UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

(Mark One)

☑ QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarter ended September 30, 2021

or

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from _____ to _____

Commission File Number 001-38598



BLOOM ENERGY CORPORATION
(Exact name of registrant as specified in its charter)

Delaware	**77-0565408**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
4353 North First Street, San Jose, California	**95134**
(Address of principal executive offices)	(Zip Code)

(408) 543-1500
(Registrant's telephone number, including area code)

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

Title of Each Class[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 (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 Exchange Act). Yes ☐ No ☑

The number of shares of the registrant's common stock outstanding as of October 27, 2021 was as follows:

Class A Common Stock, $0.0001 par value 147,730,770 shares

Class B Common Stock, $0.0001 par value 27,734,592 shares

Bloom Energy Corporation

Quarterly Report on Form 10-Q for the Three and Nine Months Ended September 30, 2021

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Unless the context otherwise requires, the terms "we," "us," "our," and "Bloom Energy," each refer to Bloom Energy Corporation and all of its subsidiaries.

Part I

ITEM 1 - FINANCIAL STATEMENTS

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

	September 30, 2021	December 31, 2020
Assets		
Current assets:		
Cash and cash equivalents[1]	$ 121,861	$ 246,947
Restricted cash[1]	65,315	52,470
Accounts receivable[1]	62,066	96,186
Contract assets	27,745	3,327
Inventories	182,555	142,059
Deferred cost of revenue	33,759	41,469
Customer financing receivable[1]	5,693	5,428
Prepaid expenses and other current assets[1]	31,946	30,718
Total current assets	530,940	618,604
Property, plant and equipment, net[1]	615,514	600,628
Operating lease right-of-use assets	70,055	35,621
Customer financing receivable, non-current[1]	40,981	45,268
Restricted cash, non-current[1]	132,725	117,293
Deferred cost of revenue, non-current	2,918	2,462
Other long-term assets[1]	38,593	34,511
Total assets	$ 1,431,726	$ 1,454,387
Liabilities, Redeemable Noncontrolling Interest, Stockholders' (Deficit) Equity and Noncontrolling Interest		
Current liabilities:		
Accounts payable	$ 101,908	$ 58,334
Accrued warranty	7,907	10,263
Accrued expenses and other current liabilities[1]	85,877	112,004
Deferred revenue and customer deposits[1]	81,894	114,286
Operating lease liabilities	6,206	7,899
Financing obligations	14,260	12,745
Recourse debt	6,034	—
Non-recourse debt[1]	7,782	120,846
Total current liabilities	311,868	436,377
Deferred revenue and customer deposits, non-current[1]	67,887	87,463
Operating lease liabilities, non-current	78,146	41,849
Financing obligations, non-current	456,315	459,981
Recourse debt, non-current	285,216	168,008
Non-recourse debt, non-current[1]	205,164	102,045
Other long-term liabilities	26,755	17,268
Total liabilities	1,431,351	1,312,991
Commitments and contingencies (Note 13)		
Redeemable noncontrolling interest	331	377
Stockholders' (deficit) equity:		
Preferred stock: 10,000,000 shares authorized and no shares issued and outstanding at September 30, 2021 and December 31, 2020.	—	—
Common stock: $0.0001 par value; Class A shares - 600,000,000 shares authorized and 147,320,041 shares and 140,094,633 shares issued and outstanding and Class B shares - 600,000,000 shares authorized and 27,758,020 shares and 27,908,093 shares issued and outstanding at September 30, 2021 and December 31, 2020, respectively.	18	17
Additional paid-in capital	3,183,101	3,182,753
Accumulated other comprehensive loss	(278)	(9)
Accumulated deficit	(3,229,752)	(3,103,937)
Total stockholders' (deficit) equity	(46,911)	78,824
Noncontrolling interest	46,955	62,195
Total liabilities, redeemable noncontrolling interest, stockholders' (deficit) equity and noncontrolling interest	$ 1,431,726	$ 1,454,387

[1]We have variable interest entities, which represent a portion of the consolidated balances recorded within these financial statement line items in the condensed consolidated balance sheets (see Note 11 - *Portfolio Financings*).

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

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
Revenue:				
Product	$ 128,550	$ 131,076	$ 413,347	$ 346,832
Installation	22,172	26,603	53,710	73,060
Service	39,251	26,141	111,375	77,496
Electricity	17,255	16,485	51,273	47,472
Total revenue	207,228	200,305	629,705	544,860
Cost of revenue:				
Product	93,704	72,037	289,889	227,653
Installation	25,616	27,872	66,756	86,938
Service	39,586	33,214	111,269	92,836
Electricity	11,439	11,195	32,913	35,266
Total cost of revenue	170,345	144,318	500,827	442,693
Gross profit	36,883	55,987	128,878	102,167
Operating expenses:				
Research and development	27,634	19,231	76,602	61,887
Sales and marketing	20,124	11,700	62,803	37,076
General and administrative	33,014	25,428	90,470	79,471
Total operating expenses	80,772	56,359	229,875	178,434
Loss from operations	(43,889)	(372)	(100,997)	(76,267)
Interest income	72	254	222	1,405
Interest expense	(14,514)	(19,902)	(43,798)	(55,030)
Interest expense - related parties	—	(353)	—	(2,513)
Other income (expense), net	2,011	(221)	1,948	(4,142)
Gain (loss) on extinguishment of debt	—	1,220	—	(12,878)
(Loss) gain on revaluation of embedded derivatives	(184)	1,505	(1,644)	2,201
Loss before income taxes	(56,504)	(17,869)	(144,269)	(147,224)
Income tax provision	158	7	595	272
Net loss	(56,662)	(17,876)	(144,864)	(147,496)
Less: Net loss attributable to noncontrolling interest and redeemable noncontrolling interest	(4,292)	(5,922)	(13,742)	(17,081)
Net loss attributable to Class A and Class B common stockholders	$ (52,370)	$ (11,954)	$ (131,122)	$ (130,415)
Net loss per share available to Class A and Class B common stockholders, basic and diluted	$ (0.30)	$ (0.09)	$ (0.76)	$ (1.01)
Weighted average shares used to compute net loss per share available to Class A and Class B common stockholders, basic and diluted	174,269	138,964	172,601	129,571

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

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
Net loss	$ (56,662)	$ (17,876)	$ (144,864)	$ (147,496)
Other comprehensive loss, net of taxes:				
Unrealized loss on available-for-sale securities	—	—	—	(23)
Change in derivative instruments designated and qualifying as cash flow hedges	(763)	573	(4,031)	(8,144)
Foreign currency translation adjustment	(299)	—	(523)	—
Other comprehensive (loss) income, net of taxes	(1,062)	573	(4,554)	(8,167)
Comprehensive loss	(57,724)	(17,303)	(149,418)	(155,663)
Less: Comprehensive loss attributable to noncontrolling interest and redeemable noncontrolling interest	(3,673)	(5,349)	(9,964)	(25,219)
Comprehensive loss attributable to Class A and Class B stockholders	$ (54,051)	$ (11,954)	$ (139,454)	$ (130,444)

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

Bloom Energy Corporation
Condensed Consolidated Statements of Redeemable Noncontrolling Interest, Stockholders' (Deficit) Equity and Noncontrolling Interest
(in thousands, except share data) (unaudited)

	Three Months Ended September 30, 2021								
	Redeemable Noncontrolling Interest	Class A and Class B Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Deficit	Noncontrolling Interest
		Shares	Amount					
Balances at June 30, 2021	$ 334	173,402,160	$ 17	$ 3,155,917	$ (124)	$ (3,177,381)	$ (21,571)	$ 51,185
Issuance of restricted stock awards	—	581,363	—	—	—	—	—	—
ESPP purchase	—	967,797	—	5,319	—	—	5,319	—
Exercise of stock options	—	126,741	1	1,122	—	—	1,123	—
Stock-based compensation	—	—	—	20,743	—	—	20,743	—
Change in effective portion of interest rate swap agreement	—	—	—	—	—	—	—	763
Distributions to noncontrolling interests	(20)	—	—	—	—	—	—	(540)
Foreign currency translation adjustment	—	—	—	—	(154)	—	(154)	(145)
Net income (loss)	17	—	—	—	—	(52,371)	(52,371)	(4,308)
Balances at September 30, 2021	$ 331	175,078,061	$ 18	$ 3,183,101	$ (278)	$ (3,229,752)	$ (46,911)	$ 46,955

	Three Months Ended September 30, 2020							
	Redeemable Noncontrolling Interest	Class A and Class B Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Deficit	Noncontrolling Interest
		Shares	Amount					
Balances at June 30, 2020	$ 118	130,238,289	$ 13	$ 2,747,890	$ (9)	$ (3,064,846)	$ (316,951)	$ 66,302
Conversion of notes	—	19,136,313	1	160,341	—	—	160,342	—
Issuance of convertible note	—	—	—	124,050	—	—	124,050	—
Issuance of restricted stock awards	—	3,203,935	1	—	—	—	1	—
ESPP purchase	—	944,979	—	4,323	—	—	4,323	—
Exercise of stock options	—	273,056	—	3,235	—	—	3,235	—
Stock-based compensation	—	—	—	14,537	—	—	14,537	—
Change in effective portion of interest rate swap agreement	—	—	—	—	—	—	—	573
Distributions to noncontrolling interests	(18)	—	—	—	—	—	—	(269)
Proceeds from noncontrolling interest	—	—	—	—	—	—	—	4,314
Net income (loss)	89	—	—	—	—	(11,954)	(11,954)	(6,011)
Balances at September 30, 2020	$ 189	153,796,572	$ 15	$ 3,054,376	$ (9)	$ (3,076,800)	$ (22,418)	$ 64,909

	Nine Months Ended September 30, 2021							
	Redeemable Noncontrolling Interest	Class A and Class B Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity (Deficit)	Noncontrolling Interest
		Shares	Amount					
Balances at December 31, 2020	$ 377	168,002,726	$ 17	$ 3,182,753	$ (9)	$ (3,103,937)	$ 78,824	$ 62,195
Cumulative effect upon adoption of Accounting Standards Update 2020-06 (Note 2)	—	—	—	(126,799)	—	5,308	(121,491)	—
Issuance of restricted stock awards	—	2,533,027	—	—	—	—	—	—
ESPP purchase	—	1,945,305	—	10,045	—	—	10,045	—
Exercise of stock options	—	2,597,003	1	62,064	—	—	62,065	—
Stock-based compensation expense	—	—	—	55,038	—	—	55,038	—
Change in effective portion of interest rate swap agreement	—	—	—	—	—	—	—	4,031
Distributions to noncontrolling interests	(37)	—	—	—	—	—	—	(5,285)
Foreign currency translation adjustment	—	—	—	—	(269)	—	(269)	(254)
Net loss	(9)	—	—	—	—	(131,123)	(131,123)	(13,732)
Balances at September 30, 2021	$ 331	175,078,061	$ 18	$ 3,183,101	$ (278)	$ (3,229,752)	$ (46,911)	$ 46,955

	Nine Months Ended September 30, 2020							
	Redeemable Noncontrolling Interest	Class A and Class B Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Gain (Loss)	Accumulated Deficit	Total Stockholders' Deficit	Noncontrolling Interest
		Shares	Amount					
Balances at December 31, 2019	$ 443	121,036,289	$ 12	$ 2,686,759	$ 19	$ (2,946,384)	$ (259,594)	$ 91,291
Conversion of notes	—	23,854,441	2	201,470	—	—	201,472	—
Issuance of convertible note	—	—	—	124,050	—	—	124,050	—
Adjustment of embedded derivative for debt modification	—	—	—	(24,071)	—	—	(24,071)	—
Issuance of restricted stock awards	—	6,524,088	1		—	—	1	—
ESPP purchase	—	1,937,825	—	8,500	—	—	8,500	—
Exercise of stock options	—	443,929	—	4,243	—	—	4,243	—
Stock-based compensation	—	—	—	53,425	—	—	53,425	—
Unrealized loss on available for sale securities	—	—	—	—	(23)	—	(23)	—
Change in effective portion of interest rate swap agreement	—	—	—	—	(5)	—	(5)	(8,139)
Distributions to noncontrolling interests	(35)	—	—	—	—	—	—	(5,696)
Contributions from noncontrolling interest	—	—	—	—	—	—	—	4,314
Net loss	(219)	—	—	—	—	(130,415)	(130,415)	(16,861)
Balances at September 30, 2020	$ 189	153,796,572	$ 15	$ 3,054,376	$ (9)	$ (3,076,800)	$ (22,418)	$ 64,909

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

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

	Nine Months Ended September 30,	
	2021	**2020**
Cash flows from operating activities:		
Net loss	$ (144,864)	$ (147,496)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	40,079	38,888
Non-cash lease expense	7,161	4,419
Write-off of property, plant and equipment, net	—	36
Impairment of equity method investment	—	4,236
Revaluation of derivative contracts	486	(2,267)
Stock-based compensation expense	57,309	57,385
Gain on remeasurement of investment	(1,966)	—
Loss on extinguishment of debt	—	11,785
Amortization of debt issuance costs and premium, net	2,824	(195)
Changes in operating assets and liabilities:		
Accounts receivable	34,291	(4,058)
Contract assets	(24,418)	(8,596)
Inventories	(39,953)	(22,772)
Deferred cost of revenue	7,307	1,562
Customer financing receivable	4,022	3,790
Prepaid expenses and other current assets	236	(2,647)
Other long-term assets	(374)	(3,217)
Accounts payable	37,973	8,704
Accrued warranty	(2,357)	(525)
Accrued expenses and other current liabilities	(26,178)	4,932
Operating lease right-of-use assets and operating lease liabilities	(7,593)	(4,467)
Deferred revenue and customer deposits	(53,181)	(15,658)
Other long-term liabilities	1,289	(3,828)
Net cash used in operating activities	(107,907)	(79,989)
Cash flows from investing activities:		
Purchase of property, plant and equipment	(44,625)	(33,066)
Net cash acquired from step acquisition	3,114	—
Net cash used in investing activities	(41,511)	(33,066)
Cash flows from financing activities:		
Proceeds from issuance of debt	—	300,000
Proceeds from issuance of debt to related parties	—	30,000
Repayment of debt	(11,017)	(92,546)
Repayment of debt - related parties	—	(2,105)
Debt issuance costs	—	(13,247)
Proceeds from financing obligations	7,534	14,807
Repayment of financing obligations	(10,174)	(7,828)
Contribution from noncontrolling interest	—	4,314
Distributions to noncontrolling interests and redeemable noncontrolling interests	(5,322)	(6,103)
Proceeds from issuance of common stock	72,109	12,745
Net cash provided by financing activities	53,130	240,037
Effect of exchange rate changes on cash, cash equivalent and restricted cash	(521)	—
Net (decrease) increase in cash, cash equivalents and restricted cash	(96,809)	126,982
Cash, cash equivalents, and restricted cash:		
Beginning of period	416,710	377,388
End of period	$ 319,901	$ 504,370
Supplemental disclosure of cash flow information:		
Cash paid during the period for interest	$ 42,598	$ 56,607
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	10,332	39,775
Operating cash flows from financing leases	643	3,684
Cash paid during the period for income taxes	372	353
Non-cash investing and financing activities:		
Increase in recourse debt, non-current upon adoption of ASU 2020-06, net (Note 2)	$ 121,491	$ —

Liabilities recorded for property, plant and equipment	6,188	350
Operating lease liabilities arising from obtaining right-of-use assets upon adoption of new lease guidance	—	39,775
Recognition of operating lease right-of-use asset during the year-to-date period	43,660	3,333
Recognition of financing lease right-of-use asset during the year-to-date period	1,961	351
Conversion of 10% convertible promissory notes into Class A common stock	—	150,670
Conversion of 10% convertible promissory notes to related party into Class A common stock	—	50,800
Accrued interest for notes	—	30
Adjustment of embedded derivative related to debt extinguishment	—	24,071

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

Bloom Energy Corporation
Notes to Unaudited Condensed Consolidated Financial Statements

1. Nature of Business, Liquidity and Basis of Presentation

Nature of Business

We design, manufacture, sell and, in certain cases, install solid-oxide fuel cell systems ("Energy 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 continue to monitor and adjust as appropriate our operations in response to the COVID-19 pandemic. There have been a number of supply chain disruptions throughout the global supply chain as countries are in various stages of opening up and demand for certain components increases. Although we were able to find alternatives for many component shortages, we experienced some delays and cost increases with respect to container shortages, ocean shipping and air freight.

Liquidity

We have generally incurred operating losses and negative cash flows from operations since our inception. With the series of new debt offerings, debt extensions and conversions to equity that we completed during 2020, we had $291.3 million of total outstanding recourse debt as of September 30, 2021, $285.2 million of which is classified as long-term debt. Our recourse debt scheduled repayments will commence in June 2022.

On October 23, 2021, we entered into a Securities Purchase Agreement (the “SPA”) with SK ecoplant Co., Ltd. (formerly known as SK Engineering and Construction Co., Ltd.) ("SK ecoplant") in connection with a strategic partnership. Pursuant to the SPA, we have agreed to sell to SK ecoplant 10,000,000 shares of zero coupon, non-voting redeemable convertible Series A preferred stock in Bloom Energy, par value $0.0001 per share, at a purchase price of $25.50 per share or an aggregate purchase price of approximately $255.0 million. For more information about the SPA, please see Note 18 - *Subsequent Events*, and for more information about our joint venture with SK ecoplant, please see Note 12 - *Related Party Transactions*.

Our future capital requirements will depend on many factors, including our rate of revenue growth, the timing and extent of spending on research and development efforts and other business initiatives, the rate of growth in the volume of system builds and the need for additional manufacturing space, the expansion of sales and marketing activities both in domestic and international markets, market acceptance of our product, our ability to secure financing for customer use of our Energy Servers, the timing of installations, and overall economic conditions including the impact of COVID-19 on our ongoing and future operations.

In the opinion of management, the combination of our existing cash and cash equivalents and operating cash flows is expected to be sufficient to meet our operational and capital cash flow requirements and other cash flow needs for the next 12 months from the date of issuance of this Quarterly Report on Form 10-Q.

Basis of Presentation

We have prepared the condensed consolidated financial statements included herein pursuant to the rules and regulations of the U.S. Securities and Exchange Commission ("SEC"), and as permitted by those rules, including all disclosures required by generally accepted accounting principles as applied in the United States (“U.S. GAAP”). Certain prior period amounts have been reclassified to conform to the current period presentation.

As disclosed in the 2020 Annual Report on Form 10-K, effective on December 31, 2020, we lost our emerging growth company status which accelerated the adoption of Accounting Standards Codification ("ASC") 842, *Leases* ("ASC 842"). As a result, we adjusted our previously reported condensed consolidated financial statements effective January 1, 2020.

Principles of Consolidation

These condensed 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 ("VIEs"), which we refer to as a tax equity partnership (each such VIE, also referred to as

our power purchase agreement entities ("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. For all periods presented, we have determined that we are the primary beneficiary in all of our operational PPA Entities, as discussed in Note 11 - *Portfolio Financings*. 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 upon consolidation.

The sale of an operating company with a portfolio of PPAs in which we do not have an equity interest is called a “Third-Party PPA.” We have determined that, although these entities are VIEs, we do not have the power to direct those activities of the Third-Party PPAs that most significantly affect their economic performance. We also do not have the obligation to absorb losses, or the right to receive benefits, that could potentially be significant to the Third-Party PPAs. Because we are not the primary beneficiary of these activities, we do not consolidate Third-Party PPAs.

Business Combinations

Acquisitions of a business are accounted by using the acquisition method of accounting. Assets acquired and liabilities assumed, including amounts attributed to noncontrolling interests, are recorded at the acquisition date at their fair values. Assigning fair values requires us to make significant estimates and assumptions regarding the fair value of identifiable intangible assets, property, plant and equipment, deferred tax asset valuation allowances and liabilities, such as uncertain tax positions and contingencies. We may refine these estimates if necessary over a period not to exceed one year by taking into consideration new information that, if known at the acquisition date, would have affected the fair values ascribed to the assets acquired and liabilities assumed.

Use of Estimates

The preparation of condensed consolidated financial statements in conformity with U.S. GAAP requires us to make estimates and assumptions that affect the amounts reported in the condensed consolidated financial statements and the accompanying notes. The most significant estimates include the determination of the stand-alone selling price, 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, lease and non-lease components and related financing obligations such as incremental borrowing rates, estimated output, efficiency and residual value of the Energy Servers, product performance warranties and guaranties and extended maintenance, derivative valuations, estimates for recapture of the U.S. Investment Tax Credit ("ITC") and similar federal tax benefits, estimates relating to contractual indemnities provisions, estimates for income taxes and deferred tax asset valuation allowances, stock-based compensation expense and the fair value of contingent consideration related to business combinations. In addition, because the duration and severity of the COVID-19 pandemic remains uncertain, certain of such estimates could require further judgment or modification and therefore carry a higher degree of variability and volatility. Actual results could differ materially from these estimates under different assumptions and conditions.

Concentration of Risk

Geographic Risk - The majority of our revenue and long-lived assets are attributable to operations in the United States for all periods presented. Additionally, we sell our Energy Servers in Japan, India and the Republic of Korea (collectively, the "Asia Pacific region"). In the three and nine months ended September 30, 2021, total revenue in the Asia Pacific region was 36% and 38%, respectively, of our total revenue. In the three and nine months ended September 30, 2020, total revenue in the Asia Pacific region was 24% and 30%, respectively, of our total revenue.

Credit Risk - At September 30, 2021 and December 31, 2020, SK ecoplant, accounted for approximately 22% and 56% of accounts receivable, respectively. At September 30, 2021, RAD Bloom Project Holdco LLC, accounted for approximately 16% of accounts receivable and none at December 31, 2020. At September 30, 2021, Bronx Community Clean Energy Project accounted for approximately 18% of accounts receivable and none at December 31, 2020. To date, we have not experienced any credit losses.

Customer Risk - During the three months ended September 30, 2021, one customer represented 35% of our total revenue. During the nine months ended September 30, 2021, two customers represented 37% and 12% of our total revenue, respectively.

2. Summary of Significant Accounting Policies

Please refer to the accounting policies described in our Annual Report on Form 10-K for the fiscal year ended December 31, 2020.

Revenue Recognition

We primarily earn product and installation revenue from the sale and installation of our Energy Servers, service revenue by providing services under operations and maintenance services contracts, and electricity revenue by selling electricity to customers under PPAs and Managed Services Agreements (as defined below). 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 enter into contracts with us for the purchase of electricity generated by our Energy Servers (a "Managed Services Agreement"), which is then financed through one of our financing partners ("Managed Services Financings"), or as a traditional lease (as explained in “Managed Service Financing" in Item 2 below). Finally, customers may purchase electricity through our PPA Entities ("Portfolio Financings").

Revenue Recognition under ASC 606 Revenue from Contracts with Customers

In applying Accounting Standards Codification 606, *Revenue from Contracts with Customers* ("ASC 606"), revenue 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 services 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 services renewal options which, in certain situations, 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 guarantees 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 services contracts and account for them as a single contract at contract inception to the extent the contracts are with the same customer. These contracts are not combined when the customer for the sale and installation of the Energy Server is different to the maintenance services contract customer. We also assess whether any contract terms including default provisions, put or call options result in components of our contracts being accounted for as financing or leasing transactions outside of the scope of ASC 606.

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 the total transaction price to each performance obligation based on the relative standalone selling price. Our maintenance services contracts are typically subject to renewal by customers on an annual basis. We assess these maintenance services renewal options at contract inception to determine whether they provide customers with material rights that give rise to separate performance obligations.

The total transaction price is determined based on the total consideration specified in the contract, including variable consideration in the form of a performance guaranty payment that represents potential amounts payable to customers. The expected value method is generally used when estimating variable consideration, which typically reduces the total transaction price due to the nature of the performance obligations to which the variable consideration relates. These estimates reflect our historical experience and current contractual requirements which cap the maximum amount that may be paid. The expected value method requires judgment and considers multiple factors that may vary over time depending upon the unique facts and circumstances related to each performance obligation. Depending on the facts and circumstances, a change in variable consideration estimate will either be accounted for at the contract level or using the portfolio method.

We exclude from the transaction price all taxes assessed by governmental authorities that are both (i) imposed on and concurrent with a specific revenue-producing transaction and (ii) collected from customers. Accordingly, such tax amounts are not included as a component of net sales or cost of sales. These tax amounts are recorded in cost of electricity revenue, cost of service revenue, and general and administrative operating expenses.

We allocate the transaction price to each distinct performance obligation based on relative standalone selling prices. Given that we typically sell an Energy Server with a maintenance services 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 ITC evolve over time, we may be required to modify the expected margin in subsequent periods and our revenue could be materially affected. Costs relating to installation include all direct and indirect installation costs. The margin we apply reflects our profit objectives relating to installation. Costs for maintenance services arrangements are estimated over the life of the maintenance contracts and include estimated future 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 services agreements based on their respective costs or, in the case of maintenance services agreements, the estimated costs to be incurred.

We generally recognize product and installation revenue at the point in time that the customer obtains control of the Energy Server. For certain instances, such as bill-and-hold transactions, control of installations transfers to the customer over time, and the related revenue is recognized over time as the performance obligation is satisfied using the cost-to-total cost (percentage-of-completion) method. We use an input measure of progress to determine the amount of revenue to recognize during each reporting period when such revenue is recognized over time, based on the costs incurred to satisfy the performance obligation. We recognize maintenance services revenue, including revenue associated with any related customer material rights, over time as we perform service maintenance activities.

Amounts billed to customers for shipping and handling activities are considered contract fulfillment activities and not a separate performance obligation of the contract. Shipping and handling costs are recorded within cost of revenue.

The following is a description of the principal activities from which we generate revenue. Our four revenue streams are classified as follows:

Product Revenue - All of our product revenue is generated from the sale of our Energy Servers to direct purchase customers, including financing partners on Third-Party PPAs and sale-and-leaseback transactions, 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 typically occurs upon transfer of control to our customers, which depending on the contract terms is when the system is shipped and delivered to our customers, when the system is shipped and delivered and is physically ready for startup and commissioning, or when the system is shipped and delivered and is turned on and producing power. Certain customer arrangements include bill-and-hold terms under which transfer of control criteria have been met, including the passing of title and significant risk and reward of ownership to the customers. Therefore, the customers can direct the use of the bill-and-hold product while we retain physical possession of the product until it is delivered to a customer site at a point in time in the future.

Under our traditional lease 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 services contract are not combined.

Installation Revenue - Nearly all of our installation revenue relates to the installation of Energy Servers sold to customers as part of a direct purchase and to financing parties as part of a traditional lease or Portfolio Financing. Generally, we recognize installation revenue when the system is physically ready for startup and commissioning, or when the system is turned on and producing power. For instances when control for installation services is transferred over time, we use an input measure of

progress to determine the amount of revenue to recognize during each reporting period based on the costs incurred to satisfy the performance obligation.

Payments received from customers are recorded within deferred revenue and customer deposits in the condensed consolidated balance sheets until control is transferred. The related cost of such product and installation is also deferred as a component of deferred cost of revenue in the condensed consolidated balance sheets until control is transferred.

Service Revenue - Service revenue is generated from maintenance services agreements. As part of our initial contract with customers for the sale and installation of our Energy Servers, we typically provide a standard one-year warranty which covers defects in materials and workmanship and manufacturing or performance conditions under normal use and service for the first year following commencement of operations. As part of this standard first-year warranty, we also monitor the operations of the underlying systems and provide output and efficiency guaranties. We have determined that this standard first-year warranty is a distinct performance obligation - being a promise to stand-ready to maintain the Energy Servers when and if required during the first year following installation. We also sell to our customers extended annual maintenance services that effectively extend the standard first-year warranty coverage at the customer's option. These customers generally have an option to renew or cancel the extended maintenance services on an annual basis and nearly every customer has renewed historically. Similar to the standard first-year warranty, the optional extended annual maintenance services are considered a distinct performance obligation – being a promise to stand-ready to maintain the Energy Servers when and if required during the renewal service year.

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

Payments from customers for the extended maintenance contracts are generally received at the beginning of each service year. Accordingly, the customer payment received is recorded as a customer deposit and revenue is recognized over the related service period as the services are performed.

Electricity Revenue - We sell electricity produced by our Energy Servers owned directly by us or by our consolidated PPA Entities. Our PPA Entities purchase Energy Servers from us and sell electricity produced by these systems to customers through long-term 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 Managed Services Financings pursuant to which we are party to a Managed Services Agreement with a customer in a sale-leaseback-sublease arrangement, we may recognize electricity revenue. We first determine whether the Energy Servers under the sale-leaseback arrangement of a Managed Services Financing were "integral equipment." As the Energy Servers were determined not to be integral equipment, we determine if the leaseback was classified as a financing lease or an operating lease.

Under ASC 840, *Leases* ("ASC 840"), our Managed Services Agreements with the financiers were classified as capital leases and were accordingly recorded as financing transactions, while the sub-lease arrangements with the end customer were classified as operating leases. We have determined that the financiers are our customers in our Managed Services Agreements. In these Managed Services Financings, we enter into an agreement with a customer for a certain term. In exchange for the use of the Energy Server and its generated electricity, the customer makes a monthly payment. The customer's monthly payment includes a fixed monthly capacity-based payment, and in some cases also includes a performance-based payment based on the performance of the Energy Server. The fixed capacity-based payments made by the customer are applied toward our obligation to pay down the financing obligation with the financier. The performance-based payment is transferred to us as compensation for operations and maintenance services and is recognized as electricity revenue. We allocate the total payments received based on the relative standalone selling prices to electricity revenue and to service revenue. Electricity revenue relating to PPAs was typically accounted for in accordance with ASC 840, and service revenue in accordance with ASC 606.

We adopted ASC 842, with effect from January 1, 2020. Managed Services Financings entered from January 1, 2020 until June 30, 2021, including some of our agreements with financiers are accounted for as financing transactions because the

repurchase options in these agreements prevent the transfer of control of the systems to the financier. Additionally, some of our leaseback agreements with financiers are not operating leases and are therefore accounted for as failed sale-and-leaseback transactions. We also determined that the sub-lease arrangements under the Managed Services Agreements with the customer are not within the scope of ASC 842 because the customer does not have the right to control the use of the underlying assets (i.e., the Energy Servers). Accordingly, such agreements are accounted for under ASC 606. Under ASC 606, we recognize customer payments for electricity as electricity revenue.

In the three months ended September 30, 2021, we completed the first successful sale-and-lease back transaction in which we transferred control of the Energy Server to the financier and leased it back as an operating lease. The proceeds from the sale are allocated between the sale of Energy Server for Product and Installation based on the relative standalone selling prices. The proceeds allocated to the sale of the Energy Servers are evaluated to determine if the transaction meets the criteria for sale-leaseback accounting. To meet the sale-leaseback criteria, control of the Energy Servers must transfer to the financier, which requires among other criteria the leaseback to meet the criteria for an operating lease. Accordingly, for such transactions where control transfers and the leaseback is classified as an operating lease, we recognize revenue on the sale of the Energy Servers, and separately recognize the lease back obligations.

We recognize a lease liability for the Energy Server leaseback obligation based on the present value of the future payments to the financier that are attributed to the Energy Server leaseback using our incremental borrowing rate. We also record a right-of-use asset, which is amortized over the term of the leaseback, and is included as a cost of electricity revenue on the condensed consolidated statements of operations.

For such sale-and-leaseback transactions during the 3 months ended September 30, 2021, we recognized $3.9 million revenue, and recognized $2.2 million right-of-use assets and liabilities as operating leases. For proceeds received from the customer under Managed Services Agreements, we recorded the electricity revenue on a straight-line basis over the lease term, which were not material.

Transactions entered into with customers prior to January 1, 2020 carried over their classification as operating leases and continue to be accounted for consistent with prior years as described in the paragraph above.

We recognize revenue from the satisfaction of performance obligations under our PPAs and Managed Services Financings as the electricity is provided over the term of the agreement in the amount invoiced, which reflects the amount of consideration to which we have the right to invoice and which corresponds to the value transferred under such arrangements.

Contract Modifications

Contract modifications are accounted for as separate contracts if the additional products and services are distinct and priced at standalone selling prices. If the additional products and services are distinct, but not priced at standalone selling prices, the modification is treated as a termination of the existing contract and the creation of a new contract. If the additional products and services are not distinct within the context of the contract, the modification is combined with the original contract and either an increase or decrease in revenue is recognized on the modification date.

Deferred Revenue

We recognize a contract liability (referred to as deferred revenue in our condensed consolidated financial statements) when we have an obligation to transfer products or services to a customer in advance of us satisfying a performance obligation and the contract liability is reduced as performance obligations are satisfied and revenue is recognized. The related cost of such product is deferred as a component of deferred cost of revenue in the condensed consolidated balance sheets. Prior to shipment of the product or the commencement of performance of maintenance services, any prepayment made by the customer is recorded as a customer deposit. Deferred revenue related to material rights for options to renew are recognized in revenue over the maintenance services period.

A description of the principal activities from which we recognize cost of revenues associated with each of our revenue streams are classified as follows:

Cost of Product Revenue - Cost of product revenue consists of costs of our Energy Servers that we sell to direct purchase, including financing partners on Third-Party PPAs, international channel providers and traditional lease customers. It includes costs paid to our materials suppliers, direct labor, manufacturing and other overhead costs, shipping costs, provisions for excess and obsolete inventory and the depreciation costs of our equipment. For Energy Servers sold to customers pending

installation, we provide warranty reserves as a part of product costs for the period from transfer of controls of Energy Servers to commencement of operations.

Cost of Installation Revenue - Cost of installation revenue primarily consists of the costs to install our Energy Servers that we sell to direct purchase, including financing partners on Third-Party PPAs and traditional lease customers. It includes cost of materials and service providers, personnel costs, shipping costs and allocated costs.

Cost of Service Revenue - Cost of service revenue consists of costs incurred under maintenance service contracts for all customers. It includes 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 Portfolio Financings Through PPA Entities *(See Note 11 - Portfolio Financings)*

In 2010, we began selling our Energy Servers to tax equity partnerships in which we held an equity interest as a managing member, or a PPA Entity. This program was financed by the sale of an Operating Company counter-party to a portfolio of PPAs to a PPA Entity. The investors in a PPA Entity contribute cash to the PPA Entity in exchange for an equity interest, which then allows the PPA Entity to purchase the Operating Company and the Energy Servers contemplated by the portfolio of PPAs owned by such Operating Company.

The cash contributions held are classified as short-term or long-term restricted cash according to the terms of each PPA Entity's governing documents. As we identified customers, the Operating Company entered into a PPA with the customer pursuant to which the customer agreed to purchase the power generated by one or more Energy Servers at a specified rate per kilowatt hour for a specified term, which can range from 10 to 21 years. The Operating Company, wholly owned by the PPA Entity, typically entered into a maintenance services agreement with us following the first year of service to extend the standard one-year performance warranties and guaranties. This intercompany arrangement is eliminated on consolidation. Those PPAs that qualify as leases are classified as either sales-type leases or operating leases and those that do not qualify as leases are classified as tariff agreements or revenue arrangements with customers. For arrangements classified as operating leases, tariff agreements, or revenue arrangements with customers, income is recognized as contractual amounts are due when the electricity is generated and presented within electricity revenue on the condensed consolidated statements of operations.

Sales-type Leases - Certain Portfolio Financings with PPA Entities entered into prior to our adoption of ASC 842 qualified as sales-type leases in accordance with ASC 840. The classification for such arrangements were carried over and accounted for as sales-type leases under ASC 842. 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 PPAs, we may also be obligated to supply fuel for the Energy Servers. The amount billed for the delivery of electricity to customers primarily consists of returns on the amounts financed including interest revenue, service revenue and fuel revenue for certain arrangements.

As the Portfolio Financings through PPA Entities entered into prior to our adoption of ASC 842 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. For those transactions that contain a lease, 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 is included in electricity revenue in the condensed consolidated statements of operations. We have not entered into any new Portfolio Financing arrangements through PPA Entities during the last three years.

Operating Leases - Certain Portfolio Financings with PPA Entities entered into prior to the adoption of ASC 842 that were deemed leases in substance, but did not meet the criteria of sales-type leases or direct financing leases in accordance with ASC 840, were accounted for as operating leases. The classification for such arrangements were carried over and accounted for as operating leases under ASC 842. Revenue under these arrangements is recognized as electricity sales and service revenue and is provided to the customer at rates specified under the PPAs.

Foreign Currency Transactions

The functional currencies of most of our foreign subsidiaries are the U.S. dollar since the subsidiaries are considered financially and operationally integrated with their domestic parent. For these subsidiaries, the 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 expense in our condensed consolidated statements of operations.

The functional currency of our joint venture in the Republic of Korea is the local currency, the South Korean won ("KRW"), since the joint venture is financially independent of its U.S. parent and the KRW is the currency in which the joint venture generates and expends cash. Assets and liabilities of this entity are translated at the rate of exchange at the balance sheet date. Revenue and expenses are translated at the weighted average rate of exchange during the period. For this entity, translation adjustments resulting from the process of translating the KRW financial statements into U.S. dollars are included in other comprehensive loss. Translation adjustments attributable to noncontrolling interests are allocated to and reported as part of the noncontrolling interests in the condensed consolidated financial statements.

Goodwill

Goodwill is recognized in conjunction with business acquisitions as the excess of the purchase consideration for the business acquisition over the fair value of identifiable assets acquired and liabilities assumed. The fair value of identifiable assets and liabilities, and thus goodwill, is subject to redetermination within a measurement period of up to one year following completion of a business acquisition.

Goodwill is tested for impairment annually or more frequently if circumstances indicate an impairment may have occurred. We acquired the remaining noncontrolling equity interest in our related party Bloom Energy Japan Limited as of July 1, 2021 and recognized goodwill of $1.7 million as of September 30, 2021.

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 2021

In August 2020, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2020-06, *Debt - Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40)* ("ASU 2020-06"). The new standard simplifies the accounting for convertible instruments by eliminating the conversion option separation model for convertible debt that can be settled in cash and by eliminating the measurement model for beneficial conversion features. The guidance is effective for fiscal years beginning after December 15, 2021, with early adoption permitted as early as fiscal years (including interim periods) beginning after December 15, 2020. Consequently, a convertible debt instrument will be accounted for as a single liability measured at its amortized cost, as long as no other features require bifurcation and recognition as derivatives. There will no longer be a debt discount representing the difference between the carrying value, excluding issuance costs, and the principal of the convertible debt instrument and, as a result, there will no longer be interest expense from the amortization of the debt discount over the term of the convertible debt instrument. The amendments in this update also require the if-converted method to be applied for all convertible instruments when calculating diluted earnings per share.

We elected to early adopt ASU 2020-06 as of January 1, 2021 using the modified retrospective transition method, which resulted in a cumulative-effect adjustment to the opening balance of accumulated deficit on the date of adoption. Prior period condensed consolidated financial statements were not restated upon adoption.

Upon adoption of ASU 2020-06, we combined the previously separated equity component with the liability component of our 2.5% Green Convertible Senior Notes due August 2025. These components are now together classified as recourse debt, thereby eliminating the subsequent amortization of the debt discount as interest expense. Similarly, the portion of issuance costs

previously allocated to equity was reclassified to debt and will be amortized as interest expense. Accordingly, we recorded a decrease to accumulated deficit of $5.3 million, a decrease to additional paid-in capital of $126.8 million, and an increase to recourse debt, non-current of approximately $121.5 million.

There is no deferred tax impact related to the adoption of ASU 2020-06 due to our full valuation allowance.

Accounting Guidance Not Yet Adopted

Cessation of LIBOR - In March 2020, the FASB issued ASU 2020-04, *Reference Rate Reform (Topic 848) Facilitation of the Effects of Reference Rate Reform on Financial Reporting* ("ASU 2020-04"), which provides optional expedients for a limited period of time for accounting for contracts, hedging relationships, and other transactions affected by the London Interbank Offered Rate ("LIBOR") or other reference rate expected to be discontinued. ASU 2020-04 is effective immediately and may be applied prospectively to contract modifications made and hedging relationships entered into or evaluated on or before December 31, 2022. We are currently evaluating the impact of the adoption of ASU 2020-04 on our consolidated financial statements.

Lessor with Variable Lease Payments - In July 2021, the FASB issued ASU No. 2021-05, *Leases (Topic 842): Lessors - Certain Leases with Variable Lease Payments* ("ASU 2021-05"), which modifies ASC 842 to require lessors to classify leases as operating leases if they have variable lease payments that do not depend on an index or rate and would have selling losses if they were classified as sales-type or direct financing leases. The amendments in ASU 2021-05 are effective for fiscal years beginning after December 15, 2021, and interim periods beginning after December 15, 2022. Early adoption is permitted. We are currently evaluating the impact of the adoption of ASU 2021-05 on our consolidated financial statements.

3. Revenue Recognition

Contract Balances

The following table provides information about accounts receivables, contract assets, customer deposits and deferred revenue from contracts with customers (in thousands):

	September 30, 2021	December 31, 2020
Accounts receivable	$ 62,066	$ 96,186
Contract assets	27,745	3,327
Customer deposits	37,911	66,171
Deferred revenue	111,870	135,578

Contract assets relate to contracts for which revenue is recognized upon transfer of control of performance obligations, however billing milestones have not been reached. Customer deposits and deferred revenue are payments received from customers or invoiced amounts prior to transfer of controls of performance obligations. Customer deposits are refundable fees until certain milestones are met.

Contract Assets

During the three months ended September 30, 2021, contract assets increased from $18.6 million to $27.7 million. Contract assets of $20.9 million were recognized when the transfers of controls of performance obligations were satisfied but the related billing milestones had not been met. Contract assets of $11.8 million from the beginning of the period were transferred to accounts receivable. During the three months ended September 30, 2020, contract assets increased from $3.0 million to $11.4 million. Contract assets of $8.4 million were recognized when the transfers of controls of performance obligations were satisfied but the related billing milestones had not been met. Contract assets of $0.1 million from the beginning of the period were transferred to accounts receivable.

During the nine months ended September 30, 2021, contract assets increased from $3.3 million to $27.7 million. Contract assets of $24.4 million were recognized when the transfers of control of performance obligations were satisfied but the related billing milestones had not been met. During the nine months ended September 30, 2020, contract assets increased from $2.8 million to $11.4 million. Contract assets of $8.6 million were recognized when the transfers of control of performance obligations were satisfied but the related billing milestones had not been met. No contract asset balances from the beginning of the periods were transferred to accounts receivable.

Deferred Revenue

Deferred revenue activity, including deferred incentive revenue activity, during the three and nine months ended September 30, 2021 and 2020 consists of the following (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
Beginning balance	$ 116,255	$ 169,253	$ 135,578	$ 175,455
Additions	175,423	166,504	541,519	464,135
Revenue recognized	(179,808)	(178,713)	(565,227)	(482,546)
Ending balance	$ 111,870	$ 157,044	$ 111,870	$ 157,044

Disaggregated Revenue

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
Revenue from contracts with customers:				
Product revenue	$ 128,550	$ 131,076	$ 413,347	$ 346,832
Installation revenue	22,172	26,603	53,710	73,060
Services revenue	39,251	26,141	111,375	77,496
Electricity revenue	804	344	2,107	488
Total revenue from contract with customers	190,777	184,164	580,539	497,876
Revenue from contracts accounted for as leases:				
Electricity revenue	16,451	16,141	49,166	46,984
Total revenue	$ 207,228	$ 200,305	$ 629,705	$ 544,860

4. Financial Instruments

Cash, Cash Equivalents and Restricted Cash

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

	September 30, 2021	December 31, 2020
As Held:		
Cash	$ 291,830	$ 180,808
Money market funds	28,071	235,902
	$ 319,901	$ 416,710
As Reported:		
Cash and cash equivalents	$ 121,861	$ 246,947
Restricted cash	198,040	169,763
	$ 319,901	$ 416,710

Restricted cash consisted of the following (in thousands):

	September 30, 2021	December 31, 2020
Current:		
Restricted cash	$ 64,059	$ 26,706
Restricted cash related to PPA Entities[1]	1,256	25,764
Restricted cash, current	65,315	52,470
Non-current:		
Restricted cash	117,501	286
Restricted cash related to PPA Entities[1]	15,224	117,007
Restricted cash, non-current	132,725	117,293
	$ 198,040	$ 169,763

[1] We have VIEs that represent a portion of the condensed consolidated balances recorded within the "restricted cash" and other financial statement line items in the condensed consolidated balance sheets (see Note 11 - *Portfolio Financings*). In addition, the restricted cash held in the PPA II and PPA IIIb entities as of September 30, 2021, includes $34.2 million and $1.2 million of current restricted cash, respectively, and $65.2 million and $13.3 million of non-current restricted cash, respectively. The restricted cash held in the PPA II and PPA IIIb entities as of December 31, 2020, includes $20.3 million and $0.7 million of current restricted cash, respectively, and $88.4 million and $13.3 million of non-current restricted cash, respectively. These entities are not considered VIEs.

Factoring Arrangements

We sell certain customer trade receivables on a non-recourse basis under factoring arrangements with our designated financial institution. These transactions are accounted for as sales and cash proceeds are included in cash used in operating activities. We derecognized $113.9 million and $49.3 million of accounts receivable during the nine months ended September 30, 2021 and during fiscal year ended December 31, 2020, respectively, under these factoring arrangements. The costs of factoring such accounts receivable on our condensed consolidated statements of operations for the three and nine months ended September 30, 2021 and 2020 were not material.

5. Fair Value

Our accounting policy for the fair value measurement of cash equivalents, the fair value of contingent consideration related to business combinations, natural gas fixed price forward contracts, embedded Escalation Protection Plan ("EPP") derivatives and interest rate swap agreements have not changed from the policies described in our Annual Report on Form 10-K for the year ended December 31, 2020.

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

The tables below set forth, by level, our financial assets that are accounted for at fair value for the respective periods. The table does not include assets and liabilities that are measured at historical cost or any basis other than fair value (in thousands):

	Fair Value Measured at Reporting Date Using			
September 30, 2021	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Cash equivalents:				
Money market funds	$ 28,071	$ —	$ —	$ 28,071
	$ 28,071	$ —	$ —	$ 28,071
Liabilities				
Contingent consideration	$ —	$ —	$ 3,623	$ 3,623
Derivatives:				
Embedded EPP derivatives	—	—	7,186	7,186
Interest rate swap agreements	—	11,853	—	11,853
	$ —	$ 11,853	$ 10,809	$ 22,662

	Fair Value Measured at Reporting Date Using			
December 31, 2020	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Cash equivalents:				
Money market funds	$ 235,902	$ —	$ —	$ 235,902
	$ 235,902	$ —	$ —	$ 235,902
Liabilities				
Derivatives:				
Natural gas fixed price forward contracts	$ —	$ —	$ 2,574	$ 2,574
Embedded EPP derivatives	—	—	5,541	5,541
Interest rate swap agreements	—	15,989	—	15,989
	$ —	$ 15,989	$ 8,115	$ 24,104

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

Natural Gas Fixed Price Forward Contracts - As of September 30, 2021, natural gas fixed price forward contracts were valued using a combination of factors including the counterparty's credit rating and estimates of future natural gas prices. The leveling of each financial instrument is reassessed at the end of each period and is based on pricing information received from third-party pricing sources. During 2021, we transferred natural gas forward contracts from Level 3 to Level 2. Transfers between these hierarchy levels were based on the availability of sufficient observable inputs to meet Level 2 versus Level 3 criteria.

For the three months ended September 30, 2021 and 2020, we recognized an unrealized gain of $0.1 million and an unrealized gain of $0.7 million, respectively, as a result of a change in the fair value of our natural gas fixed price forward contracts during these periods. We realized gains of $0.1 million and $1.2 million for the three months ended September 30, 2021 and 2020, respectively, on the settlement of these contracts in cost of revenue on our condensed consolidated statements of operations.

For the nine months ended September 30, 2021 and 2020, we recognized an unrealized gain of $1.1 million and no unrealized gains or losses, respectively. We realized gains of $1.5 million and $3.7 million for the nine months ended September 30, 2021 and 2020, respectively, on the settlement of these contracts in cost of revenue on our condensed consolidated statements of operations.

Embedded Escalation Protection Plan Derivative Liability in Sales Contracts - We estimate the fair value of the embedded EPP derivatives in certain sales contracts using a Monte Carlo simulation model, which considers various potential electricity price curves over the sales contracts' terms. We use historical grid prices and available forecasts of future electricity prices to estimate future electricity prices. We have classified these derivatives as a Level 3 financial liability.

For the three months ended September 30, 2021 and 2020, we recorded the fair value of the embedded EPP derivatives and recognized an unrealized loss of $0.2 million and an unrealized gain of $1.5 million, respectively, in (loss) gain on revaluation of embedded derivatives on our condensed consolidated statements of operations.

For the nine months ended September 30, 2021 and 2020, we recorded the fair value of the embedded EPP derivatives and recognized an unrealized loss of $1.6 million and an unrealized gain of $2.2 million, respectively, in (loss) gain on revaluation of embedded derivatives on our condensed consolidated statements of operations.

The changes in the Level 3 financial liabilities during the nine months ended September 30, 2021 were as follows (in thousands):

	Natural Gas Fixed Price Forward Contracts	Embedded EPP Derivative Liability	Total
Liabilities at December 31, 2019	$ 6,968	$ 6,176	$ 13,144
Settlement of natural gas fixed price forward contracts	(4,503)	—	(4,503)
Changes in fair value	109	(635)	(526)
Liabilities at December 31, 2020	2,574	5,541	8,115
Changes in fair value	—	1,645	1,645
Transfer from Level 3 to Level 2 in fair value hierarchy	(2,574)	—	(2,574)
Liabilities at September 30, 2021	$ —	$ 7,186	$ 7,186

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 condensed consolidated balance sheets. As of September 30, 2021, we expect $2.7 million of the loss on the interest rate swaps accumulated in other comprehensive loss to be reclassified into earnings in the next 12 months.

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

Customer Receivables and Debt Instruments - The fair value for customer financing receivables is based on a discounted cash flow model, whereby the fair value approximates the present value of the receivables (Level 3). The senior secured notes, term loans and convertible notes are based on rates currently offered for instruments with similar maturities and terms (Level 3). The following table presents the estimated fair values and carrying values of customer receivables and debt instruments (in thousands):

	September 30, 2021		December 31, 2020	
	Net Carrying Value	Fair Value	Net Carrying Value	Fair Value
Customer receivables				
Customer financing receivables	$ 46,674	$ 39,545	$ 50,746	$ 42,679
Debt instruments				
Recourse:				
10.25% Senior Secured Notes due March 2027	68,879	73,345	68,614	71,831
2.5% Green Convertible Senior Notes due August 2025	222,371	317,078	99,394	426,229
Non-recourse:				
7.5% Term Loan due September 2028	29,699	36,370	31,746	37,658
6.07% Senior Secured Notes due March 2030	74,289	84,961	77,007	89,654
LIBOR + 2.5% Term Loan due December 2021	108,958	109,513	114,138	116,113

6. Balance Sheet Components

Inventories

The components of inventory consist of the following (in thousands):

	September 30, 2021	December 31, 2020
Raw materials	$ 94,051	$ 79,090
Work-in-progress	40,822	29,063
Finished goods	47,682	33,906
	$ 182,555	$ 142,059

The inventory reserves were $14.5 million and $14.0 million as of September 30, 2021 and December 31, 2020, respectively.

Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets consist of the following (in thousands):

	September 30, 2021	December 31, 2020
Prepaid hardware and software maintenance	$ 4,034	$ 5,227
Receivables from employees	5,184	5,160
Other prepaid expenses and other current assets	22,728	20,331
	$ 31,946	$ 30,718

Property, Plant and Equipment, Net

Property, plant and equipment, net, consists of the following (in thousands):

	September 30, 2021	December 31, 2020
Energy Servers	$ 675,083	$ 669,422
Computers, software and hardware	21,105	20,432
Machinery and equipment	112,634	106,644
Furniture and fixtures	8,531	8,455
Leasehold improvements	38,156	37,497
Building	46,730	46,730
Construction-in-progress	62,906	21,118
	965,145	910,298
Less: accumulated depreciation	(349,631)	(309,670)
	$ 615,514	$ 600,628

Depreciation expense related to property, plant and equipment was $13.3 million and $13.0 million for the three months ended September 30, 2021 and 2020, respectively. Depreciation expense related to property, plant and equipment was $40.1 million and $38.9 million for the nine months ended September 30, 2021 and 2020, respectively.

Property, plant and equipment under operating leases by the PPA Entities was $368.0 million and $368.0 million and accumulated depreciation for these assets was $133.5 million and $115.9 million as of September 30, 2021 and December 31, 2020, respectively. Depreciation expense for these assets was $5.9 million and $5.9 million for the three months ended September 30, 2021 and 2020, respectively. Depreciation expense for these assets was $17.6 million and $18.0 million for the nine months ended September 30, 2021 and 2020, respectively.

Other Long-Term Assets

Other long-term assets consist of the following (in thousands):

	September 30, 2021	December 31, 2020
Prepaid insurance	$ 10,112	$ 11,792
Deferred commissions	7,039	6,732
Long-term lease receivable	7,797	6,995
Goodwill	1,719	—
Prepaid and other long-term assets	11,926	8,992
	$ 38,593	$ 34,511

Accrued Warranty

Accrued warranty liabilities consist of the following (in thousands):

	September 30, 2021	December 31, 2020
Product warranty	$ 1,107	$ 1,549
Product performance	6,800	8,605
Maintenance services contracts	—	109
	$ 7,907	$ 10,263

Changes in the product warranty and product performance liabilities were as follows (in thousands):

Balances at December 31, 2020	$ 10,154
Accrued warranty, net	6,682
Warranty expenditures during the year-to-date period	(8,929)
Balances at September 30, 2021	$ 7,907

Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consist of the following (in thousands):

	September 30, 2021	December 31, 2020
Compensation and benefits	$ 24,393	$ 28,343
Current portion of derivative liabilities	12,415	19,116
Sales-related liabilities	6,232	14,479
Accrued installation	8,854	16,468
Sales tax liabilities	1,304	2,732
Interest payable	719	2,224
Other	31,960	28,642
	$ 85,877	$ 112,004

Other Long-Term Liabilities

Other long-term liabilities consist of the following (in thousands):

	September 30, 2021	December 31, 2020
Delaware grant	$ 9,495	$ 9,212
Other	17,260	8,056
	$ 26,755	$ 17,268

We recorded a long-term liability for the potential future repayment of the incentive grant received from the Delaware Economic Development Authority of $9.5 million and $9.2 million as of September 30, 2021 and December 31, 2020, respectively. See Note 13 - *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 September 30, 2021 (in thousands, except percentage data):

	Unpaid Principal Balance	Net Carrying Value			Unused Borrowing Capacity	Interest Rate	Maturity Dates	Entity	Recourse
		Current	Long-Term	Total					
10.25% Senior Secured Notes due March 2027	$ 70,000	$ 6,034	$ 62,845	$ 68,879	$ —	10.25%	March 2027	Company	Yes
2.5% Green Convertible Senior Notes due August 2025	230,000	—	222,371	222,371	—	2.5%	August 2025	Company	Yes
Total recourse debt	300,000	6,034	285,216	291,250	—				
7.5% Term Loan due September 2028	31,912	3,315	26,384	29,699	—	7.5%	September 2028	PPA IIIa	No
6.07% Senior Secured Notes due March 2030	75,016	4,467	69,822	74,289	—	6.07%	March 2030	PPA IV	No
LIBOR + 2.5% Term Loan due December 2021	109,109	—	108,958	108,958	—	LIBOR plus margin	December 2021	PPA V	No
Letters of Credit due December 2021	—	—	—	—	759	2.25%	December 2021	PPA V	No
Total non-recourse debt	216,037	7,782	205,164	212,946	759				
Total debt	$ 516,037	$ 13,816	$ 490,380	$ 504,196	$ 759				

The following is a summary of our debt as of December 31, 2020 (in thousands, except percentage data):

	Unpaid Principal Balance	Net Carrying Value			Unused Borrowing Capacity	Interest Rate	Maturity Dates	Entity	Recourse
		Current	Long-Term	Total					
10.25% Senior Secured Notes due March 2027	$ 70,000	$ —	$ 68,614	$ 68,614	$ —	10.25%	March 2027	Company	Yes
2.5% Green Convertible Senior Notes due August 2025	230,000	—	99,394	99,394	—	2.5%	August 2025	Company	Yes
Total recourse debt	300,000	—	168,008	168,008	—				
7.5% Term Loan due September 2028	34,456	2,826	28,920	31,746	—	7.5%	September 2028	PPA IIIa	No
6.07% Senior Secured Notes due March 2030	77,837	3,882	73,125	77,007	—	6.07%	March 2030	PPA IV	No
LIBOR + 2.5% Term Loan due December 2021	114,761	114,138	—	114,138	—	LIBOR plus margin	December 2021	PPA V	No
Letters of Credit due December 2021	—	—	—	—	968	2.25%	December 2021	PPA V	No
Total non-recourse debt	227,054	120,846	102,045	222,891	968				
Total debt	$ 527,054	$ 120,846	$ 270,053	$ 390,899	$ 968				

Recourse debt refers to debt that we have an obligation to pay. Non-recourse debt refers to debt that is recourse to only our subsidiaries. The differences between the unpaid principal balances and the net carrying values apply to deferred financing costs. We and all of our subsidiaries were in compliance with all financial covenants as of September 30, 2021 and December 31, 2020.

Recourse Debt Facilities

10.25% Senior Secured Notes due March 2027 - On May 1, 2020, we issued $70.0 million of 10.25% Senior Secured Notes in a private placement ("10.25% Senior Secured Notes"). The 10.25% Senior Secured Notes are governed by an indenture (the “Senior Secured Notes Indenture”) entered into among us, the guarantor party thereto and U.S. Bank National Association, in its capacity as trustee and collateral agent. The 10.25% Senior Secured Notes are secured by certain of our operations and maintenance agreements that previously were part of the security for the 6% Convertible Notes. The 10.25% Senior Secured Notes are supported by a $150.0 million indenture between us and U.S. Bank National Association, which contained an accordion feature for an additional $80.0 million of notes that could be issued on or prior to September 27, 2021. We chose not to exercise this accordion feature, which has now expired.

Interest on the 10.25% Senior Secured Notes is payable quarterly, commencing June 30, 2020. The 10.25% Senior Secured Notes Indenture contains customary events of default and covenants relating to, among other things, the incurrence of new debt, affiliate transactions, liens and restricted payments. On or after March 27, 2022, we may redeem all of the 10.25% Senior Secured Notes at a price equal to 108% of the principal amount of the 10.25% Senior Secured Notes plus accrued and unpaid interest, with such optional redemption prices decreasing to 104% on and after March 27, 2023, 102% on and after March 27, 2024 and 100% on and after March 27, 2026. Before March 27, 2022, we may redeem the 10.25% Senior Secured 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 10.25% Senior Secured Notes at a purchase price equal to 101% of the principal amount of the 10.25% Senior Secured Notes, plus accrued and unpaid interest. The non-current balance of the outstanding unpaid principal of the 10.25% Senior Secured Notes was $64.0 million as of September 30, 2021. The current balance of the outstanding unpaid principal of the 10.25% Senior Secured Notes was $6.0 million as of September 30, 2021.

2.5% Green Convertible Senior Notes due August 2025 - In August 2020, we issued $230.0 million aggregate principal amount of our 2.5% Green Convertible Senior Notes due August 2025 (the "Green Notes"), unless earlier repurchased, redeemed or converted . The principal amount of the Green Notes are $230.0 million, less initial purchaser's discount of $6.9 million and other issuance costs of $3.0 million resulting in net proceeds of $220.1 million.

The Green Notes are senior, unsecured obligations accruing interest at a rate of 2.5% per annum, payable semi-annually in arrears on February 15 and August 15 of each year, beginning on February 15, 2021.

We may not redeem the Green Notes prior to August 21, 2023. We may elect to redeem, at face value, all or any portion of the Green Notes at any time on or after August 21, 2023 and on or before the twenty-sixth trading day immediately before the maturity date, provided certain conditions are met.

Before May 15, 2025, the noteholders have the right to convert their Green Notes only upon the occurrence of certain events, including a conversion upon satisfaction of a condition relating to the closing price of our common stock ("the Closing Price Condition"). If the Closing Price Condition is met on at least 20 of the last 30 consecutive trading days in any quarter, the noteholders may convert their Green Notes at any time during the immediately following quarter. The Closing Price Condition was not met during the three months ended September 30, 2021 and accordingly, the noteholders may not convert their Green Notes at any time during the quarter ending December 31, 2021. From and after May 15, 2025, the noteholders may convert their Green Notes at any time at their election until the close of business on the second trading day immediately before the maturity date. Should the noteholders elect to convert their Green Notes, we may elect to settle the conversion by paying or delivering, as applicable, cash, shares of our Class A common stock or a combination thereof.

The initial conversion rate is 61.6808 shares of Class A common stock per $1,000 principal amount of notes, which represents an initial conversion price of approximately $16.21 per share of Class A common stock. The conversion rate and conversion price are subject to customary adjustments upon the occurrence of certain events. In addition, if certain corporate events that constitute a "Make-Whole Fundamental Change" as defined occur, the conversion rate will, in certain circumstances, be increased for a specified period of time.

We adopted ASU 2020-06 as of January 1, 2021 using the modified retrospective transition method. Upon adoption, we combined the previously separated equity component of the Green Notes with the liability component, which is now together classified as debt, thereby eliminating the subsequent amortization of the debt discount as interest expense. Similarly, the portion of issuance costs previously allocated to equity was reclassified to debt and amortized as interest expense. Accordingly, we recorded a net decrease to accumulated deficit of $5.3 million, a decrease to additional paid-in capital of $126.8 million, and an increase to recourse debt, non-current, of approximately $121.5 million upon adoption as of January 1, 2021.

Interest expense for the three and nine months ended September 30, 2021 was $1.9 million and $5.8 million, including amortization of issuance costs of $0.5 million and $1.5 million, respectively.

Non-recourse Debt Facilities

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 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 $3.6 million and $3.8 million as of September 30, 2021 and December 31, 2020, respectively, which was included as part of long-term restricted cash in the condensed consolidated balance sheets. The loan is secured by all assets of PPA IIIa.

6.07% Senior Secured Notes due March 2030 - The notes bear a fixed interest rate of 6.07% per annum payable quarterly, which began in December 2015 and ends in March 2030. The note purchase agreement requires us to maintain a debt service reserve, the balance of which was $8.9 million and $8.5 million as of September 30, 2021 and December 31, 2020, respectively, which was included as part of long-term restricted cash in the condensed consolidated balance sheets. The notes are secured by all the assets of the PPA IV.

LIBOR + 2.5% Term Loan due December 2021 - In June 2015, PPA V entered into a $131.2 million term loan due December 2021. The current portion of the LIBOR + 2.5% Term Loan as of September 30, 2021 and December 31, 2020 was none and $114.1 million, respectively. In November 2021, PPA V entered into a $136 million term loan, which replaces the LIBOR + 2.5% Term Loan due December 2021. For additional information, please see Note 18 – *Subsequent Events*. As a result of the November 2021 refinance, we reclassified the short term obligation related to LIBOR + 2.5% Term Loan as non-current within the condensed consolidated balance sheet.

In accordance with the credit agreement, PPA V was issued 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 a letter of credit facility, the PPA V also pays commitment fees at 0.5% 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, PPA V entered into pay-fixed, receive-float interest rate swap agreements to convert its floating-rate loan into a fixed-rate loan. The agreement also included commitments to a letter of credit 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 September 30, 2021 and December 31, 2020 was $5.4 million and $5.2 million, respectively, and the unused capacity was $0.8 million and $1.0 million, respectively.

Repayment Schedule and Interest Expense

The following table presents details of our outstanding loan principal repayment schedule as of September 30, 2021 (in thousands):

Remainder of 2021	$	3,253
2022		25,765
2023		32,430
2024		36,369
2025		270,613
Thereafter		147,607
	$	516,037

Interest expense of $14.5 million and $20.3 million for the three months ended September 30, 2021 and 2020, respectively, and $43.8 million and $57.5 million for the nine months ended September 30, 2021 and 2020, respectively, was recorded in interest expense on the condensed consolidated statements of operations. This interest expense includes interest expense - related parties of $0.4 million for the three months ended September 30, 2020, and $2.5 million for the nine months ended September 30, 2020, respectively. We did not incur any interest expense - related parties during the three or nine months ended September 30, 2021.

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 September 30, 2021 and December 31, 2020 on our condensed consolidated balance sheets are as follows (in thousands):

	September 30, 2021	December 31, 2020
Liabilities		
Accrued expenses and other current liabilities	$ 11,853	$ 15,989

PPA V - In July 2015, PPA V entered into nine interest rate swap agreements to convert a variable interest rate debt to a fixed rate and we designated and documented the interest rate swap arrangements as cash flow hedges. Three of these swaps matured in 2016, three will mature on December 31, 2021 and the remaining three will mature on June 30, 2031. The effective change is recorded in accumulated other comprehensive loss and is recognized as interest expense on settlement. The notional amounts of the swaps are $178.9 million and $181.4 million as of September 30, 2021 and December 31, 2020, 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 realized immaterial gains attributable to the change in valuation during the three and nine months ended September 30, 2021 and 2020, and these gains are included in other expense, net, in the condensed consolidated statements of operations.

The changes in fair value of the derivative contracts designated as cash flow hedges and the amounts recognized in accumulated other comprehensive loss and in earnings are as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
Beginning balance	$ 12,651	$ 17,881	$ 15,989	$ 9,238
Loss (gain) recognized in other comprehensive loss	(264)	(72)	(2,548)	9,212
Amounts reclassified from other comprehensive loss to earnings	(499)	(501)	(1,483)	(1,068)
Net loss (gain) recognized in other comprehensive loss	(763)	(573)	(4,031)	8,144
Gain recognized in earnings	(35)	(36)	(105)	(110)
Ending balance	$ 11,853	$ 17,272	$ 11,853	$ 17,272

Embedded EPP Derivatives in Sales Contracts

For the three months ended September 30, 2021 and 2020, we recorded the fair value of the embedded EPP derivatives and recognized an unrealized loss of $0.2 million and an unrealized gain of $1.5 million, respectively. For the nine months ended September 30, 2021 and 2020, we recorded the fair value of the embedded EPP derivatives and recognized an unrealized loss of $1.6 million and an unrealized gain of $2.2 million, respectively. These gains and losses are included within loss on revaluation of embedded derivatives in the condensed consolidated statements of operations. The fair value of these derivatives was $7.2 million and $4.0 million as of September 30, 2021 and 2020, respectively.

9. Leases

Facilities, Office Buildings and Vehicles

We lease most of our facilities, office buildings and vehicles under operating and finance leases that expire at various dates through February 2036. We lease various manufacturing facilities in Sunnyvale, Fremont and Mountain View, California. Our Sunnyvale manufacturing facility lease was entered into in April 2005 and expires in December 2023. In June 2020 and in March 2021, we signed leases in Fremont that will expire in 2027 and 2036, respectively, to replace our manufacturing facilities in Sunnyvale and Mountain View. These existing plants together comprise approximately 534,894 square feet of space. In June 2021, we extended the lease term for our headquarters in San Jose, California to 2031 and leased two additional floors. We lease additional office space as field offices in the United States and around the world including in China, India, Japan, the Republic of Korea, Taiwan and the United Arab Emirates.

Some of these arrangements have free rent periods or escalating rent payment provisions. We recognize lease cost under such arrangements on a straight-line basis over the life of the leases. For the three months ended September 30, 2021 and 2020, rent expense for all occupied facilities was $4.4 million and $2.8 million, respectively. For the nine months ended September 30, 2021 and 2020, rent expense for all occupied facilities was $11.4 million and $6.8 million, respectively.

Our leases have lease terms ranging from less than 1 year to 15 years, some of which include options to extend the leases. The lease term is the non-cancelable period of the lease and includes options to extend or terminate the lease when it is reasonably certain that an option will be exercised.

Operating and financing lease right-of-use assets and lease liabilities for facilities, office buildings and vehicles as of September 30, 2021 and December 31, 2020 were as follows (in thousands):

	September 30, 2021	December 31, 2020
Assets:		
Operating lease right-of-use assets, net [1, 2]	$ 70,055	$ 35,621
Financing lease right-of-use assets, net [2, 3, 4]	2,943	334
Total	$ 72,998	$ 35,955
Liabilities:		
Current:		
Operating lease liabilities	$ 6,206	$ 7,899
Financing lease liabilities [5]	798	74
Total current lease liabilities	7,004	7,973
Non-current:		
Operating lease liabilities	78,146	41,849
Financing lease liabilities [6]	2,165	267
Total non-current lease liabilities	80,311	42,116
Total lease liabilities	$ 87,315	$ 50,089

[1] These assets primarily include leases for facilities, office buildings and vehicles.

[2] Net of accumulated amortization.

[3] These assets primarily include leases for vehicles.

[4] Included in property, plant and equipment, net, in the condensed consolidated balance sheets, net of accumulated amortization.

[5] Included in accrued expenses and other current liabilities in the condensed consolidated balance sheets.

[6] Included in other long-term liabilities in the condensed consolidated balance sheets.

The components of our facilities, office buildings and vehicles' lease costs for the three and nine months ended September 30, 2021 and 2020 were as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
Operating lease costs	$ 3,925	$ 2,683	$ 10,620	$ 6,280
Financing lease costs:				
Amortization of financing lease right-of-use assets	214	15	1,096	32
Interest expense for financing lease liabilities	51	4	296	10
Total financing lease costs	265	19	1,392	42
Short-term lease costs	625	131	951	668
Total lease costs	$ 4,815	$ 2,833	$ 12,963	$ 6,990

Weighted average remaining lease terms and discount rates for our facilities, office buildings and vehicles as of September 30, 2021 and December 31, 2020 were as follows:

	September 30, 2021	December 31, 2020
Remaining lease term (years):		
Operating leases	9.3 years	6.7 years
Finance leases	3.6 years	4.2 years
Discount rate:		
Operating leases	9.3 %	8.7 %
Finance leases	7.6 %	7.0 %

Future lease payments under lease agreements for our facilities, office buildings, and vehicles as of September 30, 2021, were as follows (in thousands):

	Operating Leases	Finance Leases
Remainder of 2021	$ 3,581	$ 240
2022	13,076	960
2023	14,949	955
2024	13,455	782
2025	13,477	313
Thereafter	79,085	88
Total minimum lease payments	137,623	3,338
Less: amounts representing interest or imputed interest	(53,271)	(375)
Present value of lease liabilities	$ 84,352	$ 2,963

Managed Services and Portfolio Financings Through PPA Entities

Certain of our customers enter into Managed Services or Portfolio Financings through a PPA Entity to finance their lease of Bloom Energy Servers. Prior to our adoption of ASC 842 as of January 1, 2020, such arrangements with customers that qualified as leases were classified as either sales-type leases or operating leases. For all pre-existing Managed Services Financings or Portfolio Financings through PPA Entities, we have carried over the accounting classifications for those transactions and continue to account for such transactions as either sales-type leases or operating leases under ASC 842. Customer arrangements under Managed Services and Portfolio Financings through PPA Entities entered into after January 1, 2021 do not contain a lease under ASC 842 and are accounted for under ASC 606 as revenue arrangements.

Lease agreements under our Managed Services Financings and Portfolio Financings through PPA Entities include non-cancellable lease terms, during which terms the majority of our investment in Energy Servers under lease are typically recovered. We mitigate remaining residual value risk of its Energy Servers through its provision of maintenance on the Energy Servers during the lease term and through insurance whose proceeds are payable in the event of theft, loss, damage, or destruction.

Managed Services - Our Managed Services Financings with financiers that result in failed sale-and-leaseback transactions are accounted for as financing transactions. Payments received from the financier are recognized as financing obligations in our condensed consolidated balance sheets. These financing obligations are included in each agreements' contract value and are recognized as short-term or long-term liabilities based on the estimated payment dates. The lease agreements expire on various dates through 2034. For successful sale-and-leaseback transactions, we recorded right-of-use assets and lease liabilities and recorded lease expense over the lease term. The recognized lease expense has been immaterial.

At September 30, 2021, future lease payments under the Managed Services financing obligations and the sublease payments from the customers under the related operating leases were as follows (in thousands):

	Financing Obligations	Sublease Payments[1]
Remainder of 2021	$ 10,412	$ (10,412)
2022	42,265	(42,265)
2023	43,223	(43,223)
2024	41,141	(41,141)
2025	40,106	(40,106)
Thereafter	90,023	(90,023)
Total lease payments	267,170	$ (267,170)
Less: imputed interest	(154,762)	
Total lease obligations	112,408	
Less: current obligations	(14,260)	
Long-term lease obligations	$ 98,148	

[1] Sublease Payments primarily represents the fees received by the bank from our 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.

The long-term financing obligations, as reflected in our condensed consolidated balance sheets, were $456.3 million and $460.0 million as of September 30, 2021 and December 31, 2020, 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.

Portfolio Financings through PPA Entities - Customer arrangements entered into prior to January 1, 2020 under Portfolio Financing arrangements through a PPA Entity that qualified as leases are accounted for as either sales-type leases or operating leases. Since January 1, 2020, we have not entered into any new PPAs with customers under such arrangements.

The components of our aggregate net investment in sales-type leases under our Portfolio Financings through PPA entities consisted of the following (in thousands):

	September 30, 2021	December 31, 2020
Lease payment receivables, net[1]	$ 45,784	$ 49,806
Estimated residual value of leased assets (unguaranteed)	890	890
Net investment in sales-type leases	46,674	50,696
Less: current portion	(5,693)	(5,428)
Non-current portion of net investment in sales-type leases	$ 40,981	$ 45,268

[1] Net of current estimated credit losses of approximately $0.1 million as of September 30, 2021 and December 31, 2020.

As of September 30, 2021, the future scheduled customer payments from sales-type leases were as follows (in thousands):

	Future minimum lease payments
Remainder of 2021	$ 1,494
2022	6,110
2023	6,435
2024	6,797
2025	7,125
Thereafter	19,176
Total undiscounted cash flows	47,137
Less: imputed interest	(1,302)
Present value of lease payments[1]	$ 45,835

[1] Amount comprises a current and long-term portion of lease receivables of $5.7 million and $41.0 million, respectively, after giving effect to a $0.1 million current expected credit loss reserve on the long-term portion, which is reflected as a component of the net investment in sales-type leases presented in our condensed consolidated statement of financial position as customer financing receivables.

Future estimated operating lease payments we expect to receive from Portfolio Financing arrangements through PPA Entities as of September 30, 2021, were as follows (in thousands):

	Operating Leases
Remainder of 2021	$ 10,850
2022	44,205
2023	45,290
2024	46,533
2025	47,553
Thereafter	264,018
Total lease payments	$ 458,449

10. Stock-Based Compensation Expense and Employee Benefit Plans

Stock-Based Compensation Expense

The following table summarizes the components of stock-based compensation expense in the condensed consolidated statements of operations (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
Cost of revenue	$ 2,945	$ 3,568	$ 9,749	$ 13,811
Research and development	5,678	4,103	15,876	14,913
Sales and marketing	4,391	2,234	12,486	8,358
General and administrative	7,952	5,830	19,198	20,303
	$ 20,966	$ 15,735	$ 57,309	$ 57,385

Stock Option and Stock Award Activity

The following table summarizes the stock option activity under our stock plans during the reporting period:

	Outstanding Options			
	Number of Shares	Weighted Average Exercise Price	Remaining Contractual Life (Years)	Aggregate Intrinsic Value
				(in thousands)
Balances at December 31, 2020	15,354,271	$ 21.27	6.0	$ 129,855
Exercised	(2,597,003)	23.90		
Cancelled	(973,720)	14.94		
Balances at September 30, 2021	11,783,548	21.22	5.4	50,366
Vested and expected to vest at September 30, 2021	11,619,420	21.38	5.4	48,719
Exercisable at September 30, 2021	9,328,149	24.26	4.9	25,881

Stock Options - During the three months ended September 30, 2021 and 2020, we recognized $2.7 million and $4.4 million of stock-based compensation expense for stock options, respectively. During the nine months ended September 30, 2021 and 2020, we recognized $10.0 million and $14.9 million of stock-based compensation expense for stock options, respectively. We did not grant options in the three and nine months ended September 30, 2021. We granted 200,000 options of Class A common stock during the three and nine months ended September 30, 2020 and the weighted average grant-date fair value of those options was $7.30 per share.

As of September 30, 2021 and 2020, we had unrecognized compensation expense related to unvested stock options of $9.0 million and $25.1 million, respectively. This expense is expected to be recognized over the remaining weighted-average period of 1.2 years and 2.1 years, respectively. Cash received from stock options exercised totaled $62.1 million and $4.2 million for the nine months ended September 30, 2021 and 2020, respectively.

A summary of our stock awards activity and related information is as follows:

	Number of Awards Outstanding	Weighted Average Grant Date Fair Value
Unvested Balance at December 31, 2020	6,418,788	$ 13.71
Granted	5,566,751	24.27
Vested	(2,533,027)	16.65
Forfeited	(1,184,222)	16.37
Unvested Balance at September 30, 2021	8,268,290	19.54

Stock Awards - The estimated fair value of restricted stock units ("RSUs") and performance stock units ("PSUs") is based on the fair value of our Class A common stock on the date of grant. For the three months ended September 30, 2021 and 2020, we recognized $15.8 million and $9.6 million of stock-based compensation expense for stock awards, respectively. For the nine months ended September 30, 2021 and 2020, we recognized $40.6 million and $33.3 million of stock-based compensation expense for stock awards, respectively.

As of September 30, 2021 and 2020, we had $119.1 million and $62.0 million of unrecognized stock-based compensation expense related to unvested stock awards, expected to be recognized over a weighted average period of 2.4 years and 2.2 years, respectively.

During 2020 and 2021, we granted PSUs to certain executive officers and employees that only vest upon the achievement of certain specific financial or operational performance criteria. Stock-based compensation expense associated with these PSUs is recognized over the service period as we evaluate the probability of the achievement of the performance conditions.

In May 2021, we issued RSUs and PSUs to our Chief Executive Officer. The RSUs vest over four years. Some of the PSUs can be earned based on achieving certain financial performance goals while the remaining are earned based upon achieving certain stock price goals. The PSUs will be subject to a two-year post-vest holding period in which the award holder will be restricted from selling any shares (net of shares settled for taxes). As of September 30, 2021, the unamortized compensation expense for the RSUs and PSUs was $27.0 million. Actual compensation expense is dependent on the performance of the PSUs that vest based upon a performance condition. We estimated the fair value of the PSUs that vest based on a market condition on the date of grant using a Monte Carlo simulation with the following assumptions: (i) expected volatility of 71.2%, (ii) risk-free interest rate of 1.6%, and (iii) no expected dividend yield.

The following table presents the stock activity and the total number of shares available for grant under our stock plans as of September 30, 2021:

	Plan Shares Available for Grant
Balances at December 31, 2020	20,233,754
Added to plan	7,969,144
Granted	(5,566,751)
Cancelled	2,157,942
Expired	(358,854)
Balances at September 30, 2021	24,435,235

2018 Employee Stock Purchase Plan

During the nine months ended September 30, 2021 and 2020, we recognized $4.5 million and $5.2 million of stock-based compensation expense for the 2018 Employee Stock Purchase Plan, respectively. We issued 1,945,305 shares in the nine

months ended September 30, 2021. During the nine months ended September 30, 2021, we added an additional 1,902,572 shares and there were 2,544,668 shares available for issuance as of September 30, 2021.

As of September 30, 2021 and 2020, we had $13.7 million and $2.6 million of unrecognized stock-based compensation expense, expected to be recognized over a weighted average period of 1.2 years and 0.5 years, respectively.

11. Portfolio Financings

Overview

We have developed three financing options that enable customers' use of the Energy Servers through third-party ownership financing arrangements. For additional information on these financing options, see our Annual Report on Form 10-K for the fiscal year ended December 31, 2020.

PPA Entities' Aggregate Assets and Liabilities

Generally, the assets of an operating company owned by an investment company can be used to settle only the operating company obligations, and the operating company creditors do not have recourse to us. The following are the aggregate carrying values of our VIEs' assets and liabilities in our condensed consolidated balance sheets, after eliminations of intercompany transactions and balances, including each of the PPA Entities in the PPA IIIa transaction, the PPA IV transaction and the PPA V transaction (in thousands):

	September 30, 2021	December 31, 2020
Assets		
Current assets:		
Cash and cash equivalents	$ 3,069	$ 1,421
Restricted cash	1,256	4,698
Accounts receivable	4,262	4,420
Customer financing receivable	5,693	5,428
Prepaid expenses and other current assets	3,072	3,048
Total current assets	17,352	19,015
Property and equipment, net	234,436	252,020
Customer financing receivable, non-current	40,981	45,268
Restricted cash, non-current	15,224	15,320
Other long-term assets	—	37
Total assets	$ 307,993	$ 331,660
Liabilities		
Current liabilities:		
Accrued expenses and other current liabilities	$ 15,430	$ 19,510
Deferred revenue and customer deposits	662	662
Non-recourse debt	7,782	120,846
Total current liabilities	23,874	141,018
Deferred revenue and customer deposits, non-current	5,577	6,072
Non-recourse debt, non-current	439,779	102,045
Total liabilities	$ 469,230	$ 249,135

We consolidated each PPA Entity as VIEs in the PPA IV transaction and the PPA V transaction, as we remain the minority shareholder in each of these transactions but have determined that we are the primary beneficiary of these VIEs. These PPA Entities contain debt that is non-recourse to us and own Energy Server assets for which we do not have title.

12. Related Party Transactions

Our operations include the following related party transactions (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
Total revenue from related parties	$ 3,333	$ 742	$ 8,227	$ 2,672
Interest expense to related parties	—	353	—	2,513

Bloom Energy Japan Limited

In May 2013, we entered into a joint venture with Softbank Corp. ("Softbank"), which was accounted for as an equity method investment. Under this arrangement, we sold Energy Servers and provided maintenance services to the joint venture. On July 1, 2021 (the "BEJ Closing Date"), we acquired Softbank's 50% interest in the joint venture for a cash payment of $2.0 million and subject to a $3.6 million earn out. As of the BEJ Closing Date, Bloom Energy Japan Limited ("Bloom Energy Japan") is no longer considered a related party.

For the three and nine months ended September 30, 2020, we recognized related party total revenue of $0.7 million and $2.7 million, respectively. For the nine months ended September 30, 2021, we recognized related party total revenue of $1.6 million. We had no accounts receivable from this joint venture as of September 30, 2021.

SK ecoplant Joint Venture

In September 2019, we entered into a joint venture agreement with SK ecoplant to establish a light-assembly facility in the Republic of Korea for sales of certain portions of our Energy Server for the stationary utility and commercial and industrial market in the Republic of Korea. The joint venture is majority controlled and managed by us and is accounted for as a consolidated subsidiary. For the three and nine months ended September 30, 2021, we recognized related party revenue of $3.3 million and $6.6 million, respectively. As of September 30, 2021, we had outstanding accounts receivable of $3.6 million. We recognized no related party revenue for the three and nine months ended September 30, 2020.

13. Commitments and Contingencies

Commitments

Purchase Commitments with Suppliers and Contract Manufacturers - As of September 30, 2021 and December 31, 2020, we had no material open purchase orders with our component suppliers and third-party manufacturers that are not cancellable.

Portfolio Financings Performance Guarantees - We guarantee the performance of Energy Servers at certain levels of output and efficiency to customers over the contractual term. We paid $0.2 million and $5.7 million for the nine months ended September 30, 2021 and 2020, respectively.

Letters of Credit - In 2019, pursuant to the PPA II upgrade of Energy Servers, we agreed to indemnify our financing partner for losses that may be incurred in the event of certain regulatory, legal or legislative development and established a cash-collateralized letter of credit facility for this purpose. As of September 30, 2021, the balance of this cash-collateralized letter of credit was $99.4 million, of which $34.2 million and $65.2 million is recognized as short-term and long-term restricted cash, respectively.

Pledged Funds - In 2019, pursuant to the PPA IIIb refinancing and energy servers upgrade program, we pledged $20.0 million for a seven-year period to secure our operations and maintenance obligations with respect to the totality of our obligations to the financier. We categorized the $20.0 million as restricted cash on our condensed consolidated balance sheet as of December 31, 2019. It was agreed 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. In December of 2020, we met our first milestone and 33% or $6.6 million

of the $20.0 million was released and no longer required to be pledged. As of September 30, 2021, the balance of the long-term restricted cash was $13.3 million.

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.

Contingent Consideration - Our acquisition of Softbank's 50% interest in Bloom Energy Japan included a contingent consideration related to a potential sale of Energy Servers of up to 10.5 megawatts of aggregate baseload. We recorded a contingent consideration of $3.6 million in other long-term liabilities. The consideration can be earned on or before the two year anniversary of the BEJ Closing Date. For a further discussion of our acquisition of Softbank's interest in the joint venture, please see Note 17 - *Business Combinations.*

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 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. As of September 30, 2021, we have recorded $1.0 million in current liabilities and $9.5 million in other long-term liabilities for potential future repayments of this grant.

Investment Tax Credits - Our Energy Servers are eligible for federal ITCs that accrued to qualified property under Internal Revenue Code Section 48 when placed into service. However, the ITC program has operational criteria that extend for five years. If the energy property is disposed of or otherwise ceases to be qualified investment credit property before the close of the five-year recapture period is fulfilled, it could result in a partial reduction of the incentives. Energy Servers are purchased by the PPA Entities, other financial sponsors, or customers and, therefore, these parties bear the risk of repayment if the assets placed in service do not meet the ITC operational criteria in the future although in certain limited circumstances we do provide indemnification for such risk.

Legal Matters - We are involved in various legal proceedings that arise in the ordinary course of business. We review all legal matters at least quarterly and assess whether an accrual for loss contingencies needs to be recorded. We record an accrual for loss contingencies when management believes that it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. Legal matters are subject to uncertainties and are inherently unpredictable, so the actual liability in any such 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. On September 14, 2020, the Tribunal issued an interim order dismissing the claimant’s remaining claims and requesting further briefing on the issue of prevailing party. On November 10, 2020, the Tribunal issued an order declaring us the prevailing party and requesting a motion for award of attorney’s fees. On March 17, 2021, we received the final award for attorneys' fees and costs. On March 26, 2021, we filed a petition in the Northern District of California to confirm the award. Messrs. Badger and Daubenspeck have taken the position that the award should be vacated, including on the ground that one of the arbitrators made insufficient disclosures or was biased against them. The Northern District of California rejected the arguments made by Messrs. Badger and Daubenspeck and confirmed the arbitration award and entered a separate judgment in our favor as stated in the final award.

In June 2019, Messrs. Daubenspeck and Badger filed a complaint against our Chief Executive Officer ("CEO") and our former Chief Financial Officer ("CFO") in the United States District Court for the Northern District of Illinois asserting nearly identical claims as those in the pending arbitration discussed above. The lawsuit was stayed pending the outcome of the

arbitration. The stay was lifted on October 20, 2020. On March 19, 2021 we filed a motion to dismiss the case on several grounds. On May 3, 2021, plaintiffs filed a motion to stay the lawsuit pending the outcome of the petition to confirm the arbitration award in the Northern District of California. We believe the complaint to be without merit and that the issues were previously tried and dismissed in the arbitration. We are unable to estimate any range of reasonably possible losses.

In March 2019, the Lincolnshire Police Pension Fund filed a class action complaint in the Superior Court of the State of California, County of Santa Clara, against us, certain members of our senior management, certain of our directors and the underwriters in our July 25, 2018 initial public offering ("IPO") alleging violations under Sections 11 and 15 of the Securities Act of 1933, as amended (the "Securities Act"), for alleged misleading statements or omissions in our Registration Statement on Form S-1 filed with the SEC in connection with the IPO. Two related class action cases were subsequently filed in the Santa Clara County Superior Court against the same defendants containing the same allegations; 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 defend this action vigorously. We are unable to estimate any range of reasonably possible losses.

In May 2019, Elissa Roberts filed a class action complaint in the federal district court for the Northern District of California against us, certain members of our senior management team, and certain of our directors alleging violations under Section 11 and 15 of the Securities Act for alleged misleading statements or omissions in our Registration Statement on Form S-1 filed with the SEC in connection with the IPO. On September 3, 2019, 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 as defendants our IPO underwriters, adding claims under Sections 10(b) and 20(a) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and extending the putative class period to September 16, 2019. On April 21, 2020, plaintiffs filed a second amended complaint adding claims under the Securities Act. The second amended complaint also adds
PricewaterhouseCoopers ("PwC") as a defendant, adds allegations pertaining to the February 2020 revision and restatement of our financial statements for certain previous periods, and, as to claims under the Exchange Act, extends the putative class period through February 12, 2020. On July 1, 2020, we moved to dismiss the second amended complaint. On September 29, 2021, the court entered an order dismissing with leave to amend (1) plaintiffs’ Securities Act claims as to five of seven challenged statements or groups of statements, and (2) plaintiffs’ Exchange Act claims in their entirety. On October 22, 2021, plaintiffs moved for entry of final judgment as to the dismissal of their claims against PwC, which would enable plaintiffs to immediately appeal that dismissal. We intent to respond by opposing this motion unless plaintiffs agree to waive their right to seek to amend and their right to appeal the dismissed claims against us and underwriter defendants. We believe the complaint to be without merit and we intend to defend this action vigorously. We are unable to predict the outcome of this litigation at this time and accordingly are not able to estimate any range of reasonably possible losses.

In September 2019, we received a books and records demand from purported 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 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, et al. 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. The court held a one-day trial on December 7, 2020. On February 25, 2021, the Delaware Court of Chancery issued a decision rejecting the Bolouri Demand but granting in part the Jacob Demand allowing limited access to certain books and records pertaining to the allegations made in the Hindenburg Research Report. On March 29, 2021, the Court of Chancery entered a Final Order and Judgment regarding the required production of documents. On April 28, 2021, we produced documents to Mr. Jacob that were responsive to the Final Order and Judgment. We are unable to estimate any range of reasonably possible losses.

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, and in July 2020 he amended his complaint to add claims under the California Labor Code Private Attorneys General Act. On November 30, 2020, we filed a motion to compel arbitration and the motion was to be heard on March 5, 2021. On February 24, 2021, Mr. Sanchez dismissed the individual and

class action claims without prejudice, leaving one cause of action for enforcement of the Private Attorney Generals Act. In April 2021, an amended complaint reflecting these changes was filed with the Santa Clara Superior Court. The parties have agreed to attend a mediation on January 10, 2022. Given that the case is still in its early stages, we are unable to estimate any range of reasonably possible losses.

In June 2021, we filed a petition for writ of mandate and a complaint for declaratory and injunctive relief in the Santa Clara Superior Court against the City of Santa Clara for failure to issue building permits for two of our customer installations and asking the court to require the City of Santa Clara to process and issue the building permits. On October 6, 2021, we filed an amended complaint against the City of Santa Clara adding additional claims for damages, including violations of due process, equal protection, retaliation and interference with prospective economic advantage. If we are unable to secure building permits for these customer installations in a timely fashion, our customers will terminate their contracts with us and select another energy provider. In addition, if we are no longer able to install our Energy Servers in Santa Clara under building permits, we may not able to secure future customer bookings for installation in the City of Santa Clara.

14. Segment Information

Our chief operating decision makers ("CODMs"), the CEO and the CFO, 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 CEO. 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.

15. Income Taxes

For the three months ended September 30, 2021 and 2020, we recorded provisions for income taxes of $0.2 million and an immaterial amount on pre-tax losses of $56.5 million and $17.9 million for effective tax rates of (0.3)% and 0.0%, respectively. For the nine months ended September 30, 2021 and 2020, we recorded provisions for income taxes of $0.6 million and $0.3 million on pre-tax losses of $144.3 million and $147.2 million for effective tax rates of (0.4)% and (0.2)%, respectively.

The effective tax rate for the three and nine months ended September 30, 2021 and 2020 is lower than the statutory federal tax rate primarily due to a full valuation allowance against U.S. deferred tax assets.

16. Net Loss per Share Available to Common Stockholders

The following table sets forth the computation of our net loss per share available to common stockholders, basic and diluted (in thousands, except share and per share amounts):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
Numerator:				
Net loss available to Class A and Class B common stockholders	$ (52,370)	$ (11,954)	$ (131,122)	$ (130,415)
Denominator:				
Weighted average shares of common stock, basic and diluted	174,269	138,964	172,601	129,571
Net loss per share available to Class A and Class B common stockholders, basic and diluted	$ (0.30)	$ (0.09)	$ (0.76)	$ (1.01)

The following common stock equivalents (in thousands) were excluded from the computation of our net loss per share available to common stockholders, diluted, for the three and nine months presented as their inclusion would have been antidilutive:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
Convertible notes	14,187	32,957	14,187	31,765
Stock options and awards	5,415	6,321	6,998	5,518
	19,602	39,278	21,185	37,283

17. Business Combinations

On July 1, 2021, we acquired Softbank's 50% interest in Bloom Energy Japan, for an aggregate purchase price of $2.0 million, as set forth in the Share Purchase Agreement between the parties (the "Purchase Agreement"). After purchasing the remaining 50% interest in Bloom Energy Japan from Softbank, we own 100% of Bloom Energy Japan. The transaction was accounted for as a step acquisition, which required the re-measurement of our previously held 50% ownership interest in the joint venture to fair value and the acquired net assets became part of our operations upon closing.

In accordance with ASC 805, we allocated the purchase price of our acquisitions to the tangible assets, liabilities and intangible assets acquired based on fair values and we recorded the excess purchase price over those fair values as goodwill. The fair value of assets acquired and liabilities assumed as part of this transaction are not material. The fair value of net tangible assets acquired approximated their carrying value. The Purchase Agreement included an earn-out related to a potential sale of Energy Servers to an identified customer (up to 10.5 megawatts of aggregate baseload) for an additional payment of up to approximately $3.6 million, which can be earned on or before the two year anniversary of the BEJ Closing Date. We believe that the fair value of this contingent consideration falls within Level 3 of the fair value hierarchy as a result of the unobservable inputs used for the measurement of this future event and have recorded the value in other long-term liabilities. Acquisition-related costs were expensed as incurred and were not material.

Goodwill resulting from the transaction constitutes the excess of the consideration paid over the fair values of the assets acquired and liabilities assumed and primarily represents the expected benefits of streamlining our marketing and sales activities in Japan. We recognized acquired goodwill of $1.7 million which is is recorded in long-term assets as of September 30, 2021. This acquired goodwill is not deductible for tax purposes. In connection with the acquisition and as a result of the re-measurement, we recognized $2.0 million fair value investment on the previously written-off equity investment in our original 50% interest in Bloom Energy Japan as of July 1, 2021 as a gain in other income (expense), net on our condensed consolidated statement of operations.

18. Subsequent Events

Other than those items discussed below, there have been no subsequent events that occurred during the period subsequent to the date of these condensed consolidated financial statements that would require adjustment to our disclosure in the condensed consolidated financial statements as presented.

Securities Purchase Agreement

On October 23, 2021, we entered into the SPA with SK ecoplant in connection with a strategic partnership. Pursuant to the SPA, we have agreed to sell to SK ecoplant 10,000,000 shares of zero coupon, non-voting redeemable convertible Series A preferred stock in us, par value $0.0001 per share, (the “RCPS”), at a purchase price of $25.50 per share or an aggregate purchase price of approximately $255.0 million (the “Initial Investment”). The SPA contains liquidation preferences, customary representations, warranties, covenants and conditions to the closing of the Initial Investment (the "First Closing"), including receipt of all approvals or the termination or expiration of all waiting periods required under applicable antitrust laws. The SPA

may be terminated by either us or SK ecoplant if the First Closing has not occurred by December 31, 2021, subject to extension to March 31, 2022 in the event certain approvals have not been obtained.

In addition to the Initial Investment, following the First Closing and on or prior to November 30, 2023, SK ecoplant will have the option (but not the obligation) to purchase a minimum of 11,000,000 shares of our Class A Common Stock at the higher of (i) $23.00 per share and (ii) one hundred fifteen percent (115%) of the volume-weighted average closing price of the twenty (20) consecutive trading day period immediately preceding the notice to purchase such shares (the "Second Investment"). The maximum amount of capital stock that SK ecoplant and its subsidiaries may hold is capped at 15% of our issued and outstanding capital stock (inclusive of the RCPS purchased in the Initial Investment and any other purchases of our stock). The SPA contains customary representations, warranties, covenants and conditions to closing of the Second Investment. Simultaneous with the execution of the SPA, we and SK ecoplant have executed an Amendment to the Joint Venture Agreement, an amendment and restatement to our Preferred Distribution Agreement with SK ecoplant and a new Commercial Cooperation Agreement regarding initiatives pertaining to the hydrogen market and general market expansion for the Bloom Energy Server and Bloom Energy Electrolyzer.

Term Loan Agreement

In November 2021, PPA V entered into a $136 million term loan due June 2031. This replaces the LIBOR +2.5% Term Loan due December 2021. This new non-recourse debt was issued at an interest rate of 3.04%. For additional information on the LIBOR + 2.5% Term Loan due December 2021, please see Note 7 - O*utstanding Loans and Security Agreements*.

ITEM 2 - MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This Quarterly Report on Form 10-Q contains "forward-looking statements" within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are based on current expectations, estimates, and projections about our industry, management's beliefs, and certain assumptions made by management. For example, forward-looking statements include, but are not limited to, our expectations regarding our products, services, business strategies, impact of COVID-19, timing and size of the transaction with SK ecoplant, operations, supply chain, new markets, government incentive programs, growth of the hydrogen market and the sufficiency of our cash and our liquidity. Forward-looking statements can also be identified by words such as "future," "anticipates," "believes," "estimates," "expects," "intends," "plans," "predicts," "targets," "forecasts," "will," "would," "could," "can," "may" and similar terms. These statements are based on the beliefs and assumptions of our management based on information currently available to management at the time they are made. Such forward-looking statements are subject to risks, uncertainties and other factors that could cause actual results and the timing of certain events to differ materially from future results expressed or implied by such forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those identified below, and those discussed in the section titled "Risk Factors" included in Part II, Item 1A of this Quarterly Report on Form 10-Q and in our other filings with the Securities and Exchange Commission, including our Annual Report on Form 10-K for the fiscal year ended December 31, 2020 filed on February 26, 2021. Such forward-looking statements speak only as of the date of this report. We disclaim any obligation to update any forward-looking statements to reflect events or circumstances after the date of such statements. You should review these risk factors for a more complete understanding of the risks associated with an investment in our securities. The following discussion and analysis should be read in conjunction with our condensed consolidated financial statements and notes thereto included elsewhere in this Quarterly Report on Form 10-Q.

Overview

Description of Bloom Energy

We created the first large-scale, commercially viable solid oxide fuel-cell based power generation platform that provides clean and resilient power to businesses, essential services and critical infrastructure. Our technology, invented in the United States, is the most advanced thermal electric generation technology on the market today. Our fuel-flexible Bloom Energy Servers can use biogas and hydrogen, in addition to natural gas, to create electricity at significantly higher efficiencies than traditional, combustion-based resources. In addition, our fuel cell technology can be used to create hydrogen, which is increasingly recognized as a critically important tool necessary for the full decarbonization of the energy economy. Our enterprise customers are among the largest multinational corporations who are leaders in adopting new technologies. We also have strong relationships with some of the largest utility companies in the United States and the Republic of Korea.

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.

Strategic Investment

On October 23, 2021, we entered into a Securities Purchase Agreement (the "SPA") with SK ecoplant Co., Ltd. formerly SK Engineering & Construction Co., Ltd. ("SK ecoplant") in connection with a strategic partnership. Pursuant to the SPA, we have agreed to sell to SK ecoplant 10 million shares of zero coupon, non-voting redeemable convertible Series A preferred stock in us, par value $0.0001 per share ("RCPS"), at a purchase price of $25.50 per share or an aggregate purchase price of approximately $255 million (the "Initial Investment"). The SPA contains liquidation preferences, customary representations, warranties, covenants and conditions to the closing of the Initial Investment (the "First Closing"), including receipt of all approvals or the termination or expiration of all waiting periods required under applicable antitrust laws.

In addition to the Initial Investment, following the First Closing and on or prior to November 30, 2023, SK ecoplant will have the option (but not the obligation) to purchase a minimum of 11 million shares of our Class A Common Stock at the higher of (i) US$23 and (ii) one hundred and fifteen percent (115%) of the volume-weighted average closing price of the twenty (20) consecutive trading day period immediately preceding the notice to purchase such shares. The maximum amount of capital stock that SK ecoplant and its subsidiaries may hold is capped at 15 percent of our issued and outstanding capital stock (inclusive of the RCPS purchased in the Initial Investment and any other purchases of our stock).

Simultaneous with the execution of the SPA, we and SK ecoplant executed an amendment to the Joint Venture Agreement, an amendment and restatement to our Preferred Distribution Agreement ("PDA Restatement") and a new Commercial Cooperation Agreement regarding initiatives pertaining to the hydrogen market and general market expansion for the Bloom Energy Server and Bloom Energy Electrolyzer. For more detail about the SPA we entered into with SK ecoplant, please see Note 18 - *Subsequent Events*, and for more information about our joint venture with SK ecoplant, please see Note 12 - *Related Party Transactions*.

COVID-19 Pandemic

General

We continue to monitor and adjust as appropriate our operations in response to the COVID-19 pandemic. As a technology company that supplies resilient, reliable and clean energy, we have been able to conduct the majority of operations as an "essential business" in California and Delaware, where we manufacture and perform many of our R&D activities, as well as in other states and countries where we are installing or maintaining our Energy Servers. While many of our employees continue to work from home unless they are directly supporting essential manufacturing production operations, installation work, and service and maintenance activities as well as some R&D and general administrative functions, we have implemented a phased-in return of employees who were not included in these essential groups, including at our headquarters in San Jose, California. We maintain protocols to minimize the risk of COVID-19 transmission within our facilities, including enhanced cleaning and masking if required by the local authorities. We will continue to follow CDC and local guidelines when notified of possible exposures. For more information regarding the risks posed to our company by the COVID-19 pandemic, refer to Part II, Item 1A, *Risk Factors – Risks Related to Our Products and Manufacturing – Our business has been and continues to be adversely affected by the COVID-19 pandemic.*

Liquidity and Capital Resources

COVID-19 created disruptions throughout various aspects of our business as noted herein, and impacted our results of operations in the three and nine months ended September 30, 2021. Throughout 2020, we were conservative with our working capital spend, maintaining as much flexibility as possible around the timing of taking and paying for inventory and manufacturing our product while managing potential changes or delays in installations. While we improved our liquidity in 2020, we increased our working capital spend in the first half of 2021. We have entered into new leases to maintain sufficient manufacturing facilities to meet anticipated demand in 2022, including new product line expansion. In addition, we also increased our working capital spend and resources to enhance our marketing efforts and to expand into new geographies both domestically and internationally.

We believe we have the sufficient capital to run our business over the next 12 months, including the completion of the build out of our manufacturing facilities. Our working capital will be strengthened with the closing of our transaction with SK ecoplant as described above. In addition, we may still enter the equity or debt market as need to support the expansion of our business. Please refer to Note 7 - *Outstanding Loans and Security Agreements* in Part I, Item 1, *Financial Statements*; and Part II, Item 1A, *Risk Factors – Risks Related to Our Liquidity – Our substantial indebtedness, and restrictions imposed by the agreements governing our and our PPA Entities' outstanding indebtedness, may limit our financial and operating activities and*

may adversely affect our ability to incur additional debt to fund future needs, and W*e may not be able to generate sufficient cash to meet our debt service obligations*, for more information regarding the terms of and risks associated with our debt.

Sales

We have not experienced a significant impact on our selling activity related to COVID-19 during the three and nine months ended September 30, 2021.

Customer Financing

The ongoing COVID-19 pandemic resulted in a significant drop in the ability of many financiers (particularly financing institutions) to monetize tax credits, primarily the result of a potential drop in taxable income stemming from the pandemic. However, during the last two quarters, we began to see this constraint improving. As of September 30, 2021, we had obtained financing for almost all of the financing required for our remaining 2021 installations. In addition, our ability to obtain financing for our Energy Servers partly depends on the creditworthiness of our customers, and a few of our customers' credit ratings have fallen during the pandemic, which can impact the financing for their use of an Energy Server. We continue to work on obtaining the remaining financing required for our remaining 2021 installations but if we are unable to secure financing for any of our remaining 2021 installations or any new installations, our revenue, cash flow and liquidity will be materially impacted.

Installations and Maintenance of Energy Servers

Our installation and maintenance operations were impacted by the COVID-19 pandemic in 2020 and these impacts continued during the three and nine months ended September 30, 2021. Our installation projects have experienced some delays relating to, among other things, shortages in available parts and labor for design, installation and other work; the inability or delay in our ability to access customer facilities due to shutdowns or other restrictions; and the decreased productivity of our general contractors, their sub-contractors, medium-voltage electrical gear suppliers, and the wide range of engineering and construction related specialist suppliers on whom we rely for successful and timely installations. Our installations completed during the three and nine months ended September 30, 2021 were minimally impacted by these factors, but given our mitigation strategies, we were able to complete all our planned installations except one that is scheduled to be completed in the three months ending December 31, 2021.

As to maintenance, if we are delayed in or unable to perform 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. During the three and nine months ended September 30, 2021, we experienced no delays in servicing our Energy Servers due to COVID-19.

Supply Chain

During 2020 and the nine months ended September 30, 2021, we experienced COVID-19 related delays from certain vendors and suppliers, although we were able to mitigate the impact so that we did not experience delays in the manufacturing and installation of our Energy Servers. We have a global supply chain and obtain components from Asia, Europe and India. In many cases, the components we obtain are jointly developed with our suppliers and unique to us, which makes it difficult to obtain and qualify alternative suppliers should our suppliers be impacted by the COVID-19 pandemic or related effects.

During the three and nine months ended September 30, 2021, we continued to experience supply chain disruptions due to direct and indirect COVID-19 impacts. There have been a number of disruptions throughout the global supply chain as the global economy opens up and drives demand for certain components that has outpaced the return of the global supply chain to full production. Although we were able to find alternatives for many component shortages, we experienced some delays and cost increases with respect to container shortages, ocean shipping and air freight. We have put actions in place to mitigate the disruptions by booking alternate sea routes, limiting our use of air shipments, creating virtual hubs and consolidating shipments coming from the same region. During the three months ended September 30, 2021, we continued to manage disruptions from an increase in lead times for most of our components due to a variety of factors, including supply shortages, shipping delays and labor shortages, and we expect this to continue into the fourth quarter of 2021. During the three months ended September 30, 2021, raw material pricing remained challenging. In addition, we expect component shortages especially for semiconductors and specialty metals to persist at least through the first half of 2022. In the event we are unable to mitigate the impact of price increases in raw materials, electronic components and freight, it could delay the manufacturing and installation of our Energy Servers, which would adversely impact our cash flows and results of operations, including revenue and gross margin.

If spikes in COVID-19 occur in regions in which our supply chain operates, including as a result of the Delta variant, we could experience a delay in components and incur further freight price increases, which could in turn impact production and installations and our cash flow and results of operations, including revenue and gross margin.

Manufacturing

To date, COVID-19 has not impacted our production given the safety protocols we have put in place augmented by our ability to increase our shifts and obtain a contingent work force for some of the manufacturing activities. We have incurred additional labor expense due to enhanced safety protocols designed to minimize exposure and risk of COVID-19 transmission. If COVID-19 materially impacts our supply chain or if we experience a significant COVID-19 outbreak that affects our manufacturing workforce, our production could be adversely impacted which could adversely impact our cash flow and results of operation, including revenue.

Purchase and Financing Options

Overview

Initially, we offered our Energy Servers only as direct sale, in which the customer purchases the product directly from us for cash payments made in installments. Over time, we learned that while interested in our Energy Servers, some customers lacked the interest or financial capability to purchase our Energy Servers directly. Additionally, some of these customers were not in a position to optimize the use of federal tax benefits associated with the ownership of our Energy Servers like the federal Investment Tax Credit ("ITC") or accelerated depreciation.

In order to expand our offerings to those unable to or those who prefer not directly purchase our Energy Servers, we subsequently developed three financing options that enabled customers' use of the Energy Servers with a pay as you go model through third-party ownership financing arrangements.

Under the Traditional Lease option, a customer may lease one or more Energy Servers from a financial institution that purchases such Energy Servers. In most cases, the financial institution completes its purchase from us immediately after commissioning. We both (i) facilitate this financing arrangement between the financial institution and the customer and (ii) provide ongoing operations and maintenance services for the Energy Servers (such arrangement, a “Traditional Lease”).

Alternatively, a customer may enter into one of two major types of contracts with us for the use of the Energy Servers or the purchase of electricity generated by the Energy Servers. The first type of contract has a fixed monthly payment component that is required regardless of the Energy Servers’ performance, and in some cases also includes a variable payment based on the Energy Server's performance (a “Managed Services Agreement”). Managed Services Agreements are then financed pursuant to a sale-leaseback with a financial institution (a “Managed Services Financing”). The second type of services contract requires the customer to pay for each kilowatt-hour produced by the Energy Servers (a “Power Purchase Agreement” or "PPA"). PPAs are typically financed on a portfolio basis. PPAs have been financed through tax equity partnerships, acquisition financings and direct sales to investors (each, a “Portfolio Financing”).

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 optimize the federal tax benefits associated with a fuel cell, like the ITC or accelerated depreciation. 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. Our ability to finance a Managed Services Agreement or a PPA is limited by the creditworthiness of the customer. Additionally, the Traditional Lease and Managed Services Financing options are also limited by the customer’s willingness to commit to making fixed payments regardless of the performance of our obligations under the customer agreement.

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

Warranties and Guaranties

We typically provide warranties and guaranties regarding the performance (efficiency and output) of the Energy Servers' to both the customer and in the case of Portfolio Financings, the investor. We refer to a "performance 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 "performance 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 decreased benefits resulting from the failure to meet the guaranteed level. Our obligation to make payments under the performance guaranty is always contractually capped.

In most cases, we include the first year of performance warranties and guaranties in the sale price of the Energy Server. Typically, performance warranties and guaranties made for the benefit of the customer are in the Managed Services Agreement or PPA, as the case may be. In a Portfolio Financing, the performance warranties and guaranties made for the benefit of the investors are in an operations and maintenance agreement ("O&M Agreement"). In a Traditional Lease or direct purchase option, the performance warranties and guaranties are in an extended maintenance service agreement.

Direct Purchase

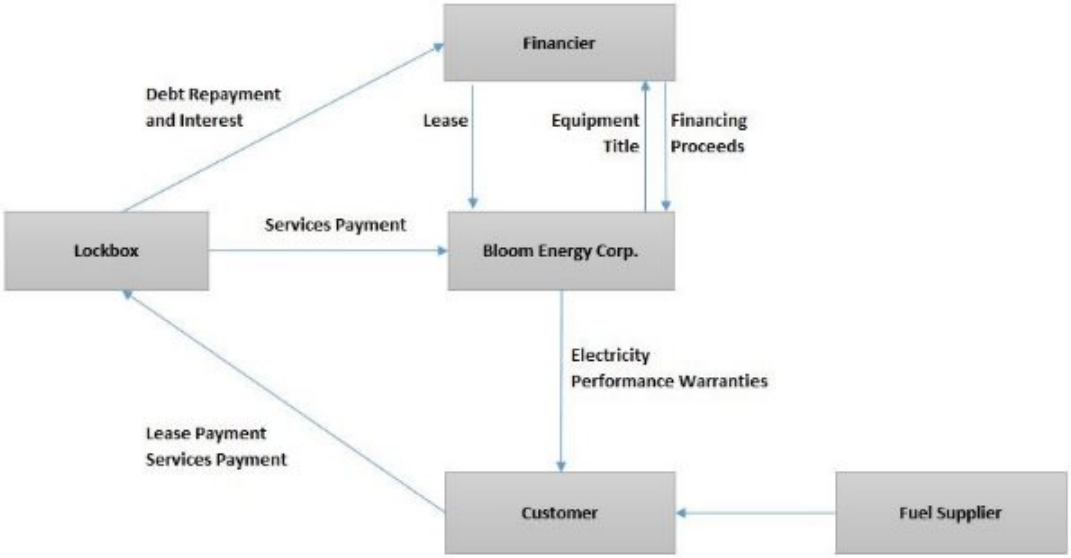
There are customers who purchase our Energy Servers directly pursuant to a fuel cell system supply and installation agreement. In connection with the purchase of Energy Servers, the customers enter into an O&M Agreement that provide for certain performance warranties and guaranties. The O&M Agreement may either be (i) for a one-year period, subject to annual renewal at the customer's option, under which our customers have historically almost always renewed the O&M Agreement for an additional year each year, or (ii) for a fixed term, typically 20 years.

These performance guarantees are negotiated on a case-by-case basis, but we typically provide an output guaranty of 95% measured annually and an efficiency guaranty of 52% measured cumulatively from the date the applicable Energy Server(s) are commissioned. In each case, underperformance obligates us to make a payment to the owner of the Energy Server(s). As of September 30, 2021, our obligation to make payments for underperformance on the direct purchase projects was capped at an aggregate total of approximately $106.7 million (including payments both for low output and for low efficiency). As of September 30, 2021, our aggregate remaining potential liability under this cap was approximately $85.2 million.

Overview of Financing and Lease Options

The substantial majority of bookings made in recent periods have been Managed Services Agreements and PPAs. Each of our financing transaction structures is described in further detail below.

Managed Services Financing



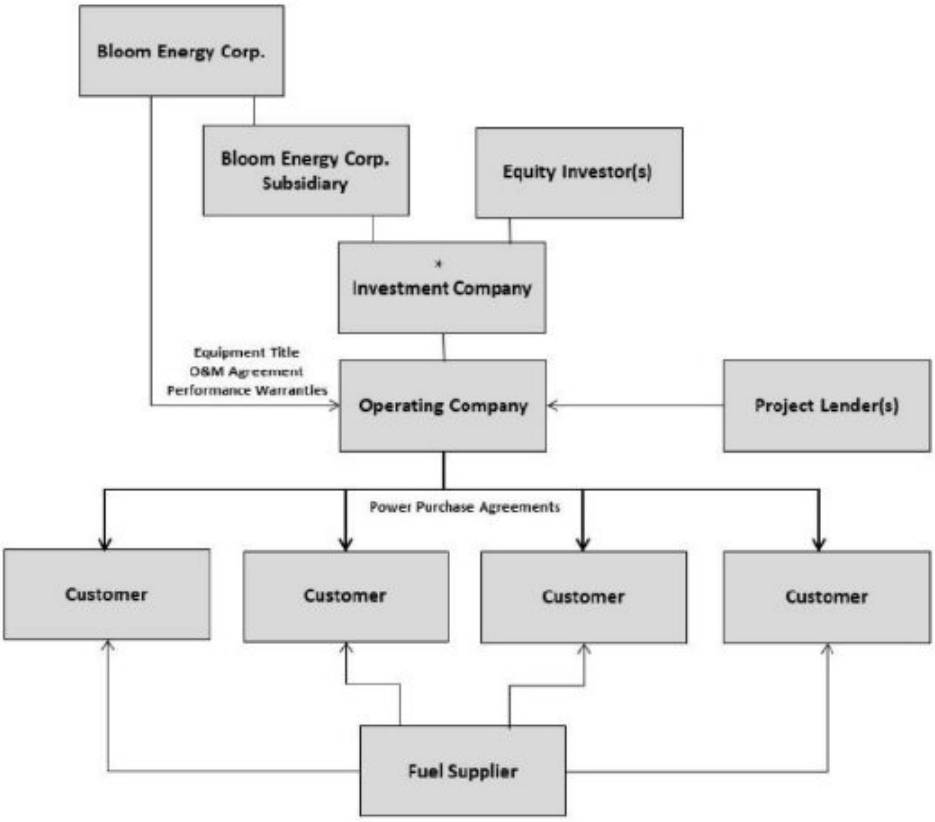
Under our Managed Services Financing option, we enter into a Managed Services Agreement with a customer for a certain term. In exchange for the electricity generated by the Energy Server, the customer makes a monthly payment. The monthly payment always includes a fixed monthly capacity-based payment, and in some cases also includes a performance-based payment based on the performance of 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 periodic rent liability under a sale-leaseback transaction with an investor. We assign all our rights to such fixed payments made by the customer to the financier, as lessor. The performance payment is transferred to us as compensation for operations and maintenance services and recognized as electricity revenue within the condensed consolidated statements of operations.

Under a Managed Services Financing, once we enter into a Managed Services Agreement with the customer, and a financier is identified, we sell the Energy Server to the financier, as lessor, and the financier, as lessor, leases it back to us, as lessee, pursuant to a sale-leaseback transaction. For failed sale-and-leaseback transactions, the proceeds from the sale are recognized as a financing obligation within the condensed consolidated balance sheets. For successful sale-and-leaseback transactions, we recognize the project sale as product revenue, and recognize the right-of-use asset and financing obligations as operating leases. 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 purchase price for an Energy Server contemplated by the Managed Services Agreement on or shortly after acceptance.

The duration of the master lease in a Managed Services Financing is currently between five and ten years.

Our Managed Services Agreements typically provide only for performance warranties of both the efficiency and output of the Energy Server, all of which are written for the benefit of the customer. These types of 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 September 30, 2021, we had incurred no liabilities due to failure to repair or replace our Energy Servers pursuant to these performance warranties and the fleet of our Energy Servers deployed pursuant to the Managed Services Financings was performing at a lifetime average output of approximately 86%.

Portfolio Financings



*A type of Portfolio Financing pursuant to which we sell an entire operating company to an investor or tax-equity partnership in which we have no equity in the purchaser is referred to as a Third-Party PPA.

We have financed PPAs through two types of Portfolio Financings. In one type of transaction, we finance a portfolio of PPAs pursuant to a tax equity partnership in which we hold a managing member interest (such partnership, a "PPA Entity"). We sell the portfolio of Energy Servers to a single member limited liability project company (an "Operating Company"). The Operating Company sells the electricity generated by the Energy Servers contemplated by the PPAs to the ultimate end customers. As these transactions include an equity investment by us in the PPA Entity for which we are the primary beneficiary and therefore consolidate the entities, we recognize revenue as the electricity is produced. Our future plans to raise capital no longer contemplate these types of transactions.

We also finance PPAs through a second type of Portfolio Financing pursuant to which we sell an entire Operating Company to an investor or tax equity partnership in which we do not have an equity interest (a "Third-Party PPA"). We recognize revenue on the sale of each Energy Server purchased by the Operating Company on acceptance. For further discussion, see Note 11 - *Portfolio Financings* in Part I, Item 1, *Financial Statements*.

When we finance a portfolio of Energy Servers and PPAs through a Portfolio Financing, we enter into a sale, engineering and procurement and construction agreement ("EPC Agreement") and an O&M Agreement, in each case with the Operating Company that both is counter-party to the portfolio of PPAs and that will eventually own the Energy Servers. As counter-party to the portfolio of PPAs, the Operating Company, as owner of the Energy Servers, receives all customer payments generated under the PPAs, any ITC, all accelerated tax depreciation benefits, and any other available state or local benefits arising out of the ownership or operation of the Energy Servers, to the extent not already allocated to the end customer under the PPA.

The sales of our Energy Servers to the Operating Company in connection with a Portfolio Financing have many of the same terms and conditions as a direct sale. Payment of the purchase price is generally broken down into multiple installments,

which may include payments prior to shipment, upon shipment 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 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 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 services under the O&M Agreement.

We typically provide performance warranties and guaranties related to output to the Operating Company under the O&M Agreement. We also backstop all of the Operating Company's obligations under the portfolio of PPAs, including both the repair or replacement obligations pursuant to the performance warranties and any payment liabilities under the guaranties.

As of September 30, 2021, we had incurred no liabilities to investors in Portfolio Financings due to failure to repair or replace Energy Servers pursuant to these performance warranties. Our obligation to make payments for underperformance against the performance guaranties was capped at an aggregate total of approximately $114.6 million (including payments both for low output and for low efficiency) and our aggregate remaining potential liability under this cap was approximately $104.6 million.

Obligations to Operating Companies

In addition to our obligations to the end customers, our Portfolio Financings involve many obligations to the Operating Company that purchases our Energy Servers. These obligations are set forth in the applicable EPC Agreement and O&M Agreement, 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 Energy Servers, and maintaining such permits and approvals throughout the term of the EPC Agreements and O&M Agreements;
- operating and maintaining the Energy Servers in compliance with all applicable laws, permits and regulations;
- satisfying the performance warranties and guaranties set forth in the applicable O&M Agreements; and
- complying with any other specific requirements contained in the PPAs with individual end-customers.

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

In some Portfolio Financings, 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 our Energy Servers and the ongoing fees for our operations and maintenance are paid on a fixed dollar-per-kilowatt basis.

Administration of Operating Companies

In each of our Portfolio Financings in which we hold an interest in the tax equity partnership, we perform certain administrative services as managing member 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 basis.

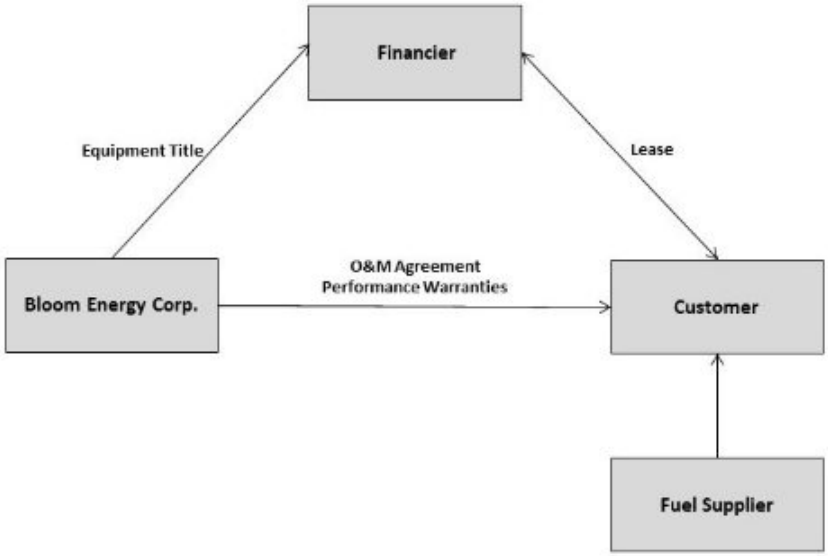
The Operating Company in each of our PPA Entities (with the exception of one PPA Entity) has incurred debt in order to finance the acquisition of Energy Servers. The lenders for these projects are a combination of banks and/or institutional investors. In each case, the debt is secured by all of the assets 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 and the PPAs. As further collateral, the lenders receive a security interest in 100% of the membership interest of the Operating Company. The lenders have no recourse to us or to any of the other equity investors (the "Equity Investors") in the Operating Company for liabilities arising out of the portfolio.

We have determined that we are the primary beneficiary in the PPA Entities, subject to reassessments performed as a result of upgrade transactions. Accordingly, we consolidate 100% of the assets, liabilities and operating results of these entities, including the Energy Servers and lease income, in our condensed consolidated financial statements. We recognize the Equity Investors' share of the net assets of the investment entities as noncontrolling interests in subsidiaries in our condensed consolidated balance sheet. We recognize the amounts that are contractually payable to these investors in each period as distributions to noncontrolling interests in our condensed consolidated statements of convertible redeemable preferred stock, redeemable noncontrolling interest, stockholders' deficit and noncontrolling interest. Our condensed consolidated statements of cash flows reflect cash received from these investors as proceeds from investments by noncontrolling interests in subsidiaries. Our condensed 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 condensed consolidated balance sheets. However, the Operating Companies are separate and distinct legal entities, and Bloom Energy Corporation may not receive cash or other distributions from the Operating Companies 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 Equity Investors, or otherwise.

For further information about our Portfolio Financings, see Note 11 - *Portfolio Financings* in Part I, Item 1, *Financial Statements.*

Traditional Lease



Under the Traditional Lease option, the customer enters into a lease directly with a financier (the "Lease"), which pays us for our Energy Servers purchased pursuant to a direct sales agreement. 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 service agreement for operations and maintenance work 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 Lease. The term of a Lease in a Traditional Lease option ranges from five to ten years.

The direct sales agreement provides for sale and the installation of our Energy Servers and includes a standard one-year warranty, to the financier as purchaser. The services agreement with the customer provides certain performance warranties and guaranties, with the services term 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.

The direct sales agreement in a Traditional Lease arrangement typically provides for performance warranties and guaranties of both the efficiency and output of our Energy Servers, all of which are written in favor of the customer. As of September 30, 2021, we had incurred no liabilities due to failure to repair or replace our Energy Servers pursuant to these performance warranties. Our obligation to make payments for underperformance against the performance guaranties for projects financed pursuant to a Traditional Lease was capped contractually under the sales agreement 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 $2.4 million.

Remarketing at Termination of Lease

In the event the customer does not renew or purchase our Energy Servers upon the expiration of its 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 the parties at the time of such sale.

Delivery and Installation

The timing of delivery and installations of our products have a significant impact on the timing of the recognition of product and installation 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.

International Channel Partners

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

Japan. In Japan, sales were previously 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 sold Energy Servers to Bloom Energy Japan and we recognized revenue once the Energy Servers left the port in the United States. Bloom Energy Japan then entered into the contract with the end customer and performed all installation work as well as some of the operations and maintenance work. As of July 1, 2021, we acquired Softbank Corp.'s interest in Bloom Energy Japan for a cash payment and are now the sole owner of Bloom Energy Japan.

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

As part of our expanded strategic partnership with SK ecoplant, the parties executed the PDA Restatement in October 2021, which incorporates previously amended terms and establishes: (i) SK ecoplant's purchase commitments for the next three years (on a take or pay basis) for Bloom Energy Servers; (ii) rollover procedures; (iii) premium pricing for product and services; (iv) termination procedures for material breaches; and (v) procedures if there are material changes to the Republic of Korea Hydrogen Portfolio Standard. For additional information, see Note 18, *Subsequent Events*.

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

SK ecoplant Joint Venture Agreement. In September 2019, we entered into a joint venture agreement with SK ecoplant to establish a light-assembly facility in the Republic of Korea for sales of certain portions of our Energy Server for the stationary utility and commercial and industrial market in the Republic of Korea. The joint venture is majority controlled and managed by us, with the facility, which became operational in July 2020. Other than a nominal initial capital contribution by Bloom Energy, the joint venture will be funded by SK ecoplant. SK ecoplant, who currently acts as a distributor for our Energy Servers for the stationary utility and commercial and industrial market in the Republic of Korea, will be the primary customer for the products assembled by the joint venture. In October 2021, as part of our expanded strategic partnership with SK ecoplant, the parties agreed to increase the scope of the assembly work done in the joint venture facility. For additional information, see Note 18, *Subsequent Events*.

Community Distributed Generation Programs

In July 2015, the state of New York introduced its Community Distributed Generation ("CDG") 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. Since then other states have instituted similar programs and we expect that other states may do so as well in the future. In June 2020, the New York Public Service Commission issued an Order that limited the CDG compensation structure for "high capacity factor resources," including fuel cells, in a way that will make the economics for these types of projects more challenging in the future. However, projects already under contract were grandfathered into the program under the previous compensation structure.

We have entered into sales, installation, operations and maintenance agreements with three developers for the deployment of our Energy Servers pursuant to the New York CDG program for a total of 441 systems. As of September 30, 2021, we have recognized revenue associated with 271 systems. We continue to believe that these types of subscriber-based programs could be a source of future revenue and will continue to look to generate sales through these programs in the future.

Comparison of the Three and Nine Months Ended September 30, 2021 and 2020

Key Operating Metrics

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

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

Acceptances

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

The product acceptances in the three and nine months ended September 30, 2021 and 2020 were as follows:

	Three Months Ended September 30,		Change		Nine Months Ended September 30,		Change	
	2021	2020	Amount	%	2021	2020	Amount	%
Product accepted during the period (in 100 kilowatt systems)	353	314	39	12.4 %	1,144	876	268	30.6 %

Product accepted for the three months ended September 30, 2021 compared to the same period in 2020 increased by 39 systems, or 12.4%, as demand increased for our Energy Servers in the Republic of Korea and the United States.

Product accepted for the nine months ended September 30, 2021 compared to the same period in 2020 increased by 268 systems, or 30.6%, as demand increased for our Energy Servers in the Republic of Korea and the utility sector where we accepted 146 systems as part of the CDG program.

Our customers have several purchase options for our Energy Servers. The portion of acceptances attributable to each purchase option in the three and nine months ended September 30, 2021 and 2020 was as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
Direct Purchase (including Third-Party PPAs and International Channels)	99 %	92 %	99 %	97 %
Managed Services	1 %	8 %	1 %	3 %
	100 %	100 %	100 %	100 %

The portion of total revenue attributable to each purchase option in the three and nine months ended September 30, 2021 and 2020 was as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
Direct Purchase (including Third-Party PPAs and International Channels)	86 %	88 %	88 %	87 %
Traditional Lease	1 %	1 %	1 %	1 %
Managed Services	8 %	5 %	6 %	6 %
Portfolio Financings	5 %	6 %	5 %	6 %
	100 %	100 %	100 %	100 %

Costs Related to Our Products

Total product related costs for the three and nine months ended September 30, 2021 and 2020 was as follows:

	Three Months Ended September 30,		Change		Nine Months Ended September 30,		Change	
	2021	2020	Amount	%	2021	2020	Amount	%
Product costs of product accepted in the period	$2,398 /kW	$2,292 /kW	$106 /kW	4.6 %	$2,357/kW	$2,398 /kW	$(41)/kW	(1.7)%
Period costs of manufacturing related expenses not included in product costs (in thousands)	$ 6,206	$ 4,000	$ 2,206	55.2 %	$ 14,044	$ 15,267	$ (1,223)	(8.0)%
Installation costs on product accepted in the period	$705 /kW	$926 /kW	$(221) /kW	(23.9)%	$591/kW	$980/kW	$(389)/kW	(39.7)%

Product costs of product accepted for the three months ended September 30, 2021 compared to the same period in 2020 increased by approximately $106 per kilowatt driven by increased freight charges and other global supply chain issues as a result of the COVID-19 pandemic.

Product costs of product accepted for the nine months ended September 30, 2021 compared to the same period in 2020 decreased by approximately $41 per kilowatt 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 for the three months ended September 30, 2021 compared to the same period in 2020 increased by approximately $2.2 million primarily driven by global supply chain issues as a result of the COVID-19 pandemic and investments in future capacity as we prepare to scale our manufacturing for future growth.

Period costs of manufacturing related expenses for the nine months ended September 30, 2021 compared to the same period in 2020 decreased by approximately $1.2 million primarily driven by 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 and higher utilization of inventory materials.

Installation costs on product accepted for the three months ended September 30, 2021 compared to the same period in 2020 decreased by approximately $221 per kilowatt. Each customer site is different and installation costs can vary due to a number of factors, including site complexity, size, location of gas, personalized applications, the customer's option to complete the installation of our Energy Servers themselves, and the timing between the delivery and final installation of our product acceptances under certain circumstances. As such, installation on a per kilowatt basis can vary significantly from period-to- period. For the three months ended September 30, 2021, the decrease in installation cost was driven by site mix as many of the acceptances did not have installation, either because the installation was done by our distribution channel partner in the Republic of Korea or the final installation associated with a specific customer was scheduled to be completed later in the year although the Energy Servers were delivered and accepted during the quarter.

Installation costs on product accepted for the nine months ended September 30, 2021 compared to the same period in 2020 decreased by approximately $389 per kilowatt. For the nine months ended September 30, 2021, the decrease in install cost was driven by site mix as many of the acceptances did not have installation, either because the installation was done by our distribution channel partner in the Republic of Korea or the final installation associated with a specific customer was scheduled to be completed later in the year although the Energy Servers were delivered and accepted during the period.

Results of Operations

A discussion regarding the comparison of our financial condition and results of operations for the three and nine months ended September 30, 2021 and 2020 is presented below.

Revenue

	Three Months Ended September 30,		Change		Nine Months Ended September 30,		Change	
	2021	2020	Amount	%	2021	2020	Amount	%
	(dollars in thousands)				(dollars in thousands)			
Product	$ 128,550	$ 131,076	$ (2,526)	(1.9)%	$ 413,347	$ 346,832	$ 66,515	19.2 %
Installation	22,172	26,603	(4,431)	(16.7)%	53,710	73,060	(19,350)	(26.5)%
Service	39,251	26,141	13,110	50.2 %	111,375	77,496	33,879	43.7 %
Electricity	17,255	16,485	770	4.7 %	51,273	47,472	3,801	8.0 %
Total revenue	$ 207,228	$ 200,305	$ 6,923	3.5 %	$ 629,705	$ 544,860	$ 84,845	15.6 %

Total Revenue

Total revenue increased by $6.9 million, or 3.5%, for the three months ended September 30, 2021 as compared to the prior year period. This increase was primarily driven by a $13.1 million increase in service revenue partially offset by a $4.4 million decrease in installation revenue and a $2.5 million decrease in product revenue.

Total revenue increased by $84.8 million, or 15.6%, for the nine months ended September 30, 2021 as compared to the prior year period. This increase was primarily driven by a $66.5 million increase in product revenue and a $33.9 million increase in service revenue partially offset by a $19.4 million decrease in installation revenue.

Product Revenue

Product revenue decreased by $2.5 million, or (1.9)%, for the three months ended September 30, 2021 as compared to the prior year period. The product revenue decrease was driven primarily by $14.2 million of previously deferred revenue related to a specific contract that changed scope and was recognized in the three months ended September 30, 2020 and unfavorable site mix partially offset by 12.4% increase in product acceptances as a result of expansion in existing markets and in our CDG program.

Product revenue increased by $66.5 million, or 19.2%, for the nine months ended September 30, 2021 as compared to the prior year period. The product revenue increase was driven primarily by a 30.6% increase in product acceptances as a result of expansion in existing markets and in our CDG program partially offset by a $14.2 million of previously deferred revenue related to a specific contract that changed scope and was recognized in the nine months ended September 30, 2020 and unfavorable site mix.

Installation Revenue

Installation revenue decreased by $4.4 million, or (16.7)%, for the three months ended September 30, 2021 as compared to the prior year period. This decrease in installation revenue was driven by site mix as many of the acceptances did not have installation, either because the installation was done by our distribution channel partner in the Republic of Korea or the final installation associated with a specific customer was scheduled to be completed later in the year although the Energy Servers were delivered and accepted during the quarter.

Installation revenue decreased by $19.4 million, or (26.5)%, for the nine months ended September 30, 2021 as compared to the prior year period. This decrease in installation revenue was driven by site mix as many of the acceptances did not have installation, either because the installation was done by our distribution channel partner in the Republic of Korea or the final installation associated with a specific customer was scheduled to be completed later in the year although the Energy Servers were delivered and accepted during the period.

Service Revenue

Service revenue increased by $13.1 million, or 50.2%, for the three months ended September 30, 2021 as compared to the prior year period. This increase was primarily due to the continued growth of our installation base driven by both an increase in new acceptances and renewal of existing service contracts.

Service revenue increased by $33.9 million, or 43.7%, for the nine months ended September 30, 2021 as compared to the prior year period. This increase was primarily due to the continued growth of our installation base driven by both an increase in new acceptances and renewal of existing service contracts.

Electricity Revenue

Electricity revenue increased by $0.8 million, or 4.7%, for the three months ended September 30, 2021 as compared to the prior year period due to the increase in the managed services asset base.

Electricity revenue increased by $3.8 million, or 8.0%, for the nine months ended September 30, 2021 as compared to the prior year period due to the increase in the managed services asset base.

Cost of Revenue

	Three Months Ended September 30,		Change		Nine Months Ended September 30,		Change	
	2021	2020	Amount	%	2021	2020	Amount	%
	(dollars in thousands)				(dollars in thousands)			
Product	$ 93,704	$ 72,037	$ 21,667	30.1 %	$ 289,889	$ 227,653	$ 62,236	27.3 %
Installation	25,616	27,872	(2,256)	(8.1)%	66,756	86,938	(20,182)	(23.2)%
Service	39,586	33,214	6,372	19.2 %	111,269	92,836	18,433	19.9 %
Electricity	11,439	11,195	244	2.2 %	32,913	35,266	(2,353)	(6.7)%
Total cost of revenue	$ 170,345	$ 144,318	$ 26,027	18.0 %	$ 500,827	$ 442,693	$ 58,134	13.1 %

Total Cost of Revenue

Total cost of revenue increased by $26.0 million, or 18.0%, for the three months ended September 30, 2021 as compared to the prior year period primarily driven by a $21.7 million increase in cost of product revenue, $6.4 million increase in cost of service revenue, increased freight charges and other supply chain-related pricing pressures partially offset by a $2.3 million decrease in cost of installation revenue.

Total cost of revenue increased by $58.1 million, or 13.1%, for the nine months ended September 30, 2021 as compared to the prior year period primarily driven by a $62.2 million increase in cost of product revenue, $18.4 million increase in cost of service revenue, increased freight charges and other supply chain-related pricing pressures partially offset by a $20.2 million decrease in cost of installation revenue.

Cost of Product Revenue

Cost of product revenue increased by $21.7 million, or 30.1%, for the three months ended September 30, 2021 as compared to the prior year period. The cost of product revenue increase was driven primarily by a 12.4% increase in product acceptances, increased freight charges and other supply chain-related pricing pressures including increased material, labor and overhead costs on a per unit basis by 6.4%.

Cost of product revenue increased by $62.2 million, or 27.3%, for the nine months ended September 30, 2021 as compared to the prior year period. The cost of product revenue increase was driven primarily by a 30.6% increase in product acceptances, increased freight charges and other supply chain-related pricing pressures partially offset by ongoing cost reduction efforts, which reduced material, labor and overhead costs on a per unit basis by 3.9%.

Cost of Installation Revenue

Cost of installation revenue decreased by $2.3 million, or (8.1)%, for the three months ended September 30, 2021 as compared to the prior year period. This decrease, similar to the $4.4 million decrease in installation revenue, was driven by site mix as many of the acceptances did not have installation in the three months ended September 30, 2021.

Cost of installation revenue decreased by $20.2 million, or (23.2)%, for the nine months ended September 30, 2021 as compared to the prior year period. This decrease, similar to the $19.4 million decrease in installation revenue, was driven by site mix as many of the acceptances did not have installation in the nine months ended September 30, 2021.

Cost of Service Revenue

Cost of service revenue increased by $6.4 million, or 19.2%, for the three months ended September 30, 2021 as compared to the prior year period. This increase was primarily due to the 12.4% increase in acceptances plus the maintenance contract renewals associated with the increase in our fleet of Energy Servers, partially offset by the significant improvements in power module life, cost reductions and our actions to proactively manage fleet optimizations.

Cost of service revenue increased by $18.4 million, or 19.9%, for the nine months ended September 30, 2021 as compared to the prior year period. This increase was primarily due to the 30.6% increase in acceptances plus the maintenance contract renewals associated with the increase in our fleet of Energy Servers, partially offset by the significant improvements in power module life, cost reductions and our actions to proactively manage fleet optimizations.

Cost of Electricity Revenue

Cost of electricity revenue increased by $0.2 million, or 2.2%, for the three months ended September 30, 2021 as compared to the prior year period, primarily due to the increase in the managed services asset base and a $0.6 million change in the fair value of the natural gas fixed price forward contract and lower property tax expenses.

Cost of electricity revenue decreased by $2.4 million, or (6.7)%, for the nine months ended September 30, 2021 as compared to the prior year period, primarily due to the $2.5 million change in the fair value of the natural gas fixed price forward contract and lower property tax expenses partially offset by the increase in the managed services asset base.

Gross Profit and Gross Margin

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2021	2020	Change	2021	2020	Change
	(dollars in thousands)					
Gross profit:						
Product	$ 34,846	$ 59,039	$ (24,193)	$ 123,458	$ 119,179	$ 4,279
Installation	(3,444)	(1,269)	(2,175)	(13,046)	(13,878)	832
Service	(335)	(7,073)	6,738	106	(15,340)	15,446
Electricity	5,816	5,290	526	18,360	12,206	6,154
Total gross profit	$ 36,883	$ 55,987	$ (19,104)	$ 128,878	$ 102,167	$ 26,711
Gross margin:						
Product	27 %	45 %		30 %	34 %	
Installation	(16) %	(5) %		(24) %	(19) %	
Service	(1) %	(27) %		0 %	(20) %	
Electricity	34 %	32 %		36 %	26 %	
Total gross margin	18 %	28 %		20 %	19 %	

Total Gross Profit

Gross profit decreased by $19.1 million in the three months ended September 30, 2021 as compared to the prior year period primarily driven by $14.2 million of previously deferred revenue related to a specific contract that changed scope and was recognized in the three months ended September 30, 2020 without a corresponding increase in costs, increased freight charges and other supply chain-related pricing pressures.

Gross profit increased by $26.7 million in the nine months ended September 30, 2021 as compared to the prior year period primarily driven by both the improvement in our product revenue and product gross margin resulting from continued product cost reduction initiatives offset by $14.2 million of previously deferred revenue related to a specific contract that changed scope and was recognized in the nine months ended September 30, 2020 without a corresponding increase in costs, increased freight charges and other supply chain-related pricing pressures.

Product Gross Profit

Product gross profit decreased by $24.2 million in the three months ended September 30, 2021 as compared to the prior year period. The decrease was primarily driven by $14.2 million of previously deferred revenue related to a specific contract that changed scope and was recognized in the three months ended September 30, 2020 without a corresponding increase in costs, increased freight charges and other supply chain-related pricing pressures offset by a 12.4% increase in product acceptances.

Product gross profit increased by $4.3 million in the nine months ended September 30, 2021 as compared to the prior year period. The improvement is driven by a 30.6% increase in product acceptances partially offset by $14.2 million of previously deferred revenue related to a specific contract that changed scope and was recognized in the nine months ended September 30, 2020, increased freight charges and other supply chain-related pricing pressures.

Installation Gross Loss

Installation gross loss decreased by $2.2 million in the three months ended September 30, 2021 as compared to the prior year period driven by the site mix, as many of the acceptances did not have installation in the current time period, and other site related factors such as site complexity, size, local ordinance requirements and location of the utility interconnect.

Installation gross loss decreased by $0.8 million in the nine months ended September 30, 2021 as compared to the prior year period driven by the site mix, as many of the acceptances did not have installation in the current time period, and other site related factors such as site complexity, size, local ordinance requirements and location of the utility interconnect.

Service Gross Profit (Loss)

Service gross profit (loss) improved by $6.7 million in the three months ended September 30, 2021 as compared to the prior year period. This was primarily due to the significant improvements in power module life, cost reductions and our actions to proactively manage fleet optimizations.

Service gross profit (loss) improved by $15.4 million in the nine months ended September 30, 2021 as compared to the prior year period. This was primarily due to the significant improvements in power module life, cost reductions and our actions to proactively manage fleet optimizations.

Electricity Gross Profit

Electricity gross profit increased by $0.5 million in the three months ended September 30, 2021 as compared to the prior year period mainly due to the increase in the managed service asset base offset by the $0.6 million change in the fair value of the natural gas fixed price forward contract.

Electricity gross profit increased by $6.2 million in the nine months ended September 30, 2021 as compared to the prior year period mainly due to the $2.5 million change in the fair value of the natural gas fixed price forward contract. This was primarily due to the significant improvements in power module life, cost reductions and our actions to proactively manage fleet optimizations.

Operating Expenses

	Three Months Ended September 30,		Change		Nine Months Ended September 30,		Change	
	2021	2020	Amount	%	2021	2020	Amount	%
	(dollars in thousands)				(dollars in thousands)			
Research and development	$ 27,634	$ 19,231	$ 8,403	43.7 %	$ 76,602	$ 61,887	$ 14,715	23.8 %
Sales and marketing	20,124	11,700	8,424	72.0 %	62,803	37,076	25,727	69.4 %
General and administrative	33,014	25,428	7,586	29.8 %	90,470	79,471	10,999	13.8 %
Total operating expenses	$ 80,772	$ 56,359	$ 24,413	43.3 %	$ 229,875	$ 178,434	$ 51,441	28.8 %

Total Operating Expenses

Total operating expenses increased by $24.4 million in the three months ended September 30, 2021 as compared to the prior year period. This increase was primarily attributable to our investment in demand origination capability both in the United States and internationally, investment in brand and product management, and our continued investment in our R&D capabilities to support our technology roadmap.

Total operating expenses increased by $51.4 million in the nine months ended September 30, 2021 as compared to the prior year period. This increase was primarily attributable to our investment in business development and front-end sales both in the United States and internationally, investment in brand and product management, and our continued investment in our R&D capabilities to support our technology roadmap.

Research and Development

Research and development expenses increased by $8.4 million in the three months ended September 30, 2021 as compared to the prior year period as we began shifting our investments from sustaining engineering projects for the current Energy Server platform to continued development of the next generation platform, and to support our technology roadmap, including our hydrogen, electrolyzer, carbon capture, marine and biogas solutions.

Research and development expenses increased by $14.7 million in the nine months ended September 30, 2021 as compared to the prior year period as we began shifting our investments from sustaining engineering projects for the current Energy Server platform, to continued development of the next generation platform and to support our technology roadmap, including our hydrogen, electrolyzer, carbon capture, marine and biogas solutions.

Sales and Marketing

Sales and marketing expenses increased by $8.4 million in the three months ended September 30, 2021 as compared to the prior year period. This increase was primarily driven by the efforts to expand our U.S. and international sales force, as well as increased investment in brand and product management.

Sales and marketing expenses increased by $25.7 million in the nine months ended September 30, 2021 as compared to the prior year period. This increase was primarily driven by the efforts to expand our U.S. and international sales force, as well as increased investment in brand and product management.

General and Administrative

General and administrative expenses increased by $7.6 million in the three months ended September 30, 2021 as compared to the prior year period. This increase was primarily driven by increases in payroll expense, legal expense and facilities expense to ensure our infrastructure and control environment is ready to scale for growth.

General and administrative expenses increased by $11.0 million in the nine months ended September 30, 2021 as compared to the prior year period. This increase was primarily driven by increases in outside services and consulting expense, payroll expense and facilities expense to ensure our infrastructure and control environment is ready to scale for growth, partially offset by lower legal expense.

Stock-Based Compensation

	Three Months Ended September 30,		Change		Nine Months Ended September 30,		Change	
	2021	2020	Amount	%	2021	2020	Amount	%
	(dollars in thousands)				(dollars in thousands)			
Cost of revenue	$ 2,945	$ 3,568	$ (623)	(17.5)%	$ 9,749	$ 13,811	$ (4,062)	(29.4)%
Research and development	5,678	4,103	1,575	38.4 %	15,876	14,913	963	6.5 %
Sales and marketing	4,391	2,234	2,157	96.6 %	12,486	8,358	4,128	49.4 %
General and administrative	7,952	5,830	2,122	36.4 %	19,198	20,303	(1,105)	(5.4)%
Total stock-based compensation	$ 20,966	$ 15,735	$ 5,231	33.2 %	$ 57,309	$ 57,385	$ (76)	(0.1)%

Total stock-based compensation for the three months ended September 30, 2021 compared to the prior year period increased by $5.2 million primarily driven by the efforts to expand our U.S. and international sales force, as well as investment to build our brand and product management teams.

Total stock-based compensation for the nine months ended September 30, 2021 compared to the prior year period decreased by $0.1 million primarily driven by the vesting of the one-time employee grants at the time of the initial public offering, which were completed in July 2020 partially offset by the efforts to expand our U.S. and international sales force, as well as investment to build our brand and product management teams.

Other Income and Expense

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2021	2020	Change	2021	2020	Change
	(in thousands)					
Interest income	$ 72	$ 254	$ (182)	$ 222	$ 1,405	$ (1,183)
Interest expense	(14,514)	(19,902)	5,388	(43,798)	(55,030)	11,232
Interest expense - related parties	—	(353)	353	—	(2,513)	2,513
Other income (expense), net	2,011	(221)	2,232	1,948	(4,142)	6,090
Loss on extinguishment of debt	—	1,220	(1,220)	—	(12,878)	12,878
Gain (loss) on revaluation of embedded derivatives	(184)	1,505	(1,689)	(1,644)	2,201	(3,845)
Total	$ (12,615)	$ (17,497)	$ 4,882	$ (43,272)	$ (70,957)	$ 27,685

Interest Income

Interest income is derived from investment earnings on our cash balances primarily from money market funds.

Interest income for the three months ended September 30, 2021 as compared to the prior year period decreased by $0.2 million primarily due to a decrease in the rates of interest earned on our cash balances.

Interest income for the nine months ended September 30, 2021 as compared to the prior year period decreased by $1.2 million primarily due to the decrease in the rates of interest earned on our cash balances.

Interest Expense

Interest expense is from our debt held by third parties.

Interest expense for the three months ended September 30, 2021 as compared to the prior year period decreased by $5.4 million as we paid off our 10% senior secured notes and converted our 10% promissory notes into equity, resulting in lower, less expensive debt.

Interest expense for the nine months ended September 30, 2021 as compared to the prior year period decreased by $11.2 million. This decrease was primarily due to lower interest expense as a result of refinancing our notes at a lower interest rate, and the elimination of the amortization of the debt discount associated with notes that have been converted to equity.

Interest Expense - Related Parties

Interest expense - related parties is from our debt held by related parties.

Interest expense - related parties for the three months ended September 30, 2021 as compared to the prior year period decreased by $0.4 million due to the conversion of all of our notes held by related parties during 2020.

Interest expense - related parties for the nine months ended September 30, 2021 as compared to the prior year period decreased by $2.5 million due to the conversion of all of our notes held by related parties during 2020.

Other Expense, net

Other expense, net, is primarily derived from investments in joint ventures, plus the impact of foreign currency translation.

Other expense, net, for the three months ended September 30, 2021 as compared to the prior year period decreased by $2.2 million primarily due to a $2.0 million gain recorded on remeasurement of our equity investment in the BEJ joint venture in connection with the acquisition thereof.

Other expense, net for the nine months ended September 30, 2021 as compared to the prior year period decreased by $6.1 million due to a $2.0 million gain recorded on fair value remeasurement of our equity investment in the Bloom Energy Japan joint venture in connection with the acquisition thereof plus the prior year's $3.9 million write-off of our investment in the Bloom Energy Japan joint venture.

Loss on Extinguishment of Debt

Loss on extinguishment of debt for the nine months ended September 30, 2021 as compared to the prior year period improved by $12.9 million resulting from our debt restructuring and debt extinguishment in the prior year period. There were no comparable debt restructuring activities in the current year's period.

Gain (Loss) on Revaluation of Embedded Derivatives

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

Gain (loss) on revaluation of embedded derivatives for the three months ended September 30, 2021 as compared to the prior year period worsened by $1.7 million due to the change in fair value of our embedded EPP derivatives in our sales contracts.

Gain (loss) on revaluation of embedded derivatives for the nine months ended September 30, 2021 as compared to the prior year period worsened by $3.8 million due to the change in fair value of our embedded EPP derivatives in our sales contracts.

Provision for Income Taxes

	Three Months Ended September 30,		Change		Nine Months Ended September 30,		Change	
	2021	2020	Amount	%	2021	2020	Amount	%
	(dollars in thousands)							
Income tax provision	$ 158	$ 7	$ 151	2,157.1 %	$ 595	$ 272	$ 323	118.8 %

Income tax provision consists primarily of income taxes in foreign jurisdictions in which we conduct business. We maintain a full valuation allowance for domestic deferred tax assets, including net operating loss and certain tax credit carryforwards.

Income tax provision increased for the three and nine months ended September 30, 2021 as compared to the prior year period 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

	Three Months Ended September 30,		Change		Nine Months Ended September 30,		Change	
	2021	2020	Amount	%	2021	2020	Amount	%
	(dollars in thousands)							
Net loss attributable to noncontrolling interests and redeemable noncontrolling interests	$ (4,292)	$ (5,922)	$ 1,630	27.5 %	$ (13,742)	$ (17,081)	$ 3,339	19.5 %

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

Net loss attributable to noncontrolling interests and redeemable noncontrolling interests for the three months ended September 30, 2021 as compared to the prior year period improved by $1.6 million due to decreased losses in our PPA Entities, which are allocated to our noncontrolling interests.

Net loss attributable to noncontrolling interests and redeemable noncontrolling interests for the nine months ended September 30, 2021 as compared to the prior year period improved by $3.3 million due to decreased losses in our PPA Entities, which are allocated to our noncontrolling interests.

Liquidity and Capital Resources

As of September 30, 2021, we had cash and cash equivalents of $121.9 million. Our cash and cash equivalents consist of highly liquid investments with maturities of three months or less, including money market funds. We maintain these balances with high credit quality counterparties, continually monitor the amount of credit exposure to any one issuer and diversify our investments in order to minimize our credit risk.

As of September 30, 2021, we had $291.3 million of total outstanding recourse debt, $212.9 million of non-recourse debt and $26.8 million of other long-term liabilities. For a complete description of our outstanding debt, please see Note 7 - *Outstanding Loans and Security Agreements* in Part I, Item 1, *Financial Statements*.

The combination of our existing cash and cash equivalents is expected to be sufficient to meet our anticipated cash flow needs for the next 12 months and thereafter for the foreseeable future. If these sources of cash are insufficient to satisfy our near-term or future cash needs, we may require additional capital from equity or debt financings to fund our operations, in particular, our manufacturing capacity, product development and market expansion requirements, to timely respond to competitive market pressures or strategic opportunities, or otherwise. In addition, we are continuously evaluating alternatives for efficiently funding our capital expenditures and ongoing operations, including entering into the transaction with SK ecoplant as described above for the sale of RCPS that is scheduled to close in the fourth quarter of 2021. We may, from time to time, engage in a variety of financing transactions for such purposes, including factoring our accounts receivable. We may not be able to secure timely additional financing on favorable terms, or at all. The terms of any additional financings may place limits on our financial and operating flexibility. If we raise additional funds through further issuances of equity or equity-linked securities, our existing stockholders could suffer dilution in their percentage ownership of us, and any new securities we issue could have rights, preferences and privileges senior to those of holders of our common stock.

Our future capital requirements will depend on many factors, including our rate of revenue growth, the timing and extent of spending on research and development efforts and other business initiatives, the rate of growth in the volume of system builds and the need for additional manufacturing space, the expansion of sales and marketing activities both in domestic and international markets, market acceptance of our products, our ability to secure financing for customer use of our Energy Servers, the timing of installations, and overall economic conditions including the impact of COVID-19 on our ongoing and future operations. In order to support and achieve our future growth plans, we may need or seek advantageously to obtain additional funding through an equity or debt financing. As of September 30, 2021, we were still working to secure a minimal amount of financing for the planned installations of our Energy Servers in 2021. Failure to obtain this financing or financing in future quarters will affect our results of operations, including revenue and cash flows.

As of September 30, 2021, the current portion of our total debt is $13.8 million, all of which is outstanding non-recourse debt. We expect a certain portion of the non-recourse debt would be refinanced by the applicable PPA Entity prior to maturity.

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

	Nine Months Ended September 30,	
	2021	2020
Net cash provided by (used in):		
Operating activities	$ (107,907)	$ (79,989)
Investing activities	(41,511)	(33,066)
Financing activities	53,130	240,037

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

	Nine Months Ended September 30,	
	2021	2020
PPA Entities [1]		
Net cash provided by PPA operating activities	$ 15,751	$ 15,676
Net cash used in PPA financing activities	(17,641)	(17,217)

[1] The PPA Entities' operating and financing cash flows are a subset of our condensed consolidated cash flows and represent the stand-alone cash flows prepared in accordance with U.S. GAAP. Operating activities consist principally of cash used to run the operations of the PPA Entities, the purchase of Energy Servers from us and principal reductions in loan balances. Financing activities consist primarily of changes in debt carried by our PPAs, and payments from and distributions to noncontrolling partnership interests. We believe this presentation of net cash provided by (used in) PPA activities is useful to provide the reader with the impact to condensed consolidated cash flows of the PPA Entities in which we have only a minority interest.

Operating Activities

Our operating activities have consisted of net loss adjusted for certain non-cash items plus changes in our operating assets and liabilities or working capital. The increase in cash used in operating activities during the nine months ended September 30, 2021 as compared to the prior year period was primarily the result of an increase in our net working capital of $68.9 million in the nine months ended September 30, 2021 due to the timing of revenue transactions and corresponding collections and the increase in inventory levels to support future demand.

Investing Activities

Our investing activities have consisted of capital expenditures that include increasing our production capacity. We expect to continue such activities as our business grows. Cash used in investing activities of $41.5 million during the nine months ended September 30, 2021 was primarily the result of expenditures on tenant improvements for a newly leased engineering building in Fremont, California. We expect to continue to make capital expenditures over the next few quarters to prepare our new manufacturing facility in Fremont, California for production, which includes the purchase of new equipment and other tenant improvements. We intend to fund these capital expenditures from cash on hand as well as cash flow to be generated from operations. We may also evaluate and arrange equipment lease financing to fund these capital expenditures.

Financing Activities

Historically, our financing activities have consisted of borrowings and repayments of debt including to related parties, proceeds and repayments of financing obligations, distributions paid to noncontrolling interests and redeemable noncontrolling interests, and the proceeds from the issuance of our common stock. Net cash provided by financing activities during the nine months ended September 30, 2021 was $53.1 million, a decrease of $186.9 million compared to the prior year period, primarily due to the issuance of debt in 2020, partially offset by higher proceeds in 2021 from stock option exercises and the sale of shares under our 2018 Employee Stock Purchase Plan.

Critical Accounting Policies and Estimates

The condensed 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 condensed 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 Operation*s above are based on our audited results of operations, which we have prepared in accordance with U.S. GAAP. In preparing these condensed consolidated financial statements, we make assumptions, judgments and estimates that can affect the reported amounts of assets, liabilities, revenues and expenses, and net income. On an ongoing basis, we base our estimates on historical experience, as appropriate, and on various other assumptions that we believe to be reasonable under the circumstances. Changes in the accounting estimates are 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 condensed 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;
- Leases: Incremental Borrowing Rate;
- Stock-Based Compensation;
- Income Taxes;
- Principles of Consolidation; and
- Allocation of Profits and Losses of Consolidated Entities to Noncontrolling Interests and Redeemable Noncontrolling Interests

Management's Discussion and Analysis of Financial Condition and Results of Operations contained in Part II, Item 7 of our Annual Report on Form 10-K for our fiscal year ended December 31, 2020 provides a more complete discussion of our critical accounting policies and estimates. During the nine months ended September 30, 2021, there were no significant changes to our critical accounting policies and estimates, except as noted below:

We adopted ASU 2020-06, *Debt—Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40)* ("ASU 2020-06"), which simplifies the accounting for convertible instruments. We applied the modified retrospective method as of January 1, 2021 in our condensed consolidated financial statements. Upon adoption of ASU 2020-06, we no longer record the conversion feature of convertible notes in equity. Instead, our convertible notes are accounted for as a single liability measured at their amortized cost and there is no longer a debt discount representing the difference between the carrying value, excluding issuance costs, and the principal of the convertible debt instrument. As a result, there is no longer interest expense relating to the amortization of the debt discount over the term of the convertible debt instrument. Similarly, the portion of issuance costs previously allocated to equity are now reclassified to debt and will be amortized as interest expense. As a result of this change in accounting policy, management no longer considers valuation of our 2.50% Green Convertible Senior Notes due August 2025 (the "Green Notes") to be a critical accounting policy and estimate.

ITEM 3 - QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

There were no significant changes to our quantitative and qualitative disclosures about market risk during nine months ended September 30, 2021. Please refer to Part II, Item 7A, *Quantitative and Qualitative Disclosures about Market Risk* included in our Annual Report on Form 10-K for our fiscal year ended December 31, 2020 for a more complete discussion of the market risks we consider.

ITEM 4 - CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our reports that we file or submit under the Exchange Act, is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer (our principal executive officer) and Chief Financial Officer (our principal financial officer) as appropriate, to allow for timely decisions regarding required disclosure.

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act), as of September 30, 2021. Based on such evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that as of September 30, 2021, our disclosure controls and procedures were effective.

Inherent Limitations on Effectiveness of Internal Controls

Our management, including the Chief Executive Officer and Chief Financial Officer, does not expect that our disclosure controls or our internal controls over financial reporting will prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. The design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Further, because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, have been detected. The design of any system of controls is based in part on certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Projections of any evaluation of the effectiveness of controls to future periods are subject to risks. Over time, controls may become inadequate because of changes in business conditions or deterioration in the degree of compliance with policies or procedures.

Changes in Internal Control over Financial Reporting

During the three months ended September 30, 2021, there were no changes in our internal controls over financial reporting, which were identified in connection with management's evaluation required by paragraph (d) of Rules 13a-15 and 15d-15 under the Exchange Act, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Part II

ITEM 1 - LEGAL PROCEEDINGS

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. For a discussion of legal proceedings, see Note 13 - *Commitments and Contingencies* in Part I, Item 1, *Financial Statements*. 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 1A - RISK FACTORS

Investing in our securities involves a high degree of risk. You should carefully consider the material risks and uncertainties described below that make an investment in us speculative or risky, as well as the other information in this Quarterly Report on Form 10-Q, including our condensed 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. The occurrence of one or more of these risks may cause the market price of our Class A common stock to decline, and you could lose all or part of your investment. It is not possible to predict or identify all such risks and uncertainties, as our operations could also be affected by factors, events or uncertainties that are not presently known to us or that we currently do not consider to present significant risks to our operations. Therefore, you should not consider the following risks to be a complete statement of all the potential risks or uncertainties that we face.

Risk Factor Summary

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

Risks Related to Our Business, Industry and Sales

- The distributed generation industry is an emerging market and distributed generation may not receive widespread market acceptance, which may make evaluating our business and future prospects difficult.
- 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 Energy Servers have significant upfront costs, and we will need to attract investors to help customers finance purchases.
- The economic benefits of our Energy Servers to our customers depend on the cost of electricity available from alternative sources, including local electric utility companies, and such cost structure is subject to change.
- If we are not able to continue to reduce our cost structure in the future, our ability to become profitable may be impaired.
- We rely on interconnection requirements and net metering arrangements that are subject to change.
- We currently face and will continue to face significant competition.
- We derive a substantial portion of our revenue and backlog from a limited number of customers, and the loss of or a significant reduction in orders from a large customer could have a material adverse effect on our operating results and other key metrics.
- Our ability to develop new products and enter into new markets could be negatively impacted if we are unable to identify partners to assist in such development or expansion, and our products may not be successful if we are unable to maintain alignment with evolving industry standards and requirements.

Risks Related to Our Products and Manufacturing

- Our business has been and continues to be adversely affected by the COVID-19 pandemic.
- Our future success depends in part on our ability to increase our production capacity, and we may not be able to do so in a cost-effective manner.
- If our Energy Servers contain manufacturing defects, our business and financial results could be harmed.
- 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.

- If our estimates of the useful life for our Energy Servers are inaccurate or we do not meet our performance warranties and performance guaranties, or if we fail to accrue adequate warranty and guaranty reserves, our business and financial results could be harmed.
- 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.
- Any significant disruption in the operations at our headquarters or manufacturing facilities could delay the production of our Energy Servers, which would harm our business and results of operations.
- The failure of our suppliers to continue to deliver necessary raw materials or other components of our Energy Servers in a timely manner and to specification could prevent us from delivering our products within required time frames and could cause installation delays, cancellations, penalty payments and damage to our reputation.
- 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 face supply chain competition, including competition from businesses in other industries, which could result in insufficient inventory and negatively affect our results of operations.
- We, and some of our suppliers, obtain capital equipment used in our manufacturing process from sole suppliers and, if this equipment is damaged or otherwise unavailable, our ability to deliver our Energy Servers on time will suffer.
- Possible new trade tariffs could have a material adverse effect on our business.

Risks Related to Government Incentive Programs

- Our business currently benefits from the availability of rebates, tax credits and other financial programs and incentives, and the reduction, modification, or elimination of such benefits could cause our revenue to decline and harm our financial results.
- We rely on tax equity financing arrangements to realize the benefits provided by ITCs and accelerated tax depreciation and in the event these programs are terminated, our financial results could be harmed.

Risks Related to Legal Matters and Regulations

- We are subject to various national, state and local laws and regulations that could impose substantial costs upon us and cause delays in the delivery and installation of our Energy Servers.
- 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.
- As a technology that runs, in part, on fossil fuel, we may be subject to a heightened risk of regulation, to a potential for the loss of certain incentives, and to changes in our customers' energy procurement policies.

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.

Risks Related to Our Financial Condition and Operating Results

- We have incurred significant losses in the past and we may not be profitable for the foreseeable future.
- 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.
- If we fail to manage our growth effectively, our business and operating results may suffer.
- If we fail to maintain effective internal control over financial reporting in the future, the accuracy and timing of our financial reporting may be adversely affected.
- Our ability to use our deferred tax assets to offset future taxable income may be subject to limitations that could subject our business to higher tax liability.

Risks Related to Our Liquidity

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

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

Risks Related to Our Operations

- We may have conflicts of interest with our PPA Entities.
- Expanding operations internationally could expose us to additional risks.
- If we are unable to attract and retain key employees and hire qualified management, technical, engineering, finance and sales personnel, our ability to compete and successfully grow our business could be harmed.
- A breach or failure of our networks or computer or data management systems could damage our operations and our reputation.

Risks Related to Ownership of Our Common Stock

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

Risks Related to Our Business, Industry and Sales

The distributed generation industry is an emerging market and distributed generation may not receive widespread market acceptance, which may make evaluating our business and future prospects difficult.

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 or our company is unproven, lack of 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 distributed generation is an emerging industry, broad acceptance of our products and services is subject to a high level of uncertainty and risk. If the market for our products and services does not develop as we anticipate, our business will be harmed. As a result, predicting our future revenue and appropriately budgeting for our expenses is difficult, and we have limited insight into trends that may emerge and affect our business. If actual results differ from our estimates or if we adjust our estimates in future periods, our operating results and financial position could be materially and adversely affected.

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

Our sales cycle is typically 12 to 18 months but can vary considerably. In order to 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 that 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, in general, 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 our 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 expand our offerings to customers who lack the financial capability to purchase our Energy Servers directly and/or who prefer to lease the product or contract for our services on a pay-as-you-go model, we subsequently developed various financing options that enabled customers use of the Energy Servers without a direct purchase through third-party ownership financing arrangements. For an overview of these different financing arrangements, please see Part I, Item 2, *Management's Discussion and Analysis of Financial Condition and Results of Operations – Purchase and Financing Options*. If in any given quarter we are not able to secure funding in a timely fashion, our results of operations and financial condition will be negatively impacted. We continue to innovate our customer contracts to attempt to attract new customers and these may have different terms and financing conditions from prior transactions.

We rely on and need to grow committed financing capacity with existing partners or attract additional partners to support our growth, finance new projects and new types of product offerings, including fuel cells for the hydrogen market. In addition, at any point in time, our ability to deploy 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 an 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 Traditional Lease option and the Managed Services Financing option, 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. To the extent we are unable to arrange future financings for any of our current projects, our business would be negatively impacted.

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.

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, and such cost structure is subject to change.

We believe that a customer's decision to purchase our Energy Servers is significantly influenced by its price, the price predictability of electricity generated by our Energy Servers in comparison to the retail price, and the future price outlook of electricity from the local utility grid and other energy sources. These prices are subject to change and may affect the relative benefits of our Energy Servers. Several factors that could influence these prices and are beyond our control, include the impact of energy conservation initiatives that reduce electricity consumption; construction of additional power generation plants (including nuclear, coal or natural gas); technological developments by others in the electric power industry; the imposition of "departing load," "standby," power factor charges, greenhouse gas emissions charges, or other charges by local electric utility or regulatory authorities; and changes in the rates offered by local electric utilities and/or in the applicability or amounts of charges and other fees imposed or incentives granted by such utilities on customers. In addition, even with available subsidies for our products, the current low cost of grid electricity in some states and countries does not render our product economically attractive.

Furthermore, an increase in the price of natural gas or curtailment of availability (e.g., as a consequence of 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.

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 that we may be unable to realize. Future increases to the cost of components and raw materials would offset our efforts to reduce our manufacturing and services costs. For example, in the past two quarters, we have experienced price increases in raw materials, which are used in our components and subassemblies for our Energy Servers. Any continued increases in the costs of raw materials and components could slow our growth and cause our financial results and operational metrics to suffer.

In addition, we may face increases in our other expenses including increases in wages or other labor costs as well as installation, marketing, sales or related costs. In order to expand into new 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.

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 24x7, 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 generally 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 or in which we anticipate expanding into in the future could adversely affect the demand for our Energy Servers. For example, in California, the net metering tariff applicable to fuel cells currently expires in 2023. We cannot predict the outcome of regulatory proceedings addressing successor tariffs that would include fuel cells, in which we remain an active participant. If there is not an economical tariff for fuel cells in California it may limit or end our ability to sell and install our Energy Servers in California.

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

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

In any particular period, a substantial amount of our total revenue has and could continue to come from a relatively small number of customers. As an example, in the year ended December 31, 2020, two customers accounted for approximately 34% and 28% of our total revenue. 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.

Our ability to develop new products and enter into new markets could be negatively impacted if we are unable to identify partners to assist in such development or expansion, and our products may not be successful if we are unable to maintain alignment with evolving industry standards and requirements.

We continue to develop new products for new markets and, as we move into those markets, we may need to identify new business partners and suppliers in order to facilitate such development and expansion, such as our entry into the hydrogen market. Identifying such partners and suppliers is a lengthy process and is subject to significant risks and uncertainties, such as an inability to negotiate mutually-acceptable terms for the partnership. In addition, there could be delays in the design, manufacture and installation of such new products and we may not be timely in the development of new products, limiting our ability to expand our business and harming our financial condition and results of operations.

In addition, as we continue to invest in research and development to sustain or enhance our existing products, the introduction of new technologies and the emergence of new industry standards or requirements could render our products obsolete. Further, in developing our products, we have made, and will continue to make, assumptions with respect to which standards or requirements will be adopted by our customers and standards-setting organizations. If market acceptance of our products is reduced or delayed or the standards-setting organizations fail to develop timely commercially viable standards our business would be harmed.

Risks Related to Our Products and Manufacturing

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

We continue to monitor and adjust as appropriate our operations in response to the COVID-19 pandemic. The precautions that we have implemented in our operations may not be sufficient to prevent exposure to COVID-19. While we do maintain protocols to minimize the risk of COVID-19 transmission within our facilities, including enhanced cleaning, temperature screenings upon entry and masking if required by the local authorities, there is no guarantee that these measures will prevent an outbreak.

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

We have experienced COVID-19 related delays from certain vendors and suppliers, which, in turn, could cause delays in the manufacturing and installation of our Energy Servers and adversely impact our cash flows and results of operations including revenue. Alternative or replacement suppliers, may not be available and ongoing delays could affect our business and growth. For example, particular suppliers on which we rely were shut down in 2020, and we were not able to obtain all the needed parts. In addition, new and potentially more contagious variants of the COVID-19 virus are developing in several countries, which can lead to future disruptions in the availability or price of these or other parts, and we cannot guarantee that we will succeed in finding alternate suppliers that are able to meet our needs. In addition, international air and sea logistics systems have been 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.

As discussed elsewhere, we also rely on third party financing for our customers' purchases of our Energy Server and the current environment may cause third party financiers to experience liquidity problems, difficulty obtaining tax partners or elect to suspend or cancel investments in our projects. If we are delayed in obtaining financing for the purchase of our Energy Servers on behalf of our customers, our cash flow and results of operations, including revenue will be adversely affected. For example, in the three months ended March 31, 2021, we were delayed in obtaining financing for our 2021 installations and cash flow was impacted as we did not receive deposits from financiers in advance of purchase of our Energy Servers. Any delays in financing would adversely impact our cash flows, results of operations and revenue.

Our installation and maintenance operations have also been impacted by the COVID-19 pandemic. For example, our installation projects have experienced delays relating to, among other things, shortages in available labor for design, installation and other work; the inability or delay in our ability to access customer facilities due to shutdowns or other restrictions; the decreased productivity of our general contractors, their sub-contractors, medium-voltage electrical gear suppliers, and the wide

range of engineering and construction related specialist suppliers on whom we rely for successful and timely installations; the stoppage of work by gas and electric utilities on which we are critically dependent for hook ups; and the unavailability of necessary civil and utility inspections as well as the review of our permit submissions and issuance of permits by multiple authorities that have jurisdiction over our activities.

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

As to maintenance, if we are delayed in or unable to perform 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 continue to remain in close communication with our manufacturing facilities, employees, customers, suppliers and partners, but there is no guarantee we will be able to mitigate the impact of this dynamic and fluid situation.

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 risks inherent in the development and construction of new facilities, including risks of delays and cost overruns as a result of factors outside our control, which may include delays in government approvals, burdensome permitting conditions, and delays in the delivery of manufacturing equipment and subsystems that we manufacture or obtain from suppliers.
- 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. For example, currently the market for manufacturing labor has been constrained, which could pose a risk to our ability to increase production.

If we are unable to expand our manufacturing facilities or develop our existing facilities in a timely manner to meet increased demand, we may be unable to further scale our business, which would negatively affect our results of operations and financial condition. Conversely, if the demand for our 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 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 introduce defects into our products. As we grow our manufacturing volume, the chance of manufacturing defects could increase. In addition, new product introductions or design changes made for the purpose of cost reduction, performance improvement, fulfilling new customer requirements or improved reliability could introduce new design defects that may impact Energy Server

performance and life. Any design or manufacturing defects or other failures of our Energy Servers to perform as expected could cause us to incur significant service and 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 or environmental factors such as smoke from wild fires, have affected the performance of our Energy Servers and are not always possible to predict until the Energy Server is in operation. 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 service and re-engineering costs or divert the attention of our engineering personnel from product development efforts. Furthermore, we may be unable to adequately address the impacts of factors outside of our control in a manner satisfactory to our customers. Any of these circumstances could significantly and adversely affect customer satisfaction, market acceptance, and our business reputation.

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

We offer certain customers the opportunity to renew their O&M Agreements (defined herein) on an annual basis, for up to 30 years, at prices predetermined at the time of purchase of the Energy Server. We also provide performance warranties and performance 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, especially for new product introductions, and our estimates may prove to be incorrect. Failure to meet these warranty and performance 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 O&M agreements each year, the total liability over time may be more than the accrual. Actual warranty expenses have in the past been and may in the future be greater than we have assumed in our estimates, the accuracy of which may be hindered due to our limited history operating at our current scale. Therefore, if our estimates of the useful life for our Energy Servers are inaccurate or we do not meet our performance warranties and performance guaranties, or if we fail to accrue adequate warranty and guaranty reserves, our business and financial results could be harmed.

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 and certain cases in the United States), 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. For more information regarding these restrictions, please see the risk factors in the section entitled "*Risks Related to Legal Matters and Regulations*." As a result, unforeseen delays in the review and permitting process could

delay the timing of the construction and installation of our 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 technology that runs, in part, on fossil fuel, we may be subject to a heightened risk of regulation, to a potential for the loss of certain incentives, and to changes in our customers' energy procurement policies.*" 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 our 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 headquarters or 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, our headquarters and several of our manufacturing facilities are located in the San Francisco bay area, an area that is susceptible to earthquakes, floods and other natural disasters. The occurrence of a natural disaster such as an earthquake, drought, extreme heat, flood, fire, localized extended outages of critical utilities (such as California's public safety power shut-offs) or transportation systems, or any critical resource shortages could cause a significant interruption in our business, damage or 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.

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

We rely on a limited number of third-party suppliers, and in some cases sole suppliers, for some of the raw materials and components 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 our standards and 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. There have been a number of supply chain disruptions throughout the global supply chain as countries are in various stages of opening up and demand for certain components increases associated with the COVID-19 pandemic. For example, we expect component shortages especially for semiconductors and specialty metals to persist at least through the first half of 2022. Significant delays and shortages could prevent us from delivering our Energy Servers to our customers within required time frames and cause order cancellations, which would adversely impact our cash flows and results of operations.

In some cases, we have had to create our own supply chain for some of the components and materials utilized in our fuel cells. We have made significant expenditures 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. In addition, some of our suppliers use proprietary processes to manufacture components. We may be unable to obtain comparable components from alternative suppliers without considerable delay, expense, or at all, as replacing these suppliers could require

us either to make significant investments to bring the capability in-house or to invest in a new supply chain partner. Some of our suppliers are smaller, private companies, 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.

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.

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

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

of operations and financial condition. Consequently, the imposition of tariffs on items imported by us from China or other countries could increase our costs and could have a material adverse effect on our business and our results of operations.

A failure to properly comply (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 Border Protection, 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 and Border Protection 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 Related to Government Incentive Programs

Our business currently benefits from the availability of rebates, tax credits and other financial programs and incentives, and the reduction, modification, or elimination of 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 United States also provide incentives to end users and purchasers of our Energy Servers. We currently have operations and sell our Energy Servers in Japan, India, and the Republic of Korea (collectively, our "Asia Pacific region"), where in some locations such as the Republic of Korea, Renewable Portfolio Standards ("RPS") are in place to promote the adoption of renewable power generation, including, in some circumstances, 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 utilize these governmental rebates, tax credits, and other financial incentives to lower the effective price of the Energy Servers to our customers in the U. S. and the Asia Pacific region. Financiers and Equity Investors in our PPA Programs may also take advantage of these financial incentives, lowering the cost of capital and energy to our customers. However, these incentives or RPS's 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 Korean RPS is scheduled to be replaced in 2022 with the Hydrogen Portfolio Standard (“HPS”). This may impact the demand for our Energy Servers in the Republic of Korea. Initially, we do not expect the HPS to require 100% hydrogen as a feedstock for fuel cell projects. The Ministry of Trade, Industry, and Economy is running a stakeholder process in 2021, which will determine the specifics of the HPS incentive mechanism. For the nine months ended September 30, 2021 and for the year ended December 31, 2020, our revenue in the Republic of Korea accounted for 38% and 34% of our total revenue, respectively. Therefore, if sales of our Energy Servers to this market decline in the future, this may have a material adverse effect on our financial condition and results of operations.

As another example, in the United States, commercial purchasers of fuel cells are eligible to claim the federal ITC. While legislation under active consideration would extend the ITC for up to five years, as part of a national infrastructure plan, under current law the ITC will end on December 31, 2023.

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 in incentives. In the case of a Portfolio Financing, the owner of the portfolio bears the risk of repayment if the assets placed in service do not meet the ITC operational criteria in the future.

As another example, many of our installations in California interconnect with investor-owned utilities on Fuel Cell Net Energy Metering (“FC NEM”) tariffs. FC NEM tariffs will be available for new installations until December 31, 2023.

However, to remain eligible for the FC NEM tariffs, at least some installations currently on those tariffs are likely to be required to meet greenhouse gas emissions standards. As noted above, we are working through the appropriate regulatory channels to establish alternative tariffs to FC NEM, which is currently set to expire in 2023. If our customers are unable to interconnect under the FC NEM tariffs or a suitable alternative, interconnection and tariff costs may increase and such an increase may negatively impact demand for our products. Additionally, the uncertainty regarding requirements for service under any of these tariffs could negatively impact the perceived value of or risks associated with our products, which could also negatively impact demand.

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

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

We expect that Energy Server deployments through certain of our financed transactions will receive capital from 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 the only party who can perform operations and maintenance on our Energy Servers have made it difficult to attract investors in the past. Our ability to obtain additional financing in the future depends on the continued confidence of banks and other financing sources in our business model, the market for our Energy Servers, and 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 national, state and local laws and regulations that could impose substantial costs upon us and cause delays in the delivery and installation of our Energy Servers.

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. 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 the various laws and regulations can be significant, and violations may result in substantial fines and penalties or third-party damages.

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. 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 all the various 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.

We are 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 address these in accordance with applicable regulatory standards. 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.

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). Guidance from these agencies on how certain environmental laws and regulations may or may not be applied to our technology can be inconsistent.

For example, natural gas, which is 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; these gas cleaning units are typically replaced at customers' sites once every 15 to 36 months. From 2010 to late 2016 and in the regular course of maintenance of the Energy Servers, we periodically replaced the units in our servers relying upon a federal environmental exemption that permitted the handling 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 appropriately under the exemption, the U.S. Environmental Protection Agency ("EPA") issued guidance for the first time in late 2016 that differed from our belief and conflicted with the state approvals we had obtained. We have complied with the new guidance and, given the comparatively small quantities of benzene produced, we do not anticipate significant additional costs or risks from our compliance with the revised 2016 guidance. In order to put this matter behind us and with no admission of law or fact, we agreed to a consent agreement that was ratified and incorporated by reference into a final order that was entered by an Environmental Appeals Judge for EPA's Environmental Appeals Board in May of 2020. Consistent with the consent agreement and final order, a final payment of approximately $1.2 million was made in the fourth quarter of 2020 and EPA has confirmed the matter is formally resolved. Additionally, a nominal penalty was paid to a state agency under that state's environmental laws relating to the same issue.

Some states in which we operate, including New York, New Jersey and North Carolina, have specific permitting or environmental exemptions for fuel cells. Other states in which we currently operate, including California, have emissions-based requirements, most of which require permits or other notifications for quantities of emissions that are higher than those observed from our Energy Servers. For example, the Bay Area Air Quality Management District in California has an air permit and risk assessment exemption for emissions of chromium in the hexavalent form ("CR+6") that are less than 0.00051 lbs/year. Emissions above this level may trigger the need for a permit. Also, California's Proposition 65 requires notification of the presence of CR+6 unless public exposure is below 0.001 µg/day, the level determined to represent no significant health risk. Since the California standards are more stringent than those in any other state or foreign location in which we have installed Energy Servers to date, we are focused on California's standards. If stricter standards are adopted in other states or jurisdictions or our servers can't meet applicable standards, it could impact our ability to obtain regulatory approval and/or could result in 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 and that there are inconsistencies between how we are regulated in different jurisdictions. It is possible that regulators could delay or

prevent us from conducting our business in some way pending agreement on, and compliance with, shifting regulatory requirements. Such actions could delay the installation of 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.

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

The current generation of our Energy Servers running on natural gas produce nearly 23% fewer carbon emissions than the average U.S. marginal power generation sources that our projects displace. However, the operation of our Energy Servers does produce carbon dioxide ("CO2"), which contributes 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 more difficult or more costly for us or our customers to install and operate our Energy Servers on particular sites, thereby negatively affecting our ability to deliver cost savings to customers. 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 natural gas-fueled Energy Servers. Our business prospects may be negatively impacted if we are prevented from completing new installations or our installations become more costly as a result of laws, regulations, ordinances, or rules applicable to our Energy Servers, or by our customers' and potential customers' energy procurement policies.

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 regional and federal level.

A law governing the sale of electricity from the Delaware Project was necessary to implement part of several incentives that Delaware offered to us to build our major manufacturing facility ("Manufacturing Center") in Delaware. Those incentives have proven controversial in Delaware, in part because our Manufacturing Center, while a significant source of continuing manufacturing employment, has not expanded as quickly as projected. The opposition to the Delaware Project is an example of potentially material risks associated with electric power regulation.

At the federal level, FERC has authority to regulate under various federal energy regulatory laws, wholesale sales of electric energy, capacity, and ancillary services, and the delivery of natural gas in interstate commerce. Also, several of the tax equity partnerships in which we have an interest are 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, as well as organized market rules such as the PJM tariffs affecting the Delaware Project, 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 and market operators frequently modify these statutes, regulations and market rules.

Governments, often acting through state utility or public service commissions, as well as market operators, 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. High-voltage electricity poses potential shock hazards, and natural gas and hydrogen are flammable gases and therefore a potentially dangerous fuel. 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 us and could materially impede widespread market acceptance and demand for our Energy Servers, which could harm our brand, our business prospects, and our operating results. Our product liability insurance may not be sufficient to cover all potential product liability claims. Any lawsuit seeking significant monetary damages either in excess of our coverage or outside of our coverage may have a material adverse effect on our business and our financial condition.

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

We have been and continue to be involved in legal proceedings, administrative proceedings, claims, and other litigation that arise in the ordinary course of business. Purchases of our products have also been the subject of litigation. For information regarding pending legal proceedings, please see Part II, Item 1, *Legal Proceedings* and Note 13 - *Commitments and Contingencies* in Part I, Item 1, *Financial Statements*. 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 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.

Policing unauthorized use of proprietary technology can be difficult and expensive, and the protective measures we have taken to protect our trade secrets may not be sufficient to prevent such use. For example, many of our engineers reside in California where it is not legally permissible to prevent them from working for a competitor. 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.

In connection with our expansion into new markets, we may need to develop relationships with new partners,

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

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. 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 don't 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 Related to Our Financial Condition and Operating Results

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

Since our inception in 2001, we have incurred significant net losses and have used significant cash in our business. As of September 30, 2021, we had an accumulated deficit of $3.2 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, as well as internationally. We may continue to 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; and
- attracting and retaining key talent in a competitive marketplace.

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

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

Our financial condition and results of operations and other key metrics have fluctuated significantly in the past and may continue to fluctuate in the future due to a variety of factors, many of which are beyond our control. For example, the amount of product revenue we recognize in a given period is materially dependent on the volume of installations of our 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, the COVID-19 pandemic or such other health emergency, 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;
- interruptions in our supply chain;
- whether we are able to structure our sales agreements in a manner that would allow for the product and installation revenue to be recognized upfront;
- delays or cancellations of Energy Server installations;
- fluctuations in our service costs, particularly due to unexpected costs of servicing and maintaining Energy Servers;

- fluctuations in our research and development expense, including periodic increases associated with the pre-production qualification of additional tools as we expand our production capacity;
- the length of the sales and installation cycle for a particular customer;
- the timing and level of additional purchases by existing customers;
- the timing of the development of the market for hydrogen fuel cell products;
- unanticipated expenses or installation delays associated with changes in governmental regulations, permitting requirements by local authorities at particular sites, utility requirements and environmental, health and safety requirements;
- disruptions in our sales, production, service or other business activities resulting from disagreements with our labor force or our inability to attract and retain qualified personnel; and
- unanticipated changes in federal, state, local, or foreign government incentive programs available for us, our customers, and tax equity financing parties.

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

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

Our current growth and future growth plans may make it difficult for us 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.

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

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

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

We may be limited in the portion of net operating loss carryforwards ("NOLs") that we can use in the future to offset taxable income for U.S. federal and state income tax purposes. Our NOLs will expire, if unused, beginning in 2022 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 Related to Our Liquidity

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

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 September 30, 2021, we and our subsidiaries had approximately $504.2 million of total consolidated indebtedness, of which an aggregate of $291.3 million represented indebtedness that is recourse to us, all of which is classified as non-current. Of this $291.3 million in debt, $68.9 million represented debt under our 10.25% Senior Secured Notes due March 2027, and $222.4 million represented debt under the $230.0 million aggregate principal amount of the Green Notes. In addition, our PPA Entities' (defined herein) outstanding indebtedness of $212.9 million represented indebtedness that is non-recourse to us. For a description and definition of PPA Entities, please see Part I, Item 2, *Management's Discussion and Analysis – Purchase and Financing Options – Portfolio Financings*. As of September 30, 2021, we had $13.8 million in short-term debt and $490.4 million in long-term debt. Given our substantial level of indebtedness, it may be difficult for us to secure additional debt financing at an attractive cost, which may in turn impact our ability to expand our operations and our product development activities and to remain competitive in the market. Our liquidity needs could vary significantly and may be affected by general economic conditions, industry trends, performance, and many other factors not within our control.

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

Upon the occurrence of certain events to us, including a change in control, a significant asset sale or merger or similar transaction, our liquidation or dissolution or the cessation of our stock exchange listing, each of which may constitute a fundamental change under the outstanding notes, holders of certain of the notes have the right to cause us to repurchase for cash any or all of such outstanding notes. We cannot provide assurance that we would have sufficient liquidity to repurchase such notes. Furthermore, our financing and debt agreements contain events of default. If an event of default were to occur, the trustee or the lenders could, among other things, terminate their commitments and declare outstanding amounts due and payable and

our cash may become restricted. We cannot provide assurance that we would have sufficient liquidity to repay or refinance our indebtedness if such amounts were accelerated upon an event of default. Borrowings under other debt instruments that contain cross-acceleration or cross-default provisions may, as a result, be accelerated and become due and payable as a consequence. We may be unable to pay these debts in such circumstances. We cannot provide assurance that the operating and financial restrictions and covenants in these agreements will not adversely affect our ability to finance our future operations or capital needs, or our ability to engage in other business activities that may be in our interest or our ability to react to adverse market developments.

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

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

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.

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

Risks Related 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 O&M 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, a 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 September 30, 2021, conflicts of interest may arise in the future that 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.

Expanding operations internationally could expose us to additional risks.

Although we currently primarily operate in the United States, we continue to expand our business internationally. We currently have operations in the Asia Pacific region and more recently Dubai, United Arab Emirates to oversee operations in Europe and the Middle East. 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;
- greater difficulties in securing or enforcing our intellectual property rights in certain jurisdictions;
- 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.

In addition, a portion of our sales and expenses stem from countries outside of the United States, and are in currencies other than U.S. dollars, and therefore subject to foreign currency fluctuation. Accordingly, fluctuations in foreign currency rates could have a material impact on our financial results in future periods. As a result of these risks, any potential future international expansion efforts that we may undertake may not be successful, which may harm our ability for future growth.

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

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

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, 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. 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, and the protective measures we have taken may be insufficient to prevent such events. A breach or failure of our networks or computer or data management systems due to intentional actions such as cyber-attacks, including but not limited to ransomware attacks, phishing or denial-of-service attacks, negligence, or other reasons, whether as a result of actions by third-parties or our employees, could seriously disrupt our operations or could affect our ability to control or to assess the performance in the field of our Energy Servers and could result in disruption to our business and potentially legal liability. In addition, a failure of certain of our IT systems could affect our production line, 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.

Risks Related to Ownership of Our Common Stock

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

The market price of our Class A common stock has been and may continue to be volatile. In addition to factors discussed in this Risk Factors section, the market price of our Class A common stock may fluctuate significantly in response to numerous 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 us 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; and
- other events or factors including those resulting from war, incidents of terrorism or responses to these events.

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

We may issue additional shares of our Class A common stock in connection with any future conversion of the Green Notes and thereby dilute our existing stockholders and potentially adversely affect the market price of our Class A common stock.

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

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

Our Class B common stock has ten votes per share, and our Class A common stock has one vote per share. As of September 30, 2021, 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 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.

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

by shareholder advisory firms critical of our corporate governance practices or capital structure could also adversely affect the value of our Class A common stock.

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

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

Provisions in our charter documents and under Delaware law could make an acquisition of us more difficult, may limit attempts by our stockholders to replace or remove our current management, may limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, or employees, 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 2 - UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

None.

ITEM 3 - DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4 - MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5 - OTHER INFORMATION

Not applicable.

ITEM 6 - EXHIBITS

			Incorporated by Reference			
Exhibit Number		**Description**	**Form**	**File No.**	**Exhibit**	**Filing Date**
10.1		Securities Purchase Agreement, dated October 23, 2021, by and between the Registrant and SK ecoplant Co., Ltd.	8-K	001-38598	10.1	10/25/2021
10.2	†	Amended and Restated Preferred Distributor Agreement, dated October 23, 2021, by and among the Registrant, Bloom SK Fuel Cell, LLC, and SK ecoplant Co., Ltd.				Filed herewith
10.3		Amendment to the Joint Venture Agreement, dated October 23, 2021, by and between the Registrant and SK ecoplant Co., Ltd.				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 Financial Officer pursuant to Rule 13a-14(a) and 15d-14(a) of the Securities and Exchange Act of 1934, as amended, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002				Filed herewith
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- the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document				Filed herewith
101.SCH		Inline XBRL Taxonomy Extension Schema Document				Filed herewith
101.CAL		Inline XBRL Taxonomy Extension Calculation Linkbase Document				Filed herewith
101.DEF		Inline XBRL Taxonomy Extension Definition Linkbase Document				Filed herewith
101.LAB		Inline XBRL Taxonomy Extension Label Linkbase Document				Filed herewith
101.PRE		Inline XBRL Taxonomy Extension Presentation Linkbase Document				Filed herewith
104		Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)				

† Portions of this exhibit are redacted as permitted under Regulation S-K, Rule 601.

** The certifications furnished in Exhibit 32.1 hereto are deemed to accompany this Quarterly Report on Form 10-Q 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.

SIGNATURES

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

BLOOM ENERGY CORPORATION

Date: November 5, 2021

By: /s/ KR Sridhar
KR Sridhar
Founder, President, Chief Executive Officer and Director
(Principal Executive Officer)

Date: November 5, 2021

By: /s/ Gregory Cameron
Gregory Cameron
Executive Vice President and
Chief Financial Officer
(Principal Financial and Accounting Officer)

CERTAIN CONFIDENTIAL INFORMATION IN THIS EXHIBIT HAS BEEN OMITTED AND REPLACED WITH "[…*…]" BECAUSE IT IS NOT MATERIAL AND WOULD BE COMPETITIVELY HARMFUL IF PUBLICLY DISCLOSED.**

Exhibit 10.2

EXECUTION VERSION

Amended and Restated Preferred Distributor Agreement

This Amended and Restated Preferred Distributor Agreement (this "Agreement") is entered into as of October 23, 2021 (the "Effective Date") by and among Bloom Energy Corporation ("Bloom Corp"), a corporation established under the laws of the State of Delaware, United States of America, Bloom SK Fuel Cell, LLC ("JV"), a limited liability company organized under the laws of the Republic of Korea, and SK ecoplant Co., Ltd. (f/k/a SK Engineering & Construction Co., Ltd.) ("Distributor"), a corporation established under the laws of the Republic of Korea. Each of Bloom Corp, JV and Distributor are referred to herein as a "Party," and together, as the "Parties."

RECITALS

WHEREAS, Bloom Corp develops, manufactures and supplies certain Products in connection with electric power facilities. Distributor is experienced and engaged in the business of engineering, procuring, and constructing electric power facilities on a turnkey basis, including the distribution of electric power generation components integrated into such facilities;

WHEREAS, Bloom Corp and Distributor entered into a preferred distributor agreement dated November 14, 2018 (the "PDA");

WHEREAS, Bloom Corp and Distributor agreed to amend the PDA on the terms of an amendment agreement dated December 19, 2018, an amendment agreement dated January 30, 2019 and a joinder and amendment agreement dated April 17, 2020 pursuant to which JV became a party to the PDA (such amendments, collectively, the "Amendments"); and

WHEREAS, the Parties have further agreed to amend and restate the PDA (as amended by the Amendments) in its entirety as set forth in 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 as follows:

AGREEMENT

1. Definitions and Rules of Interpretation.

(a) Definitions.

"Adjusted Quarterly Quantity" shall have the meaning given to it in Section 2(e)(ii)(1) hereof.

"Ancillary Equipment" means, collectively, the Company-Required Ancillary Equipment and the Distributor-Procured Ancillary Equipment.

"Bloom Corp" has the meaning set forth in the Preamble.

"Bloom Energy Server" means the solid oxide fuel cell server manufactured by Company, consisting of the exterior box and all components inside, including without limitation the Fuel Cell Stack and power electronics.

"Bundang Standard" means a limitation of liability in each service year equal to [...***...] of the annual LTSA service fee for such service year; provided, that if liability for liquidated damages in any year exceed the foregoing limitation, then such underperformance will be debited from the performance bank for the following service year.

"CCA" means that certain Commercial Collaboration Agreement, dated as of the date hereof, by and between Bloom Corp and Distributor.

"Claims" shall have the meaning given to it in Section 11(b) hereof.

"Commissioning Capacity Specification" means the Rated Capacity specification required for Products to pass the Commissioning Test applicable to such Products, as defined in the Purchase Order for such Products.

"Commissioning Completion" shall have the meaning given to it in Section 4(a) hereof.

"Commissioning Duration Specification" means the period of time during which the Commissioning Test for Products is performed, as defined in the Purchase Order for such Products.

"Commissioning Efficiency Specification" means the efficiency specification required for Products to pass the Commissioning Test applicable to such Products, as defined in the Purchase Order for such Products.

"Commissioning Test" means the testing of the Products for a Project to determine whether it achieves the Commissioning Efficiency Specification when brought to the Commissioning Capacity Specification for the Commissioning Duration Specification, calculated by dividing (a) the AC electrical output (expressed in Therms) of the Products as measured at the Products' transformers, by (b) the total LHV fuel input (expressed in Therms) of the Products, as measured at the Products' Company-designated gas meter. The Commissioning Test includes the pre-power up check, fuel flow test, water system test, communication system test, and items as may be specified in a Purchase Order.

"Company" means (a) Bloom Corp, with respect to rights, obligations, liabilities, and other terms and conditions applicable to Products supplied by Bloom Corp; and (b) JV, with respect to rights, obligations, liabilities, and other terms and conditions applicable to Products supplied by JV.

"Company Performance LD Cap" shall have the meaning given to it in Section 3(c)(ii) hereof.

"Company-Required Ancillary Equipment" means equipment for a Project, other than the Bloom Energy Server, which Distributor must purchase from Company to enable installation and operation, including without limitation equipment set forth on Exhibit A, as may be updated and delivered to Distributor from time to time.

"Company Trademarks" shall have the meaning given to it in Section 9(f) hereof.

"Component AC" means the a/c inverter unit module; as such module may be updated by Bloom Corp in current and future generations of Energy Server.

"Component FP" means the fuel processing unit module; as such module may be updated by Bloom Corp in current and future generations of Energy Server.

"Component PE" means the power enclosure module, including power electronics; as such module may be updated by Bloom Corp in current and future generations of Energy Server.

"Component PM" means the power module; as such module may be updated by Bloom Corp in current and future generations of Energy Server.

"Confidential Information" shall mean (i) any information disclosed by Company to Distributor that is in written, graphic, machine readable or other tangible form and is marked "Confidential," "Proprietary" or in some other manner to indicate its confidential nature; (ii) oral information disclosed by Company to Distributor pursuant to this Agreement that is designated as confidential at the time of disclosure, and reduced to a writing marked as confidential and delivered by Company to Distributor within a reasonable time; (iii) any information a reasonable person in the circumstances would understand to be confidential, including without limitation non-public information contained in an RFP submission and the pricing terms of this Agreement. Notwithstanding any failure to so identify it, all non-public information embodied in the Products, including without limitation the source code underlying object code and bitmaps embodied in the Products, shall be Confidential Information.

"Customer" means any third party that obtains a Product integrated into a stationary solid oxide fuel cell power facility in the Territory for the purpose of generating electricity, and not for further distribution or resale.

"Customer Agreement" means an agreement between a Customer and Distributor for the supply of Products. Where Distributor is the EPC Contractor for a Project, the Customer Agreement may be an EPC Agreement. Where Distributor is not the EPC Contractor for a Project, the Customer Agreement is not required to be the EPC Agreement.

"Deficiency" shall have the meaning given to it in Section 2(e)(ii)(1) hereof.

"Delivery" and "Delivered" shall have the meanings given to them in Section 7(d)(i) hereof.

"[...***...]" shall have the meaning given to it in Section 3(d)(i) hereof.

"Distributor-Procured Ancillary Equipment" means equipment for a Project, not including the Bloom Energy Server and Company-Required Ancillary Equipment, which Distributor may procure from suppliers other than Company, for use in the installation of a Project.

"Documentation" means published written documentation related to the specifications, performance, installation, use or maintenance of the Products provided by Company or a Supplier under this Agreement.

"Energy Server" and Bloom Energy Server are interchangeable and means the solid oxide fuel cell Bloom Energy Server®, composed of the Component FP, Component PE, Component PM and Component AC modules and all components therein; as such server may be updated by Bloom Corp from time to time in its discretion.

"EPC" means "engineering, procurement, and construction."

"EPC Contractor" is the entity responsible for engineering, procuring and constructing each Project.

"Exception" shall mean Exceptions to Distributor ROFR and Exceptions to Company ROFR.

"[...***...]" shall have the meaning given to it in Section 3(d)(i) hereof.

"Excess Performance LD Requirements" means that such Project (a) is not a Non-EPC Project, (b) has a performance liquidated damages cap under the LTSA that is equal to or less than the Bundang Standard, and (c) has performance commitments under the LTSA that are not in excess of the Standard Performance Commitments.

"Final Deficiency" shall have the meaning given to it in Section 2(e)(ii)(1) hereof.

"Final Readjusted Quarterly Quantity" shall have the meaning given to it in Section 2(e)(ii)(1) hereof.

"Force Majeure" means any act or circumstance that delays or interferes with the affected Party's performance of its obligations in accordance with this Agreement, if such act or event is beyond the reasonable control, and not the result of the fault or negligence, of the affected Party. "Force Majeure" shall include the following acts or events:

(i) acts of God;

(ii) acts of civil or military authority, war, riot, or other civil disturbances;

(iii) fire or explosions not caused by the Products;

(iv) the elements, extraordinarily extreme weather, and acts of nature, or environmental factors including storms, floods, dust, lightning and earthquakes;

(v) failure to maintain gas pressure or gas quality requirements at the input of the Product;

(vi) a malfunction or failure of the electric grid at the applicable site of the Project (e.g. a brownout or blackout), including without limitation, the failure of the electric grid to comply with, as applicable, the standards set forth in the IEEE Standard 1547 for Interconnecting Distributed Resources with Electric Power System, as may be amended from time to time;

(vii) sabotage, vandalism, theft, accident or destruction caused by a third party (other than a contractor retainer by either Party), that materially impair either Party's ability to perform its obligations under this Agreement;

(viii) any issues caused by the addition or operation of onsite generation or electrical infrastructure not comprising the Products;

(ix) strikes, walkouts, lockouts or similar labor actions or disputes;

(x) any other cause or causes which are beyond such Party's reasonable control; or

(xi) the inability to connect to the internet, or any other failure or unavailability of internet connectivity or availability for any cause whatsoever, including fiber optic cable cuts, interruption or failure of digital transmission links, hacker attacks.

"Force Majeure" shall not include a Party's financial inability to perform under this Agreement.

"Bookings Target" shall have the meaning given to it in Section 2(e)(vi) hereof.

"Fuel Cell Stack" shall have the meaning given to it in JVA.

"GenCo" means a generation company owned by the government of the Republic of Korea.

"Hot Box" shall have the meaning given to it in the JVA.

"Indemnified Parties" shall have the meaning given to it in Section 11(b) hereof.

"Indemnifying Party" shall have the meaning given to it in Section 11(b) hereof.

"Initial Term" shall have the meaning given to it in Section 13(a) hereof.

"Invoice Due Date" means, for invoices issued by Company (a) prior to January 1, 2019, within sixty (60) days of receipt of such invoice; and (b) on or after January 1, 2019, within forty-five (45) days of receipt of such invoice.

"JV" has the meaning set forth in the Preamble.

"JVA" means the Joint Venture Agreement, dated September 24, 2019, by and between Bloom Corp and SK ecoplant Co., Ltd. (f/k/a SK Engineering & Construction Co., Ltd.), as may be amended, modified and supplemented, from time to time.

"JV Scope" shall have the meaning given to it in the JVA.

"kW" means kilowatts, and "MW" means megawatts. All references to kW and MW of Projects refer to the rated output of such Projects.

"[...***...]" shall have the meaning given to it in Section 3(d)(ii) hereof.

"Licensed Material" means (a) the Products, and (b) all documentation delivered hereunder by Company to Distributor for use pursuant to the terms and conditions of this Agreement.

"Limited License" shall have the meaning set forth in Section 9(b) hereof.

"LTSA" means the "long term service agreement" pursuant to which O&M services for a Project are rendered.

"Major Subcontract" means any subcontract or series of subcontracts for the performance of Distributor's obligations under this Agreement or under a Customer Agreement, having an aggregate value in excess of fifty percent (50%) of the engineering and construction budget for such Project.

"Market" means Projects in the Territory that are not subject to an Exception.

"Marketing Materials" shall have the meaning set forth in Section 9(h) hereof.

"Non-EPC Project" shall have the meaning given to it in Section 3(d)(iii) hereof.

"Notice of Commissioning Completion" shall have the meaning given to it in Section 4(a) hereof.

"O&M" shall have the meaning given to it in Section 3(a) hereof.

"Original Quarterly Quantity" shall have the meaning given to it in Section 2(e)(i) hereof.

"Performance Insurance" means a policy of insurance covering Company's non-payment of amounts due to Customer pursuant to a LTSA in connection with a refund, repurchase, or similar consideration for passage of title and possession to the applicable Products to Company.

"Permitted Subcontractor" means a subcontractor set forth on Exhibit B, or otherwise approved by Bloom Corp in writing (following the passing of appropriate due diligence of such subcontractor conducted by Bloom Corp), not to be unreasonably withheld, delayed, or denied; provided, however, that in no event shall a competitor or potential competitor to Bloom Corp be a Permitted Subcontractor.

"Pre-Commissioning Completion Warranty" shall have the meaning given to it in Section 4(b)(i) hereof.

"Pre-Commissioning Completion Warranty Period" shall have the meaning given to it in Section 4(b)(i) hereof.

"Product" means any of the Energy Server and Company-Required Ancillary Equipment and any Software, Documentation or Updates provided pursuant to this Agreement.

"Product Price" shall have the meaning given to it in Section 6(a)(i) hereof.

"Prohibited Activities" shall have the meaning set forth in Section 9(c) hereof.

"Project" means a stationary utility-scale or commercial & industrial fuel cell energy generation project composed of Energy Servers, together with applicable Company-Required Ancillary Equipment and Distributor-Procured Ancillary Equipment.

"Purchase Agreement" shall mean the Securities Purchase Agreement, dated as of the date of this Agreement, by and between Bloom Corp and Distributor, as may be amended and restated, supplemented, or otherwise modified from time to time in accordance with its terms.

"Purchase Order" shall have the meaning given to it in Section 7(b) hereof.

"Purchase Period" shall have the meaning given to it in Section 2(e)(ii)(1) hereof.

"Rated Capacity" means the aggregate rated capacity (expressed in kW) of the Bloom Energy Servers included in the Project, as set forth in a duly-accepted Purchase Order.

"Readjusted Quarterly Quantity" shall have the meaning given to it in Section 2(e)(ii)(1) hereof.

"Renewal Term" shall have the meaning given to it in Section 13(a) hereof.

"ROFR" shall have the meaning given to it in Section 2(a) hereof.

"ROFR Exercise Period" shall have the meaning given to it in Section 2(a) hereof.

"Second Distribution Agreement" means that certain preferred distributor agreement, dated as of January 30, 2019, by and between Company and Second Distributor, as may be amended and restated, supplemented, or otherwise modified from time to time in accordance with its terms.

"Second Distributor" means SK D&D Co., Ltd.

"Standard Performance Commitments" means:

(a) Performance Guarantee (i.e. remedy is payment of liquidated damages): (i) [...***...] total output factor with banking (pre-transformer); (ii) if required by Customer, [...***...] LHV efficiency with banking (pre-transformer); [...***...]; and

(b) Performance Warranty (i.e. remedy is repair, replacement, repurchase): (i) [...***...] total output factor with banking (pre-transformer); (ii) if required by Customer, [...***...] LHV efficiency with banking (pre-transformer); [...***...].

"SOEC" means the Company-developed solid oxide electrolyzer.

"Software" means the software provided by Company or a Supplier pursuant to this Agreement.

"Subsequent Deficiency" shall have the meaning given to it in Section 2(e)(ii)(1) hereof.

"Suppliers" means any providers of third party software that is included with Software provided under this Agreement.

"Technical Advisor" shall have the meaning give to it in Section 4(c) hereof.

"Term" shall have the meaning given to it in Section 13(a) hereof.

"Territory" means the Republic of Korea.

"Third Party Software" has the meaning given to it in Section 9(d) hereof.

"Transfer Price" means [...***...].

"Tri-Party Agreement" means that certain Tri-Party Consent and Agreement, dated as of January 30, 2019, by and among Company, Distributor, and Second Distributor, as may be amended, amended and restated, supplemented, or otherwise modified from time to time in accordance with its terms.

"Updates" means any corrections, enhancements, bug fixes or other modifications for the Products provided to Distributor by Company pursuant to this Agreement.

"Warranty Correction" shall have the meaning given to it in Section 4(b)(ii) hereof.

(b) Rules of Interpretation. Unless a clear contrary intention appears, (i) the singular includes the plural and vice versa; (ii) "include" or "including" means including without limiting the generality of the description preceding such term; (iii) the word "or" is not exclusive, unless otherwise expressly stated; (iv) headings are provided for the convenience of the parties and shall not affect the interpretation of a provision; (v) all references to days or time shall mean such day or time in California, U.S.A., except as may be expressly set forth in a Purchase Order; (vi) all references to money shall be in United States dollars; except as may be expressly set forth in a Purchase Order; and (vii) all references to "Korea" refer to the Republic of Korea. References to sections, exhibits and schedules are, unless otherwise indicated, references to sections, exhibits, and schedules to this Agreement. References to an exhibit shall mean the referenced exhibit and any sub-exhibits, schedules, sub-parts, components or attachments included therewith. References to a section shall mean the referenced section and all sub-sections thereof. All exhibits attached to this Agreement are incorporated herein by this reference and made a part hereof for all purposes.

2. ROFR; Appointment of Distributor.

(a) Mutual Right of First Refusal. Distributor shall have the right of first refusal during the Term (the "Distributor ROFR") to serve as the distributor of the Products for any fuel cell generation project in the Territory that is not subject to an Exception to Distributor ROFR. The Parties will follow the framework set forth in the CCA for future SOEC distributorship rights for the Distributor. Company shall have the right of first refusal during the Term (the "Company ROFR"; and each of Distributor ROFR and Company ROFR, a "ROFR") to serve as Distributor's supplier of the generation equipment for any fuel cell generation project in the Territory that is not subject to an Exception to Company ROFR. Each ROFR is exercisable within ninety (90) days ("ROFR Exercise Period") from the date that Company or Distributor, as applicable, delivers written notice to the counterparty, requesting such counterparty's determination of whether it will exercise its ROFR for such project. When a Party requests the counterparty's determination of whether it will exercise its ROFR for a project the Party requesting such determination shall continue to serve as the supplier or distributor (as applicable to Company or Distributor, respectively) for such project.

(b) A Party's ROFR will automatically terminate, and the counterparty proposing such fuel cell generation project may determine whether to pursue such project, by itself or with third parties, without the involvement of Party holding such ROFR, if the Party holding such ROFR does not deliver written notice within the ROFR Exercise Period that it wishes to exercise its right to serve as supplier or distributor (as applicable to Company and Distributor, respectively), for such

project. The ROFR is not a right to require that Company or Distributor consummate any particular sales or service transaction for any particular Project. Company and Distributor may each, in its sole discretion and for any reason, determine whether to pursue or consummate any Project and enter into a Purchase Order. If a Party chooses not to pursue or consummate any transaction for which it has exercised the ROFR within the ROFR Exercise Period, such Party shall not thereafter pursue or consummate such Project by itself or with a third party. For the avoidance of doubt, a Party shall have no right with respect to any project for which it does not exercise its right to serve as supplier or distributor (as applicable to Company and Distributor, respectively) within the ROFR Exercise Period.

(c) Exceptions to Right of First Refusal.

(i) During the Initial Term of this Agreement:

(1) The following projects are exempt from Distributor's ROFR (each, an "Exception to Distributor ROFR"):

a. [...***...];

b. [...***...];

c. [...***...]; and

d. [...***...].

(2) The following projects are exempt from Company's ROFR (each, an "Exception to Company ROFR"):

a. [...***...].

(ii) [...***...].

(iii) [...***...].

(d) Material Breach. If either Party offers a project that is subject to the counterparty's ROFR (and is not subject to an applicable Exception) herein without first sending a notice to the Party holding such ROFR in accordance with Section 2(a), it shall constitute a material breach of this Agreement, but such breach may be cured by revoking such offer to the third party within five (5) days of written notice thereof and thereafter proceeding in accordance with ROFR procedures set forth in Section 2(a).

(e) Commitment.

(i) Commitment. Distributor shall purchase, on a take or pay basis, the following volume of Energy Servers for each of the periods set forth below (with respect to each quarter of each calendar year, [...***...]:

Calendar Year	Quarter 1 (MW)	Quarter 2 (MW)	Quarter 3 (MW)	Quarter 4 (MW)
2021	[...***...]	[...***...]	[...***...]	[...***...]
2022	[...***...]	[...***...]	[...***...]	[...***...]
2023	[...***...]	[...***...]	[...***...]	[...***...]
2024*	[...***...]	[...***...]	[...***...]	[...***...]

* 2024 Original Quarterly Quantity subject to Section 2(e)(ii)(5) and 2(e)(iii).

(ii) Commitment Shortfall.

(1) [...***...].

(2) [...***...].

(3) [...***...].

(4) Satisfaction of Commitment. For purposes of this Section 2(e), commitment shall be deemed satisfied when the Product is Delivered.

(5) 2024. Delivery of [...***...] in markets other than the Territory and U.S. may be credited against Distributor's commitment to purchase Energy Servers in any quarter of year 2024 set forth in Section 2(e)(i) above and/or, sales, and/or distribution of SOEC equivalent [...***...] at the Product Price of the Energy Server in 2024 [...***...].

(iii) Commitment in Years 2023 and 2024. Notwithstanding anything to the contrary contained herein, if the JV cannot perform Full Assembly (as defined in the JVA) as contemplated by Section 6.2 of the JVA for reasons attributable directly and solely to Bloom Corp, which shall not include Force Majeure or any other reasons beyond Bloom Corp's or the JV's contemplation or control, then this Section 2(e) and the obligations to purchase Original Quarterly Quantities in 2024 set forth in this Section 2(e) shall be adjusted by agreement between the Parties and in direct proportion to the shortfall addressed in this Section 2(e)(iii).

(iv) Amendment to Commitment and JV Scope. Notwithstanding anything to the contrary contained herein, if the Clean Hydrogen Energy Portfolio Standards and any other rules and regulations applicable or relevant to the Products that are promulgated or amended by the government of Korea deviate materially from the Parties' economic-value expectations, which are that the Clean Hydrogen Energy Portfolio Standards incentive will be substantially similar to the existing renewable-portfolio-standard (RPS) incentive based on renewable energy credits (RECS) of [...***...] then Distributor and Bloom Corp shall negotiate in good faith to amend the Original Quarterly Quantities set forth in Section 2(e)(i) above and the JV Scope.

(v) GenCo RFP. If Distributor delivers written notice to Company requesting Company's determination of whether it will exercise its ROFR for a GenCo RFP, and is selected as the winner of such GenCo RFP but Company chooses not to execute a Purchase Order for such

GenCo RFP, then the MW capacity of the transaction shall be applied to the annual target for such calendar year as though a Purchase Order had been executed; provided, however, that notwithstanding the foregoing, such MW capacity shall not be applied for such calendar year if the reason that Company chose not to exercise its ROFR or execute a Purchase Order arose from either (a) risks to protection of Company's intellectual property; or (b) **[...***...]**.

(vi) Bookings Target. By no later than two (2) months prior to the end of each calendar year, Distributor shall provide the Company with a twelve (12) month non-binding bookings target of its anticipated requirements for Product in the Territory for the subsequent calendar year, which may be updated by Distributor from time to time during the course of such subsequent year (each, a "Bookings Target"). Distributor's initial Bookings Target is set forth below. Each Bookings Target is a non-binding estimate and shall not obligate Distributor to purchase the volume of Product set forth in such Bookings Target.

Calendar Year	Quantity
2022	**[...***...]**
2023	**[...***...]**
2024	**[...***...]**

(vii) Appointment.

(1) Subject to the terms and conditions of this Agreement and the Tri-Party Agreement, Company hereby appoints Distributor, for the Term, as an authorized distributor of the Products from Company for redistribution to Customers pursuant to each Project in the Territory for which Distributor has exercised the ROFR pursuant to Section 2(a). This appointment is nonexclusive with respect to Projects outside the Territory, Projects subject to an Exception, Projects for which Distributor has not exercised the ROFR pursuant to Section 2(a), and Projects for which contracted sales occur following the expiration of the Term or earlier termination of this Agreement in accordance with its terms. In such cases, Company reserves the right to license and distribute the Products directly and through any other remarketers, dealers, distributors, sales representatives or other channels and for any purposes. In such cases, Company reserves the right to market and sell upgrades for the Products and/or other products or services to any Customer that has previously obtained a licensed Product from Distributor. Subject to the terms and conditions of this Agreement, Distributor will be free to establish its own pricing for Products.

(2) Each license of Products from Company to Distributor pursuant to this Agreement shall be subject to, and governed by, this Agreement, including without limitation the intellectual property provisions set forth in Section 9, and the export and import restrictions set forth in Section 14. Company shall not be bound by, and specifically objects to, any term, condition or other provision which is different from or in addition to the provisions of this Agreement and

which is submitted by Distributor in any order, receipt, acceptance, confirmation, correspondence or otherwise, unless Company specifically agrees to such provision in a writing signed by Company.

(f) Second Distributor. The Parties acknowledge that: (a) Company and Second Distributor have entered into the Second Distribution Agreement; and, (b) the Parties and Second Distributor have entered into the Tri-Party Agreement. The Parties Agree that, notwithstanding anything in this Agreement to the contrary, including without limitation Section 2 hereof, Second Distributor may serve as a distributor of Company in the Territory and Company may supply Products and Ancillary Equipment to Second Distributor for Projects in the Territory, in each case without any obligation to notify or receive the consent of Distributor. Product and Ancillary Equipment purchases by Second Distributor shall not, however, be credited towards Distributor's take-or-pay purchase obligations under this Agreement. The Parties agree that all disputes related to or arising out of Company's relationship with Second Distributor or any supply or service transaction conducted between Company and Second Distributor shall be exclusively and finally resolved pursuant to the terms and conditions of the Tri-Party Agreement.

3. Resale Terms and Conditions.

(a) Intellectual Property.

(i) Distributor shall comply with all intellectual property limitations set forth in Section 9.

(ii) Distributor shall make best efforts to ensure that the intellectual property provisions of the Customer Agreement (and, if applicable, related RFP bid materials) comply with the following requirements, and shall receive Company's written consent prior to executing a Customer Agreement (which may occur as early as submission of RFP bid materials) which does not comply with such provisions: (a) Company shall have the exclusive right to conduct all monitoring, control, operations, and maintenance activities ("O&M") for each Project during the life thereof; (b) Customer and all third parties shall otherwise comply with the Prohibited Activities; (c) Company shall have a right of re-purchase upon abandonment, or attempted sale or transfer of the Products or Project; and (d) pursuant to the terms and conditions of the LTSA, Company shall have a right of re-purchase upon termination of the LTSA for any reason.

(b) Customer Agreement.

(i) Responsibility. Any Customer Agreement consummated with respect to a Project shall be by and between Distributor and Customer, and Company shall have no obligation or liability thereunder. As between Distributor and Customer, Distributor shall be responsible for the performance of all obligations thereunder, including obligations with respect to development, permitting, engineering, procurement, and construction. Distributor shall not subcontract any obligation under the Customer Agreement or this Agreement unless such subcontractor is a Permitted Subcontractor; provided, however, that any and all Major Subcontracts shall be subject to Company's prior written consent. Distributor shall be solely responsible for the engagement,

management and payment of its subcontractors, and shall be solely responsible for the acts, omissions or defaults of its subcontractors and their agents, representatives and employees.

(ii) Terms and Conditions. In the event that Customer of a Project imposes unfavorable terms and conditions in its Customer Agreement that conflicts with or deviates from this Agreement, both Parties shall use best efforts to negotiate with Customer the terms and conditions of the Customer Agreement as the equal level with this Agreement.

(iii) EPC Contractor. The Parties intend that Distributor will be the EPC Contractor for any Project for which it has exercised the ROFR. However, if Company provides its prior written consent regarding the third party chosen to serve as the EPC Contractor for such Project (a Project for which Distributor is not the EPC Contractor, a "Non-EPC Project") and the terms of such relationship, then Distributor may nonetheless exercise the ROFR for such Project and the Parties may execute a Purchase Order for such Project. All activities of any EPC Contractor (including without limitation Distributor) shall be subject to the intellectual property provisions set forth in Section 3(a), and Company (and not Distributor or any third party) shall perform all activities which require opening a Bloom Energy Server, including without limitation in connection with the commissioning of each Project. For the avoidance of doubt, EPC Contractor pricing shall be taken into consideration by Distributor when Distributor determines whether to exercise a ROFR, and the pricing set forth in Section 5 shall not be subject to change arising out of costs and expenses related to the EPC Contractor of a Project.

(iv) Buy-Down LDs. Liquidated damages commonly referred to as "buy-down liquidated damages" and assessed prospectively for future performance of a Project based upon performance during commercial operation of such Project (e.g. one (1) year or two (2) years of commercial operation), do not form part of Company's offer for any Project. If buy-down liquidated damages are required by the rules of procurement for any project (e.g. the rules of a request for proposals), then the Parties may, by mutual written agreement, decide in writing to pursue such Project upon terms and conditions with respect to such buy-down liquidated damages which are mutually acceptable to the Parties; provided, that neither Party shall be under any obligation to enter into any such agreement.

(v) Performance Bond. If a Customer Agreement requires Distributor to post a "performance bond" or equivalent financial security to secure performance of the Delivery of the Products and the passage of the Commissioning Test (a "Performance Bond"), the Parties shall set forth in the applicable Purchase Order the requirements of such financial security, and the Parties' respective responsibility therefor; provided, that in no event shall Company's responsibility for posting a Performance Bond exceed the lesser of (a) the pro-rata percentage of the contract price under such Customer Agreement attributable to the supply of the Products; and (b) one hundred percent (100%) of the Product Price of such Products as set forth in the Purchase Order therefor. The contractual liability of Company for failure to timely Deliver the Products or for the Products to pass the Commissioning Test, together with the draw conditions for a Performance Bond posted by

Company, shall be set forth in the Purchase Order. The Parties shall make best efforts to negotiate in the Customer Agreement to minimize exposure related to such liabilities.

(c) LTSA.

(i) LTSA Negotiation. Company shall be solely authorized and responsible for all marketing (including bid materials), negotiation, and execution of any LTSA for any Project that is, or is proposed to be, subject to a Customer Agreement. Distributor may not, without Company's prior written consent, make any representation on Customer's behalf with respect to any LTSA, including without limitation representation regarding pricing, performance commitments, or limitations of liability. Distributor shall have the opportunity to participate in LTSA negotiations with Company and Customer for any LTSA that is subject to the Distributor Excess Performance LD Commitment. Distributor shall not have liability pursuant to any LTSA, except as set forth in an Excess Performance LD Agreement.

(ii) Company Performance Liquidated Damages. Notwithstanding anything to the contrary in this Agreement, Company's total liability for performance liquidated damages for any Project that is not a Non-EPC Project, for the term of the LTSA of such Project, shall in no event exceed (a) [...***...]; and (b) [...***...] (the foregoing, collectively, the "Company Performance LD Cap").

(d) [...***...].

(i) [...***...].

(ii) [...***...].

(iii) [...***...].

(iv) [...***...].

4. Commissioning and Pre-Commissioning Completion Warranty.

(a) Commissioning. Company shall perform the Commissioning Test at the earliest practicable date after the Products are mechanically complete as a complete Project (or, if such Project is in phases, a complete phase of such Project), and have all governmental authorizations and third party consents required to bring such Project (or phase thereof, as applicable) to operational power levels and perform the Commissioning Test. Upon passage of the Commissioning Test, Company shall deliver to Distributor a notice of commissioning completion, substantially in the form set forth in Exhibit D ("Notice of Commissioning Completion" and the date of commencement of operations set forth therein, the "Commissioning Completion Date"). If the Products fails to pass the Commissioning Test, Distributor may submit a claim under the Pre-Commissioning Completion Warranty to Company for verification pursuant to Section 4(b).

(b) Pre-Commissioning Completion Warranty.

(i) Pre-Commissioning Completion Warranty. Subject to Section 4(b)(iii), Company warrants to Distributor, that, during the period commencing upon Delivery and continuing until the achievement of Commissioning of the Products for a Project ("Pre-Commissioning Completion Warranty Period"), such Products shall be free from physical defects in design, materials and workmanship that prevent such Products from achieving Commissioning Completion (the "Pre-Commissioning Completion Warranty"). The Pre-Commissioning Completion Warranty is not transferable to any third person, including a Customer, without Company's prior written consent.

(ii) Warranty Correction. If Products fail to satisfy the Pre-Commissioning Completion Warranty during the Pre-Commissioning Completion Warranty Period, Distributor shall make a written warranty claim to Company and Company shall verify whether such warranty claim is valid. Company shall either repair or replace (as determined by Company) the applicable Products (a "Warranty Correction") and re-perform the Commissioning Test within times acceptable to Customer; provided, that if Company has commenced and thereafter diligently pursued such Warranty Correction, but the nature of the specific remedy cannot be performed at the time requested by Customer, then such period shall conform to terms and conditions under the Purchase Order. Company may, as it deems necessary or appropriate, re-perform a Warranty Correction within such period (as may be extended pursuant to the foregoing sentence). Upon completion of the Warranty Correction, Company shall notify Distributor in writing, and Commissioning Test shall be re-performed. Breach of the Pre-Commissioning Completion Warranty shall not be extended to the Pre-Commissioning Completion Warranty Period after the achievement of Commissioning Completion. If Company fails to provide a Warranty Correction within the time required by the Customer Agreement, and as a result Customer rejects the Products, then Company shall pay to Distributor, as Distributor's sole and exclusive remedy, the Refund Amount. The "Refund Amount" is an amount equal to (a) **[...***...]**; provided, however, that in no event shall Company's liability for a Refund Amount **[...***...]**.

(iii) Warranty of JV Scope. For the avoidance of doubt, Products constituting JV Scope shall be subject to the Pre-Commissioning Completion Warranty set forth in Section 4 of this Agreement. Warranty claims, if any, for Products constituting JV Scope shall be directed to either Bloom Corp or JV, as the supplier of such Products pursuant to the Purchase Order for such Products; and in the event the applicable defect underlying a warranty claim arises from the JV Scope supplied by JV, JV shall be responsible for the Pre-Commissioning Completion Warranty with respect to such defect and in the event the applicable defect underlying a warranty claim arises from Company-Required Ancillary Equipment supplied by Bloom Corp, Bloom Corp shall be responsible for the Pre-Commissioning Completion Warranty with respect to such defect.

(iv) Exclusions. The Pre-Commissioning Completion Warranty shall not cover any obligations on the part of Company to the extent caused by or arising from (a) the Products affected by loss, vandalism, or other third-party actions or omissions after Delivery; (b) any failure relating to failure of natural gas supply to conform to the required specifications; (c) removal of any safety device by any person other than Company, (d) accidents, abuse, improper third party testing,

(e) Force Majeure events, or (f) commissioning, operation, repair, opening or accessing, or modification of the Products by anyone other than Company or Company's authorized agents.

(c) Technical Advisor. During the period of construction, Company shall make reasonably available an employee of Company or its affiliates during business hours (telephonically, via email, or at the Site, as may be mutually agreed and coordinated) to serve as technical advisor regarding Company technology (a "Technical Advisor"). Such Technical Advisor shall provide interpretive advice to Distributor regarding the technical specifications, installation manual, and other Product-specific information. Such advice shall exclude any supervision, management, or evaluation of Distributor's or its contractors' personnel, agents or subcontractors and work relating thereto, and any responsibility for planning, scheduling or management of Distributor's work (including in connection with development or permitting).

5. Post-COD Warranty Matters. The Parties expect that, following Commissioning Completion of the Products (a) the Products shall not be within the scope of Distributor's warranty to a Customer, as set forth in the Customer Agreement; and (b) Company's performance commitments and financial responsibility under the LTSA do not include responsibility for damaged, defective, or otherwise underperforming Ancillary Equipment. If the foregoing expectation is not fulfilled in any Customer Agreement or LTSA, the Purchase Order for such Products shall reflect the Parties' respective responsibility to the other Party, if any, for the damaged, defective, or otherwise underperforming Products or Ancillary Equipment.

6. Prices and Payment.

(a) Pricing.

(i) The "Product Price" applicable to Products and the services provided by Technical Advisors pursuant to this Agreement shall be as set forth in the table below, **[...***...]**. The Parties will meet to discuss in good faith further updates to the Product Price and will incorporate any further changes to the Product Price in the table set forth below in a further amendment to this Agreement; **[...***...]**.

UNTIL DECEMBER 31, 2022

		Bloom Corp	JV
1	Energy Server	$[...***...]	[...***...]
2	Component AC + Component FP	[...***...]	([...***...]
3	Company-Required Ancillary Equipment	[...***...]	[...***...]
4	Technical Advisory Services	([...***...]	[...***...]

FROM JANUARY 1, 2023 UNTIL DECEMBER 31, 2023

		Bloom Corp	JV
1	Hot Box	$[...***...]	[...***...]
2	JV Scope: Hot Box Integration, Component AC, Component FP, Component PE, Company-Required Ancillary Equipment	[...***...]	[...***...]
3	Technical Advisory Services	[...***...]	[...***...]

FROM JANUARY 1, 2024 UNTIL DECEMBER 31, 2024

		Bloom Corp	JV
1	Hot Box	$[...***...]	[...***...]
2	JV Scope: Hot Box Integration, Component AC, Component FP, Component PE, Company-Required Ancillary Equipment	[...***...]	[...***...]
3	Technical Advisory Services	[...***...]	[...***...]

(ii) Product Price Discussion. No later than June 30, 2023, Distributor and Company shall discuss whether an adjustment to the Product Price is appropriate for Projects with Purchase Orders to be executed in 2024, based upon market conditions, technological development, and other relevant factors. If the Parties do not enter into a mutual written amendment to this Agreement (which neither Party shall be under any obligation to conclude), then the above price shall continue to apply to Projects with Purchase Orders executed in 2024.

(b) GenCo RFPs. With respect to any Project to be bid into a request for proposals issued by a GenCo, Distributor may demonstrate to Company's satisfaction, by delivery of a true and complete budget threshold document issued by such GenCo, that lower pricing is required to participate in such RFP. In such case, Company may determine whether to proceed with bidding such Project into the RFP upon lower pricing mutually-agreed with Distributor, or whether not to proceed with such bid. In addition, the Parties shall discuss the principal terms upon which they will participate in such RFP.

(c) Invoicing. Company shall invoice Distributor the Product Price applicable to the Products set forth in a Purchase Order as follows:

(i) Deposit: [...***...].

(ii) Delivery: [...***...].

(d) Payment. Except as expressly provided in this Agreement, payment obligations are non-cancellable, and payments made hereunder shall be irrevocable and non-refundable. Distributor shall pay all invoices by no later than the Invoice Due Date. If Distributor fails to make any payment when due, Company may, at its option and without prejudice to its other remedies, suspend performance, defer delivery or seek remedies available at law or in equity without liability to Company.

(e) Taxes. Taxes, duties or excises are not included in the fees charged for the Product, except as may be set forth in the Incoterm applicable to the shipment of such Product, as set forth in Section 7(d)(i)(1). If Company pays any taxes, duties or excises which are not included in the fees charged for the Product, Company shall itemize such taxes, duties or excises as a separate item on its invoices to Distributor, and Distributor shall reimburse Company for such taxes, duties or excises; provided, that Distributor shall not be required to make any such reimbursement if it provides a valid tax exemption certificate to Company prior to Delivery of such Product.

(f) Late Payments. Interest shall accrue daily on amounts which are not paid by the Party owing such amount when due pursuant to this Agreement at a rate equal to [...***...]. In the event that any payment to Company due hereunder is overdue, Company reserves the right to suspend performance until such delinquency is corrected.

7. Supply of Products.

(a) Forecasts. During the Term, Distributor shall provide Company with a good faith rolling twelve (12) month forecast, updated quarterly, for units of the Products (in kW) to be sold by Distributor hereunder during each month in such twelve (12) month period.

(b) Purchase Orders. Distributor shall initiate purchases under this Agreement by submitting written purchase orders to Company substantially in the form set forth as Exhibit C (each, a "Purchase Order"). Purchase Orders shall state unit quantities, unit descriptions, requested delivery dates, shipping instructions, and other matters, which shall in each case be subject to the Parties' mutual agreement. Neither Party shall be obligated to execute a Purchase Order, nor shall any Purchase Order be binding upon either Party until signed by each of Distributor and Company. Once executed by both Parties, Purchase Orders shall be non-cancelable for any reason other than due to a Force Majeure event that causes the cancellation of such Project or in Distributor's participation in such Project. For the avoidance of doubt, JV shall not have authority to execute Purchase Orders on behalf of Bloom Corp, and Bloom Corp shall not have authority to execute Purchase Orders on behalf of JV. In no event shall Bloom Corp be required to include Company-Required Ancillary Equipment or services performed by Technical Advisors in a Purchase Order for Energy Servers.

(c) Packing. All Products shipped by Company to Distributor under this Agreement shall be packaged in accordance with instructions set forth in the applicable Purchase Order.

(d) Title; Risk of Loss; Acceptance; and Shipment.

(i) Delivery. Title, risk of loss, and acceptance of the Products shall pass from Company to Distributor upon Delivery.

(1) "Delivery" shall occur as follows:

a. Products Supplied by Bloom Corp: when Products supplied by Bloom Corp arrive at the named destination place in the Republic of Korea as stated in the relevant PO, the Products are "Delivered."

b. Products Supplied by JV: when Products supplied by JV are made available Ex Works at JV's manufacturing facilities, the Products are "Delivered."

(2) Risk of Loss. The risk of loss specified in Section 7(d)(i)(1)(a) shall govern the Parties' respective liabilities. As between Company and Distributor, the insurance of Distributor shall be responsible for insurable losses occurring on or after passage of risk of loss from Company to Distributor pursuant to Section 7(d)(i)(1).

(e) Product Updates. Company shall have the right to make design modifications to Products from time to time and in its sole discretion, at any time prior to the execution of a Purchase Order for such Product. Following execution of a Purchase Order for a Product, Company shall not, without the prior written consent of Distributor, make design modifications to the Products set forth in such Purchase Order that represent a material change to such Products' form, fit, or function.

8. Marketing and Administration.

(a) Independent Contractor. Distributor is an independent contractor, not an employee, agent, or representative of Company. Distributor is not authorized to, and will not attempt to, create or assume any obligation or liability, express or implied, in the name of or otherwise on behalf of Company. Without limiting the generality of the foregoing, Distributor will not enter into any contract, agreement or other commitment, make any warranty or guaranty, or incur any obligation or liability in the name or otherwise on behalf of Company. This Agreement will not be interpreted or construed as creating or evidencing any agency, franchise, association, joint venture or partnership among the Parties.

(b) Marketing. Distributor shall market, promote, and distribute the Products in the Territory as Company's "preferred partner" in the Territory and as otherwise mutually agreed by the Parties. These efforts may include without limitation the use of mailings, advertising, seminars, and other customary marketing techniques. Company will provide support to Distributor for Market development activities, and may choose to engage in marketing activities.

(c) Feedback. Distributor shall provide Company with prompt written notification of any comments or complaints about the Products that are made by Customers, and of any problems with the Products or their use that Distributor becomes aware of. Such written notification shall be the property of Company, and shall be considered to be part of Company's Confidential Information.

(d) Audit. Company shall have the right to inspect and audit Distributor's marketing, use, deployment, and exploitation of the Products for compliance with the terms and conditions of this Agreement.

(e) Force Majeure. Neither Party shall be liable under any circumstance, nor be deemed to be in breach of this Agreement, for any delay or failure in performance or interruption of service resulting from Force Majeure. In the case of a delay due to an event of Force Majeure, affected deadlines shall be extended by a period of time equal to the time lost due to Force Majeure.

9. Ownership.

(a) Proprietary Rights. Company or its Suppliers own all right, title and interest (including without limitation all intellectual property rights), in and to the Products and any modifications or improvements thereto, whether or not made by Company. Distributor acknowledges that the licenses granted under this Agreement do not provide Distributor with title to or ownership of any intellectual property rights contained in or related to the Products, but only a right of limited use under the terms and conditions of this Agreement. Except as expressly set forth in Section 3 and this Section 9, Company reserves all rights and grants Distributor no licenses of any kind hereunder. Distributor hereby assigns to Company all information, including but not limited to feedback or suggestions, provided to Company with respect to the Products, and such information shall be deemed Confidential Information.

(b) License Grant. Subject to the terms and conditions of this Agreement, Company grants to Distributor a limited, non-exclusive, non-transferable, royalty-free license to market, sell and offer to sell the Products to Customers within the Market during the Term, including use of all Licensed Material for such purpose (the "Limited License").

(c) Restrictions. The Limited License does not include any rights to, and Distributor shall not (and shall not permit any Customer to) conduct any of the following activities (such activities, the "Prohibited Activities"):

(i) Disassemble, decompile or "unlock", translate, decode or otherwise reverse engineer, or attempt in any manner to reconstruct or discover, any part of the Products or other Licensed Materials;

(ii) Modify, adapt, enhance, or create a derivative work of the Products or other Licensed Materials. Only Company shall have the right to modify, adapt, enhance or create a derivative work of the Products or any other Licensed Material;

(iii) Use the Licensed Materials to develop or manufacture a product that is similar to Products or other Licensed Materials;

(iv) Open the covering, access the interior, or give others the opportunity to open the covering or access the interior, of any Products. Only Company and its authorized representatives may open or access such interior;

(v) Copy or remove any proprietary notices, labels, or marks on Licensed Materials without Company's prior written consent;

(vi) Except as expressly permitted by this Agreement, assign, sublicense, distribute, rent, lease, loan, sell, transfer, network, publish, make available, or permit any third party access to the Products or other Licensed Materials;

(vii) Develop intellectual property, or help any third party develop intellectual property, which could be asserted against Company's intellectual property in the Products or other Licensed Materials;

(viii) File any action (or directly or indirectly support or be involved in any such action) in any court or agency which in any way attack the validity, enforceability, ownership, or protectability of any intellectual property of Company (including trade secrets), Confidential Information of Company, or other proprietary Company information; or

(ix) Cause or permit any third party to do any of the foregoing.

(d) Software. Distributor acknowledges that the Software may contain or be provided with copyrighted software of Company's Suppliers as identified in associated documentation or other printed materials ("Third Party Software") which is obtained under a license from such Suppliers. All third party licensors and Suppliers retain all right, title and interest in and to such Third Party Software and all copies thereof, including all copyright and other intellectual property rights. Distributor's use and distribution of any Third Party Software shall be subject to and Distributor shall comply and cause all Customers to comply with the applicable restrictions and other terms and conditions set forth (i) in this Agreement or the Documentation applicable to the Software and (ii) in such Third Party Software documentation or printed materials.

(e) Proprietary Notices. Distributor will ensure that all copies of the Products will incorporate copyright and other proprietary notices in the same manner that Company incorporates such notices in the Products or in any manner reasonably requested by Company. Distributor will not remove any copyright or other proprietary notices incorporated on or in the Products by Company.

(f) Use of Trademarks. During the term of this Agreement, Distributor may advertise the Products under the trademarks, marks, and trade names that Company may provide from time to time (the "Company Trademarks"). Distributor understands that Company has applied for applicable federal and state registration of certain of its trademarks and agrees, upon Company's request, to so indicate on the Products and in any advertisement, promotional materials or other documents that contain the Products' names. Nothing herein will grant to Distributor any right, title or interest in Company Trademarks. At no time during or after the term of this Agreement will Distributor challenge or assist others to challenge Company Trademarks or the registration thereof or attempt to register any trademarks, marks or trade names confusingly similar to those of Company. Distributor will follow reasonable trademark usage guidelines communicated by

Company, will provide examples of its usage of Company Trademarks upon request by Company, and will promptly correct any deviations from such guidelines upon notification by Company of such deviations.

(g) Use of Trade Names. Distributor will present and promote the sale of the Products fairly. Distributor may represent itself as an authorized Distributor of Company and use Company's product names in Distributor's advertising and promotional media provided (i) that Distributor conspicuously indicates in all such media that such names are trademarks of Company and (ii) that Distributor submits all such media to Company for prior approval and satisfies the requirements set forth in paragraph (c) above. Upon termination of this Agreement for any reason, Distributor will immediately cease all use of the Products' names and Company Trademarks and, at Distributor's election, destroy or deliver to Company all materials in Distributor's control or possession which bear such names and trademarks, including any sales literature. Distributor will not challenge any intellectual property rights claimed by Company in such trademarks.

(h) Use of Marketing Materials. Company may provide Distributor with marketing materials, such as marketing literature, Company logos, and/or artwork, as Company may determine in its sole discretion (the "Marketing Materials"). Company hereby grants Distributor permission to use, reproduce, translate, and distribute the Marketing Materials solely in connection with Distributor's distribution of Products hereunder. Distributor hereby assigns to Company all intellectual property rights in any and all translations of the Marketing Materials. Upon termination of this Agreement for any reason, Distributor will immediately cease all use of the Marketing Materials and, at Distributor's election, destroy or deliver to Company all Marketing Materials in Distributor's control or possession.

10. Confidentiality.

(a) Confidential Information. During the period this Agreement is in effect and for ten (10) years thereafter, the Parties shall hold Confidential Information of the other Party in confidence and use the same degree of care, but in no event less than reasonable care, to avoid disclosure of Confidential Information as it uses with respect to its own confidential and proprietary information of similar type and importance. The receiving Party agrees to disclose Confidential Information only to its employees or other agents who have a bona fide need to know solely to perform its obligations or exercise its rights hereunder, who will each agree to comply with this section. The receiving Party shall not sell, license, sublicense, publish, display, distribute, disclose or otherwise make available the Confidential Information to any third party nor use such information except as authorized by this Agreement. The receiving Party shall immediately notify the disclosing Party of the unauthorized disclosure or use of the Products or Confidential Information and to assist Company in remedying such unauthorized use or disclosure. It is further understood and agreed that any breach of this Section 10 or Section 9(c) is a material breach of this Agreement and any such breach would cause irreparable harm to the disclosing Party, entitling the disclosing Party to injunctive relief in addition to all other remedies available at equity or law. Notwithstanding the above, non-public information contained in an RFP and the prices hereunder shall be Confidential Information of both Parties.

(b) Exceptions. Notwithstanding the above, receiving Party shall be under no obligation not to disclose any information that it can prove: (i) was in the public domain at the time

it was disclosed or has entered the public domain through no fault of the receiving Party; (ii) was known to the receiving Party, without restriction, at the time of disclosure, as demonstrated by files in existence at the time of disclosure; (iii) is disclosed with the prior written approval of the disclosing Party; (iv) becomes known to receiving Party, without restriction, from a source other than the disclosing Party without breach of this Agreement by receiving Party; or (v) is disclosed pursuant to the order or requirement of a court, administrative agency, other governmental body, or the requirements of a public stock exchange; provided, however, that receiving Party shall provide prompt notice thereof to disclosing Party to enable disclosing Party to seek a protective order or otherwise prevent or restrict such disclosure.

11. Indemnification.

(a) Intellectual Property Indemnification.

(i) Company shall indemnify, defend and hold Distributor harmless against any third party action (including a Customer) alleging that the Products infringe any valid U.S. patent or copyright, and Company shall pay all settlements entered into, and all final judgments and costs (including reasonable attorneys' fees) awarded against Distributor in connection with such action, provided Distributor (i) notifies Company promptly in writing of any such action, (ii) gives Company exclusive control and authority over the defense or settlement of such action, (iii) does not enter into any settlement or compromise of any such action without the prior written consent of Company and (iv) provides all reasonable assistance to Company at the request and expense of Company. If any Licensed Material becomes, or in the opinion of Company may become, the subject of an infringement claim, Company may, at its option, (i) procure for Distributor the right to continue using such Licensed Material, (ii) modify or replace such Licensed Material with substantially equivalent non-infringing products, or (iii) require the return of such Licensed Material and refund to Distributor a pro-rata portion of the Product Price of such Licensed Material on a depreciated basis, without depreciation for the first year after achievement of Commissioning, and thereafter on a straight line amortization of the Product Price equal to the term of the LTSA (e.g. nineteen year amortization for a twenty-year LTSA); with the provision of remedies pursuant to this Section 11(a)(i) being the sole and exclusive remedies for an infringement claim subject to this Section 11(a).

(ii) Company shall have no indemnification obligations with respect to any third party action alleging that (i) the use of any Products, or any part of them, in combination with products or technology not supplied by Company, or (ii) any service or other process utilizing any Products, infringes any third party intellectual property right, and in such event Distributor will indemnify, defend and hold harmless Company, and its officers, directors and employees, against any such action, and Distributor will pay all settlements entered into, and all final judgments and costs (including reasonable attorneys' fees) awarded against such party in connection with such action, provided Company (i) notifies Distributor promptly in writing of any such action, (ii) gives Distributor exclusive control and authority over the defense or settlement of such action, (iii) does not enter into any settlement or compromise of any such action without Distributor's prior written consent and (iv) provides all reasonable assistance to Distributor at the request and expense of Distributor.

(b) Mutual Indemnification. Except as otherwise set forth in this Agreement, each Party (such Party providing indemnification, the "Indemnifying Party") shall indemnify, defend and hold harmless the other Party and its affiliates, and each of their respective directors, officers, members, shareholders, employees and contractors (collectively, the "Indemnified Parties"), from and against all third party (not including affiliates, third party beneficiaries, or persons with an equity or security interest the Indemnified Party or its assets) claims, demands, actions, causes of action, and proceedings ("Claims") for injury or death of any person or loss or damage to property, in each case to the extent caused by the Indemnifying Party's gross negligence or willful misconduct; provided, that the Indemnified Party shall provide the Indemnifying Party prompt notice of any such Claim, authorize the Indemnifying Party to settle or defend such Claim, provide the Indemnifying Party control of the defense of such Claim, and assist such defense (at the Indemnifying Party's reasonable expense) upon request of the Indemnifying Party. Notwithstanding the foregoing, an Indemnifying Party shall not be required to indemnify, defend or hold harmless for any Claim arising out of the negligence, willful misconduct or breach of this Agreement by the Indemnified Party. The provision of remedies pursuant to this Section 11(b) are the sole and exclusive remedies for an indemnification claim subject to this Section 11(b).

12. Limited Warranties. EXCEPT AS EXPRESSLY PROVIDED PURSUANT TO THE PRE-COMMISSIONING COMPLETION WARRANTY SET FORTH IN SECTION 4(b) AND SECTION 5 HEREIN, THE PRODUCTS ARE PROVIDED "AS IS", AND COMPANY AND ITS SUPPLIERS MAKE NO WARRANTY, EXPRESS, IMPLIED, STATUTORY OR OTHERWISE, WITH RESPECT TO PRODUCTS OR ANY PART THEREOF, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTY OF TITLE, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT, OR THOSE ARISING FROM COURSE OF PERFORMANCE, DEALING, USAGE OR TRADE. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, NEITHER COMPANY NOR ANY OF ITS SUPPLIERS WARRANT THAT THE PRODUCTS OR ANY PART THEREOF WILL MEET DISTRIBUTOR'S REQUIREMENTS OR BE UNINTERRUPTED, OR ERROR-FREE, OR THAT ANY ERRORS IN THE PRODUCTS WILL BE CORRECTED.

13. Term and Termination.

(a) The term of this Agreement shall commence on the Effective Date and terminate on December 31, 2024 (the "Initial Term"). Thereafter, this Agreement shall be renewed automatically for three (3) year renewal terms (each a "Renewal Term"), unless not extended by either Party pursuant to the following sentence (the Initial Term and any Renewal Term, together, the "Term"). Commencing six (6) months prior to the expiration of the Initial Term or any Renewal Term, the Parties shall discuss whether to extend the Term for the immediately succeeding Renewal Term, upon mutually-agreed terms; provided, that if the annual target established pursuant to Section 2(e) for the concluding year has been satisfied, neither Party may prevent the Term for extending for the immediately succeeding Renewal Term. During each such six (6) month period, neither Party may terminate this Agreement. Subject to the foregoing, if the annual target for the concluding year has not been satisfied, then upon the conclusion of such six (6) month period, either Party may, without liability, terminate this Agreement by written notice to the other Party,

with such termination to become effective upon the expiration of such calendar year (without renewal).

(b) Termination for Cause. Except as set forth in the last sentence of this Section 13(b), if either Party defaults in the performance of any material provision of this Agreement, then the non-defaulting Party may give written notice to the defaulting Party that if the default is not cured within thirty (30) days this Agreement will be terminated. If the non-defaulting Party gives such notice and the default is not cured during the thirty-day period, then this Agreement shall automatically terminate at the end of that period. Notwithstanding the foregoing, if Distributor breaches the provisions of Section 9 hereof, then the Company shall be entitled to terminate this Agreement effective immediately upon delivery of written notice to Distributor.

(c) Termination for Insolvency and Related Events. This Agreement shall terminate, without notice, (i) upon the institution by or against either Party of insolvency, receivership or bankruptcy proceedings or any other proceedings for the settlement of such Party's debts, (ii) upon either Party's making an assignment for the benefit of creditors, or (iii) upon either Party's dissolution or ceasing to do business.

(d) Effect of Termination. Purchase orders and services contracted during the Term shall survive the expiration or earlier termination of this Agreement. Subject to the foregoing, if this Agreement is terminated, then all of Distributor's rights and licenses with respect to the Products shall terminate, provided that each Customer license granted in accordance with this Agreement shall survive in accordance with its terms, subject to termination for default in accordance with its terms. Upon termination, Distributor must destroy any and all promotional literature, price quotations, order forms, data, information and other items received by Distributor from Company in connection with this Agreement.

(e) Limitation of Liability. In the event of termination by either Party in accordance with any of the provisions of this Agreement, neither Party shall be liable to the other, because of such termination, for compensation, reimbursement or damages on account of the loss of prospective profits or anticipated sales or on account of expenditures, inventory, investments, leases or commitments in connection with the business or goodwill of either Party. Termination shall not, however, relieve either Party of any obligations incurred prior to the termination, including, without limitation, i) the obligation of Distributor to pay Company for Products purchased prior to such termination or ii) the obligation of Company to provide purchased Products to Distributor.

(f) Survival of Certain Terms. The provisions of Sections 1 and Sections 9-13, and Section 17-18 of this Agreement, and all payment obligations incurred during the term of this Agreement, shall survive the expiration or termination of this Agreement for any reason. All other rights and obligations of the parties shall cease upon termination of this Agreement.

14. Import and Export Requirements. Distributor shall, at its own expense, pay all import and export licenses and permits, customs charges and duty fees, if any, and shall take all other actions, if any, required to accomplish the export and import of the Products purchased by Distributor. The Products are specifically subject to U.S. Export Administration Regulations. Distributor agrees to strictly comply with all export, re-export and import restrictions and regulations of the Department

of Commerce or other agency or authority of the United States or the Territory or other applicable countries, and not to transfer, or authorize the transfer of, directly or indirectly, the Products or any direct product thereof to a prohibited country or otherwise in violation of any such restrictions or regulations. Distributor agrees to ensure that the Products provided hereunder are only installed in the Territory. Distributor's failure to comply with this Section is a material breach of this Agreement.

15. Compliance with Laws; Business Practices.

(a) Each Party shall comply with, and ensure that its contractors and employees comply with, all laws and regulations of the United States and all other jurisdictions in which such Party carries out activities under or related to this Agreement, including laws prohibiting bribery and other unethical business practices. Without limitation, the Parties' performance of this Agreement shall comply with including, but not limited to the Foreign Corrupt Practices Act of 1977 of the United States and, as applicable, the Improper Solicitation and Graft Act (Kim Young Ran Act), and, all other applicable anti-corruption legal requirements and with all applicable embargo and other economic sanctions legal requirements.

(b) Notwithstanding any provisions herein to the contrary, each Party shall indemnify, defend and hold harmless the other Party and its officers, directors, affiliates, employees and representatives from and against any claim, loss, damages, liability, expense or cost of whatever nature, including reasonable attorneys' fees and costs, arising out of or related to such Party's or its employee's or agent's failure to comply with applicable law as provided in this Section 15(a) or the terms and conditions of Section 15(c). The obligation of each Party under this Section 15 shall survive the termination or expiration of this Agreement. Any breach or threatened breach of Section 15(a) and Section 15(c) by a Party shall give the other Party the immediate right to terminate this Agreement.

(c) Anti-Bribery and Anti-Corruption.

(i) Representations and Warranties.

(1) Distributor represents, warrants and covenants to Company that it will comply with, and shall ensure that its stockholders, directors, officers, employees, agents, representatives, and contractors (including Permitted Subcontractors) comply with, the U.S. Foreign Corrupt Practices Act of 1977 ("FCPA"), as amended (15 U.S.C. §§78dd-1 et seq.), and other applicable anti-corruption laws and regulations applicable to a Party in carrying out the activities or related to this Agreement ("Anti-Corruption Laws").

(2) Distributor represents, warrants and covenants to Company that neither it nor any of its stockholders, directors, officers, employees, agents, representatives, or its contractors (including Permitted Subcontractors), has made, offered, promised or authorized or will make, offer, promise or authorize, in connection with the sale of the Products or other performance contemplated in this Agreement, any payment or transfer of anything of value, directly or indirectly, to any person for the purpose of influencing any act or decision of such person or securing an

improper advantage to assist Company or its affiliates in obtaining or retaining business in connection with this Agreement.

(ii) Annual Certification. Distributor agrees that it will, at the request of Company (but no more than once per calendar year), provide Company with a certification in the form hereto attached and incorporated by reference as Exhibit F.

(iii) Training. Distributor agrees that it will cause each person who is involved in carrying out the activities under this Agreement (including without limitation stockholders, directors, officers, employees, agents and representatives, if such persons are involved in carrying out activities under this Agreement) to participate in training related to compliance with Anti-Corruption Laws, such training of which shall consist of such persons taking part in the anti-corruption training program of the Company in Korea or on-line (in which case Korean subtitles shall be prepared and provided by the Company).

(iv) Audit Rights. For the purpose of allowing Company to monitor Distributor's compliance with this Section 15 and/or any Anti-Corruption Laws, the Company shall have the right to conduct an investigation or audit, or have its authorized representatives conduct an investigation or audit of Distributor's fuel cell business related books, records, and other documentation relevant to Distributor's activities under this Agreement, to verify compliance with this Section 15 and with Anti-Corruption Laws. Distributor shall cooperate with such investigation or audit, which shall be conducted through the review of information and materials provided by Distributor at the request of the Company to which is relevant to verification of compliance with this Section 15 or with Anti-Corruption Laws, and Distributor shall grant Company the ability to conduct interviews and Q&A sessions with persons relevant to such audit. Distributor shall cooperate with information and materials requested by the person conducting the audit under this Section.

(v) Notice of Breach. Distributor agrees that, should it learn or have reason to know of (a) any payment or transfer of anything of value or any offer, promise or authorization of any payment or transfer of anything of value to any person for the purpose of obtaining or retaining business or securing any improper advantage for or on behalf of Company or its affiliates; or (b) any other development during the term of this Agreement that in any way makes inaccurate or incomplete any representation, warranty or covenant in this Section 15, Distributor will immediately advise Company of such knowledge and the basis known to Distributor related to such knowledge.

(vi) Relationships to Officials.

(1) During the Term, Distributor represents, warrants, and covenants that it is not and shall not become, and that none of Distributor's directors, officers, employees, agents and representatives are an employee or officer of a government of any country, including any federal, regional or local department , agency or enterprise owned or controlled by the government; an employee or officer of a political party (for the avoidance of doubt, excluding memberships in

any political party); an employee or officer of a public international organization (for the avoidance of doubt, excluding industry related associations and foundations); or a candidate for political office.

(2) Distributor shall implement a program to cause its directors, officers, employees, agents and representatives who are involved in carrying out the performance of this Agreement to notify Distributor if any immediate family member of such person is an employee or officer of a government of any country, including any federal, regional or local department, agency or enterprise owned or controlled by the government; an employee or officer of a political party (for the avoidance of doubt, excluding membership is any political party); an employee or officer of a public international organization (for the avoidance of doubt, excluding industry related associations and foundations); or a candidate for political office. Distributor shall, on a quarterly basis, notify Company of the results of such program, and identify the persons who have notified Distributor of the fact that such person's immediate family member(s) is holding such position(s), and the position(s) that is held by such family member(s).

(vii) Meetings with Government Officials; Reports. Each Party understands and acknowledges that Distributor may meet with government officials in connection with the performance of this Agreement. In the event that Distributor proposes to meet with any government official(s) with the title of director (*kwa jang*) or higher in connection with the performance of this Agreement, Distributor shall provide prior notice to the Company of such proposed meeting, including the name(s) and title of the government officials and a description of the meeting agenda and shall invite the Company to attend all such meetings. In the event the Company decides not to attend or unable to attend such meetings, Distributor shall provide promptly a summary of each such meeting, including the name and title of the attendees to the Company.

(d) Breach and Remedy.

(i) Non-Curable Breach. Distributor's breach of Section 15(a) or Section 15(c)(i) constitutes a non-curable breach of this Agreement. In the event of Distributor's breach of Section 15(a) or Section 15(c)(i), Company shall have the right, exercisable immediately upon written notice to Distributor, to terminate this Agreement, and Company's obligations to Distributor shall be immediately terminated, including without limitation payment of fees (provided, that any and all fees that are accrued and not paid as of the date of termination shall become due and payable as of the date of termination).

(ii) Curable Breach. Distributor's breach of Section 15(b) or any subsection of Section 15(c) other than Section 15(c)(i), if remaining uncured twenty (20) days after written notice from Supplier, shall constitute a breach of this Agreement. In the event of Distributor's breach of Section 15(b) or any subsection of Section 15(c) other than Section 15(c)(i) remains uncured after such period, Distributor shall have the remedies set forth in Section 15(d)(iv).

(iii) Other Variations. In the event that a Party violated Anti-Corruption Laws prior to the Effective Date of the Joinder and Amendment No. 3 to the PDA, dated April 17, 2020,

or violates Anti-Corruption Laws and such violation is not in connection with this Agreement, then the non-violating Party shall have the remedies set forth in Section 15(d)(iv).

(iv) Consequences of Curable Breaches and Other Violations.

(1) In the event that Distributor breaches this Agreement in the manner set forth in Section 15(d)(ii), or a Party violates Anti-Corruption Laws in the manner set forth in Section 15(d)(iii), and such breach or violation has an adverse impact on the non-defaulting Party (as determined by the non-defaulting Party in its discretion), each Party shall use reasonable commercial efforts to work together to avoid exercising any of the remedies set forth in Section 15(d)(iv)(2) (including through taking actions that can address the adverse impact on the non-defaulting Party); provided, that this will not in any way limit the right of the non-breaching or non-violating Party to ultimately exercise the remedies set forth in Section 15(d)(iv)(2) if the adverse impact is not able to be addressed (as determined by the non-breaching or non-violating Party in its discretion).

(2) If the Parties' efforts to address the adverse impact to the non-breaching or non-violating Party pursuant to Section 15(d)(iv)(1) have been unsuccessful (as determined by the non-breaching or non-violating Party in its discretion), then the remedies set forth in this Section 15(d)(iv)(2) shall be available to such Party. The election between Options 1-3 (as defined below in this Section 15(d)(iv)(2)) shall be mutually decided by the Parties, but if the Parties do not reach agreement, then the non-breaching or non-violating Party shall retain the right to terminate this Agreement set forth in as Option 3, below. For the avoidance of doubt, termination of this Agreement shall be the last resort of the Parties after taking efforts pursuant to Section 15(d)(iv)(1) and considering Option 1 and Option 2, below; provided, that this will not in any way limit the right of the non-breaching or non-violating Party to ultimately exercise the termination remedy set forth in Option 3 if the adverse impact is not able to be addressed (as determined by the non-breaching or non-violating Party in its discretion).

"Option 1": Suspend each Party's respective ROFR until such time as such breach or violation no longer has an adverse impact on the non-breaching or non-violating Party (as determined by the non-defaulting Party in its discretion).

"Option 2": If Distributor is the defaulting Party, to assign this Agreement from Distributor to an affiliate of Distributor which is not involved (directly or indirectly) in such breach or violation; provided, than such assignment (a) does not pose an adverse impact to Company (as determined in Company's discretion); and (b) is subject to Company's prior written consent in accordance with Section 18(c); such consent not to be unreasonably withheld.

"Option 3": The non-breaching or non-violating Party may terminate this Agreement terminate this Agreement immediately upon written notice.

16. Export Compliance. Distributor shall not export, re-export, resell, ship or divert directly or indirectly any portion of the Products or other technical information supplied hereunder in any form, including without limitation any technical data furnished hereunder, to any country except as the laws of the United States of America expressly permit, or for which an export license or other governmental approval is required, without first obtaining such license or approval. This obligation shall survive any termination of this Agreement.

17. Limitation of Liability.

(a) NEITHER COMPANY NOR DISTRIBUTOR SHALL BE LIABLE TO THE OTHER BY REASON OF LOSS OF PROFITS, OR FOR ANY SPECIAL, CONSEQUENTIAL, INCIDENTAL, PUNITIVE OR INDIRECT DAMAGES (OR DIRECT DAMAGES IN THE CASE OF THE SUPPLIERS) ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, TORT (INCLUDING WITHOUT LIMITATION NEGLIGENCE), STRICT LIABILITY OR OTHERWISE ARISING OUT OF OR UNDER THIS AGREEMENT OR ANY USE OR INABILITY TO USE THE PRODUCTS OR EQUIPMENT, OR FOR BREACH OF THIS AGREEMENT. EACH PARTY'S TOTAL LIABILITY ARISING OUT OF OR UNDER THIS AGREEMENT, OR FOR BREACH OF THIS AGREEMENT, WHETHER IN CONTRACT, TORT (INCLUDING WITHOUT LIMITATION NEGLIGENCE), STRICT LIABILITY OR OTHERWISE, SHALL NOT EXCEED FOR ANY PURCHASE ORDER THE CONTRACT AMOUNT PURSUANT TO SUCH PURCHASE ORDER, PROVIDED, HOWEVER, [...***...].

(b) Notwithstanding the limitations of liability set forth in Section 17(a), such limitations of liability shall not apply to or limit in anyway any liability of Distributor or Company (i) arising from fraud or willful misconduct or gross negligence of such Party; or (ii) in respect of any obligation of such Party to indemnify for third party claims pursuant to Section 11 (including without limitation in respect of costs and expense incurred by the indemnified Party in respect of such third party claim).

(c) Liability of Bloom Corp and JV. Notwithstanding any other provision of this Agreement to the contrary, the duties and obligations of Bloom Corp and JV under this Agreement are several and not joint, and neither Bloom Corp nor JV shall be liable for the duties or obligations of the other Party arising as "Company" hereunder. Except with respect to Bloom Corp's right to exercise the Company ROFR pursuant to Section 2(a), the rights of Bloom Corp and JV shall be several, and neither Bloom Corp nor JV shall have the authority to waive or exercise any right on behalf of the other Party acting as "Company" hereunder.

18. General.

(a) Governing Law. This Agreement is governed and interpreted in accordance with the laws of the State of California and the United States of America without reference to conflicts of laws principles and excluding the United Nations Convention on Contracts for the Sale of Goods.

(b) Dispute Resolution.

(i) All controversies, claims, disputes or difference in connection with this Agreement shall be finally settled by arbitration administered by the Korean Commercial Arbitration Board ("KCAB") in accordance with the International Arbitration Rules of the KCAB. The venue of arbitration proceedings and seat of arbitration shall be Seoul, the Republic of Korea.

(ii) The number of arbitrators shall be three, with Company and Distributor nominating one arbitrator each and the two arbitrators shall jointly nominate the third arbitrator.

(c) Assignment. Distributor shall not transfer, assign or delegate this Agreement or any rights or obligations hereunder, whether voluntarily, by operation of law or otherwise, without the prior written consent of Company. Subject to the foregoing, the terms and conditions of this Agreement shall be binding upon and inure to the benefit of the parties to it and their respective heirs, successors, assigns and legal representatives.

(d) Publicity. No public release or announcement concerning the transactions contemplated hereby shall be issued by any Party without the prior written consent of the other Parties (which consents shall not be unreasonably withheld, conditioned or delayed), except for any such release or announcement as may be required by securities law or other applicable law or the applicable rules or regulations of any securities exchange or securities market, in which case the disclosing Party shall (to the extent permissible under applicable law) allow the other Parties, as applicable, reasonable time to comment on such release or announcement in advance of such issuance and the disclosing party shall consider the other Parties' comments in good faith.

(e) Merger, Modification and Waiver. This Agreement constitutes the entire agreement between Company and Distributor with respect to the subject matter hereof, and merges all prior negotiations and drafts of the parties with regard thereto. No modification of or amendment to this Agreement, nor any waiver of any rights under this Agreement, by Company shall be effective unless in writing. If there is any conflict between the terms and conditions of this Agreement and the terms and conditions of any Purchase Order or other document, the terms and conditions of this Agreement shall prevail; provided, that if a specific provision of a Purchase Order expressly states that it prevails in the event of conflict with the terms and conditions of this Agreement, then such specific provision of such Purchase Order shall prevail. The waiver of one breach or default or any delay in exercising any rights shall not constitute a waiver of any subsequent breach or default.

(f) Severability. If any of the provisions of this Agreement is held by a court of competent jurisdiction to be invalid or unenforceable under any applicable statute or rule of law, it shall be replaced with the valid provision that most closely reflects the intent of the parties and the remaining provisions shall continue in full force and effect.

(g) Notices. All notices permitted or required under this Agreement shall be in writing and shall be delivered in person; by courier, overnight delivery, or confirmed fax; or mailed by first class, registered or certified mail, postage prepaid, to the address of the Party specified in this Agreement or such address as either Party may specify in writing. Such notice shall be deemed to have been given upon receipt.

Bloom Corp

Bloom Energy Corporation

4353 North First Street
San Jose, CA 95134

Attn:
Email:

JV

Bloom SK Fuel Cell, LLC

1-Dong, 225,
Suchul-Daero (Gongdan-Dong 188-8)
Gumi-Si, Gyeongsangbuk-do, 39270, Korea

Attn:
Email:

Distributor

SK ecoplant Co., Ltd.

19, Yulgok-ro 2-gil, Jongno-gu
Seoul 03143, Korea

Attn:
Email:

(h) Counterparts. This Agreement may be executed in any number of separate counterparts and delivered by electronic means (including in Portable Document Format (.PDF) and digital signature formats such as DocuSign), each of which shall be deemed an original and all of which together shall constitute one instrument.

(i) Advice of Legal Counsel. Each Party acknowledges and represents that, in executing this Agreement, it has had the opportunity to seek advice as to its legal rights from legal counsel and that the person signing on its behalf has read and understood all of the terms and provisions of this Agreement. This Agreement shall not be construed against any Party by reason of the drafting or preparation thereof.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their duly authorized representatives as of the date first written above.

BLOOM CORP

BLOOM ENERGY CORPORATION

By: /s/ Gregory Cameron

Name: Gregory Cameron
Title: Chief Financial Officer

JV

BLOOM SK FUEL CELL, LLC

By: /s/ Randy Ahuja

Name: Randy Ahuja
Title: Chief Executive Officer

DISTRIBUTOR

SK ECOPLANT CO., LTD.

By: /s/ Wang Jae Lee
Name: Wang Jae Lee
Title: Head of Hydrogen Business Center

EXHIBIT A

COMPANY-REQUIRED ANCILLARY EQUIPMENT

1. Mechanical installation kit
2. Electrical installation kit
3. Plumbing installation kit
4. Telemetry cabinet
5. Water Distribution Module
6. Water Distribution Module installation kit
7. Cosmetic side panels
8. Cosmetic rear panels (if systems not installed back-to-back)
9. Forklift cover panels
10. Varmint protection kit
11. Signage kit
12. Installation alignment fixture

EXHIBIT B

PERMITTED SUBCONTRACTORS

Machinery/Piping:

[...*...]**

Electrical/Instrument:

[...*...]**

EXHIBIT C

FORM OF PURCHASE ORDER

[To be agreed in writing by the Parties.]

[*Signatures Follow*]

IN WITNESS WHEREOF, the Parties have caused this Purchase Order to be executed by their duly authorized representatives.

PROPOSED:	**ACCEPTED:**
SK ECOPLANT CO., LTD.	**BLOOM ENERGY CORPORATION**
Signature:	Signature:
_____	_____
Name:	Name:
_____	_____
Title:	Title:
_____	_____
Date:	Date:
_____	_____

EXHIBIT D

FORM OF NOTICE OF COMMISSIONING COMPLETION

Installation Information and Notice of Acceptance

Customer: {Insert Contract Customer Name}

Customer Address: {Insert Site Address}
{Insert City, State, Zip}

Site Address: {Insert Site Name (Site ID)}
{Insert Site Address}
{Insert City, State, Zip}

Bloom Energy Sales Order Number: _____

Installation Information

Product	Serial Number	Shipment Date	Installation Date	Complete Full Power Date

Acceptance Details

By signing below, Bloom Energy represents that the Product in aggregate at the installation Site has passed the following Commissioning tests:

Test Name	Date	Status
Electrical Tie In Connection		Complete
Commissioning Complete		Complete
System Startup		Complete
Permission to Operate		Complete
Full Power Date		Complete

Bloom Energy Corporation

_____
Signature

_____
Name

_____
Date

EXHIBIT E

EXHIBIT F

FORM OF COMPLIANCE CERTIFICATION

SK ecoplant Co. Ltd *("**Distributor**"),* Bloom Energy Corporation *("**Bloom Corp**")* and Bloom SK Fuel Cell, Ltd. (*"**JV**"*) have entered into that certain Amended and Restated Preferred Distributor Agreement, dated as of [ ], 2021 (as amended, amended and restated, supplemented or modified from time to time, the *"**A&R PDA**")*. Capitalized terms used herein and not otherwise defined herein shall have the meanings ascribed to such terms in the A&R PDA.

The undersigned certifies, in its capacity as [TITLE] of Distributor, and on behalf of Distributor for the benefit of Company, that:

(a) As of the date hereof, the undersigned is an officer of Distributor with responsibility for assuring that Distributor complies with the certifications set forth herein.

(b) From November 14, 2018 to the date hereof, none of Distributor, its stockholders, its directors, its officers, its employees, its representatives or its agents have (a) made, offered, promised or authorized, in connection with the sale of Products or other performance contemplated in the A&R PDA, any payment or transfer anything of value, directly or indirectly, to any person for the purpose of influencing any act or decision of such person or securing an improper advantage in connection with any activity arising from the performance of the A&R PDA; or (b) otherwise violated any Anti-Corruption Laws (as defined in the A&R PDA) in connection with any activity in the performance of the A&R PDA.

(c) As of the date hereof, the undersigned is not aware of any activities by Distributor or any of its stockholders, its directors, its officers, its employees, its representatives, or its agents that constitutes a violation of Section 15 of the A&R PDA (or subsections thereof).

Distributor covenants that, should the undersigned learn of any matter that would cause the certifications set forth above to become untrue or materially misleading, the undersigned shall immediately advise the General Counsel of Bloom Corp and the Representative Director of JV.

DISTRIBUTOR

SK ECOPLANT CO., LTD.

By: _____

Name: [_]

Title: [_]

Date: [_]

Exhibit 10.3

EXECUTION VERSION

AMENDMENT TO THE JOINT VENTURE AGREEMENT

This Amendment (this "Amendment") dated as of October 23, 2021, to that Joint Venture Agreement ("JVA") dated as of September 24, 2019, is executed by and between SK ecoplant Co., Ltd. (f/k/a SK Engineering & Construction Co., Ltd.) ("SK") and Bloom Energy Corporation ("Bloom Energy"). SK and Bloom Energy shall be referred to individually as a "Party" and collectively as "Parties." Capitalized terms used but not defined herein have the meanings ascribed to them in the JVA.

RECITALS

WHEREAS, the Parties are entering into that Securities Purchase Agreement ("SPA"), dated as of the date hereof, pursuant to which SK (or its designee) shall purchase from Bloom Energy certain shares of capital stock of Bloom Energy; and

WHEREAS, concurrently with the execution of the SPA, the Parties are entering into this Amendment to expand the scope of the business of the JV Company and targeted markets and amend certain portions of the JVA as set forth herein.

NOW THEREFORE, the Parties agree as follows:

1. Definitions. The corresponding definitions in Section 1.1 of Schedule 1 are hereby amended and restated as follows:

   a. "Ancillary Equipment" has the meaning set forth in the JVA.

   b. "Energy Server" has the meaning set forth in the PDA.

   c. "YFP" means "Component EP" as such term is defined in the PDA.

   d. "YPE" means "Component PE" as such term is defined in the PDA.

   e. "YAC" means "Component AC" as such term is defined in the PDA.

   f. "YPM" means "Component PM" as such term is defined in the PDA.

2. JV Scope. The lead-in paragraph of Section 6.2 is hereby amended by deleting it in its entirety and replacing it with the following:

"The scope of the business of the JV Company involving manufacture and assembly, of the System shall consist of, (a) during the fourth quarter of 2021, assembly of the YFP (and its successors) and the YAC (and its successors) portions of the Energy Server, (b) during the course of 2022 and in any case before the end of 2022, preparing for full assembly of the Energy Servers, including by making the necessary capital improvements, so that full assembly of Energy Servers will begin in January 2023, which will include YPE (and its successors), BOP support systems that provide fuel, air, exhaust, and water flows to and from the Hot Box, FCM, integration of the YPM (and its successors), which consists of the YPE and the FCM, and any other component, module and/or equipment necessary to support or assist the Energy Server (the "***Full Assembly***") and (c) at all times, the Ancillary Equipment (collectively, the "***JV Scope***").

3. Manufacturing Facilities. Section 6.2(a) is hereby amended by deleting it in its entirety and replacing it with the following:

"(a) Manufacturing Facilities. Bloom Energy and SK shall commence development and expansion of the existing manufacturing facility of the JV Company or development of a new manufacturing facility ("***Manufacturing Facilities***"). The commencement of Full Assembly activities at the Manufacturing Facilities shall be targeted for January 2023. In case of 2024, sales, marketing, distribution and deployment of the System in Korea and Other Territory shall be fulfilled from the Manufacturing Facilities. It is the understanding of the Parties that the JV Company must receive Fuel Cell Stack or the Fuel Cell Stack integration components of the Hot Box in a volume equivalent to the Original Quarterly Quantity (as defined in the PDA) in 2022, 2023 and 2024."

4. Sell-Through Model. Section 6.3 is hereby amended by deleting it in its entirety and replacing it with the following:

"6.3 Sell-Through Model. Sales and purchases with respect to the Systems (or components thereof), as among Bloom Energy, SK and the JV Company, shall be structured pursuant to the principles set forth below:

(a) Sales to SK.

(i) *Sales to SK by the JV Company*. Each component of the System that constitutes JV Scope and is available for sale by the JV Company at the time of sale shall be exclusively sold by the JV Company to SK.

(ii) *Sales to SK by Bloom Energy*. Each component of the System that does not constitute JV Scope at the time of sale shall be exclusively sold by Bloom Energy to SK.

(iii) *SK Procurement*. SK shall continue to separately procure the Distributor-Procured Ancillary Equipment (as defined in the PDA) in accordance with the PDA.

(b) Sales to the JV Company

(i) *Sales to the JV Company by Suppliers.* The JV Company shall directly source and procure the JV Scope in accordance with Section 6.2(c) to the extent possible and develop its own supply network, all in accordance with Bloom Energy's supplier qualification process and with Bloom Energy's prior written approval. Suppliers qualified by the JV Company shall not be exclusive to the JV Company.

(ii) *Sales to the JV Company by Bloom Energy*. The Parties anticipate that the JV Scope will be sourced by the JV Company from third parties once Bloom Energy is satisfied that: (1) an adequate procurement and supply-chain organization has been developed within the JV Company; (2) competitive pricing has been established between the JV Company and third-party vendors; and, (3) the entire sourcing function is ready to be transitioned to the JV Company. If the conditions set forth above have been met to Bloom Energy's reasonable satisfaction, the Parties will reconvene to determine: (1) when and to what extent the sourcing function will be transitioned to the JV Company; and (2) whether, and to what extent, Bloom Energy will discontinue sales to the JV Company after such transition.

(iii) *Sales to Bloom Energy or Third Parties*. If, under the PDA, SK does not exercise the Distributor ROFR, there is an applicable Exclusion, or the Distributor ROFR is no longer effective (in each case, as defined by the terms of the PDA), then JV Scope associated with such Product (as defined in the PDA) sale may be sold directly from the JV Company to Bloom Energy or to a third party."

5. Termination. Section 16.2(d) is hereby amended by deleting it in its entirety and replacing it with the following:

"(d) By Bloom Energy if SK or any of its majority-owned subsidiaries competes with the JV Company or Bloom Energy by engaging in the fuel cell business at the time such entity is under the Control of SK."

6. Publicity. The following shall be added as Section 18.4:

"18.4 Publicity. No public release or announcement concerning the transactions contemplated hereby shall be issued by any of the Party or JV Company without the prior written consent of the other Parties (which consents shall not be unreasonably withheld, conditioned or delayed), except for any such release or announcement as may be required by securities Law or other applicable Law or the applicable rules or regulations of any securities exchange or securities market, in which case the respective Party, as the case may be, shall (to the extent permissible under applicable Law) allow the other Parties, as applicable, reasonable time to comment on such release or announcement in advance of such issuance and the disclosing party shall consider the other Party's comments in good faith."

7. Miscellaneous.

a. Except for any amendments to the JVA made pursuant to this Amendment, all terms and conditions of the JVA will continue in full force and effect in accordance with its provisions on the date of this Amendment.

b. To the extent of a conflict or inconsistency between the JVA and this Amendment, this Amendment will prevail.

c. References to the JVA will be to the JVA, as amended by this Amendment.

d. This Amendment shall be governed by the laws of the Republic of Korea.

e. This Amendment may be executed in any number of counterparts, each of which shall be considered an original, and all of such counterparts shall constitute one Amendment. To facilitate execution of this Amendment, each of the Parties may execute and exchange by e-mail as a portable document format or other electronic imaging, counterparts of the signature page, which shall be deemed original signatures for all purposes.

f. Articles 21 through 24 of the JVA shall apply *mutatis mutadis* to this Amendment.

[Signature pages follow]

IN WITNESS WHEREOF, the Parties have caused this Amendment to be executed by their respective officers or other representatives thereunto duly authorized as of the date first above written.

SK ecoplant Co., Ltd.

By: _/s/ Wang Jae Lee_____
Name: Wang Jae Lee
Title: Head of Hydrogen Business Center

IN WITNESS WHEREOF, the Parties have caused this Amendment to be executed by their respective officers or other representatives thereunto duly authorized as of the date first above written.

Bloom Energy Corporation

By: _/s/ Gregory Cameron_____
Name: Gregory Cameron
Title: Chief Financial Officer

EXHIBIT 31.1

CERTIFICATIONS OF CHIEF EXECUTIVE OFFICER

PURSUANT TO RULE 13a-14(a) AND RULE 15d-14(a)

OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED,

AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, KR Sridhar, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the quarter ended September 30, 2021 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: November 5, 2021

By: /s/ KR Sridhar

KR Sridhar
President and Chief Executive Officer
(Principal Executive Officer)

EXHIBIT 31.2

CERTIFICATIONS OF CHIEF FINANCIAL OFFICER
PURSUANT TO RULE 13a-14(a) AND RULE 15d-14(a)
OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Gregory Cameron, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the quarter ended September 30, 2021 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: November 5, 2021

By: /s/ Gregory Cameron
Gregory Cameron
Executive Vice President and 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

The following certifications are hereby made in connection with the Quarterly Report on Form 10-Q for the quarter ended September 30, 2021 of Bloom Energy Corporation (the "Company") as filed with the Securities and Exchange Commission on the date hereof (the "Report"):

I, KR Sridhar, President and Chief Executive Officer, hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

1. The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

November 5, 2021

By: /s/ KR Sridhar
KR Sridhar
President and Chief Executive Officer
(Principal Executive Officer)

I, Gregory Cameron, Executive Vice President and Chief Financial Officer, hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

1. The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 5, 2021

By: /s/ Gregory Cameron
Gregory Cameron
Executive Vice President and Chief Financial Officer
(Principal Financial Officer)