upon the Executive any right to continue in service for any period of specific duration or interfere with or otherwise restrict in any way the rights of the Company or any subsidiary or parent of the Company or of the Executive, which rights are hereby expressly reserved by each, to terminate his or her service at any time and for any reason, with or without Cause.

(i) **Choice of Law**. The validity, interpretation, construction and performance of this Agreement shall be governed by the laws of the State of California (other than its choice-of-law provisions).

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, each of the parties has executed this Agreement, in the case of the Company by its duly authorized officer, as of the day and year first above written.

EXECUTIVE	BLOOM ENERGY CORPORATION
/s/ Hari Pillai	/s/ Grace Jones
Name: Hari Pillai	By: Grace Jones Sr. Director, Human Resources

Exhibit 21.1

Subsidiaries of Bloom Energy Corporation

Name of Subsidiary	Jurisdiction
Bloom Energy 2009 PPA Portfolio Holding Company, LLC	Delaware
Diamond State Generation Holdings, LLC	Delaware
2012 V PPA Holdco, LLC	Delaware
2013B ESA Holdco, LLC	Delaware
2014 ESA HoldCo, LLC	Delaware
2015 ESA HoldCo, LLC	Delaware
BE Development, Inc.	Delaware
Bloom Energy (India) Pvt. Ltd.	India

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 (No. 333-226369) of Bloom Energy Corporation of our report dated March 31, 2020 relating to the financial statements, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP
San Jose, California
March 31, 2020

EXHIBIT 31.1

CERTIFICATION 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, 2019 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:	March 31, 2020	By:	/s/ KR Sridhar
			KR Sridhar Founder, President, Chief Executive Officer and Director (Principal Executive Officer)

EXHIBIT 31.2

CERTIFICATION 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, Randy Furr, certify that:

1. I have reviewed this Annual Report on Form 10-K for the year ended December 31, 2019 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: March 31, 2020

By: /s/ Randy Furr

Randy Furr
Chief Financial Officer
(Principal Financial 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

In connection with the Annual Report on Form 10-K for the year ended December 31, 2019 of Bloom Energy Corporation (the “Company”) as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, KR Sridhar, Chief Executive Officer 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 result of operations of the Company.
3.

Date:	March 31, 2020	By:	/s/ KR Sridhar
			KR Sridhar
			Founder, President, Chief Executive Officer and Director
			(Principal Executive Officer)

In connection with the Annual Report on Form 10-K for the year ended December 31, 2019 of Bloom Energy Corporation (the “Company”) as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Randy Furr, Chief Financial Officer 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 result of operations of the Company.

Date:	March 31, 2020	By:	/s/ Randy Furr
			Randy Furr
			Chief Financial Officer
			(Principal Financial Officer)