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 quarterly period ended September 30, 2020

or

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

Commission File Number 001-38598



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

Delaware	**77-0565408**
(Sate or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification 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 Act). Yes ☐ No ☑

The number of shares of the registrant's common stock outstanding as of October 30, 2020 was as follows:

Class A Common Stock, $0.0001 par value 138,307,369 shares

Class B Common Stock, $0.0001 par value 27,891,011 shares

Bloom Energy Corporation

Quarterly Report on Form 10-Q for the Three and Nine Months Ended September 30, 2020

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

Explanatory Note

As previously disclosed, we restated the relevant unaudited interim condensed consolidated financial statements as of and for the quarterly periods ended September 30, 2019, June 30, 2019, and March 31, 2019. The quarterly restatements are or will be effective with the filing of our 2020 Quarterly Reports on Form 10-Q. See Note 2, *Restatement of Previously Issued Condensed Consolidated Financial Statements*, in Part I, Item 1, *Financial Statements*, for additional information related to the restatement of our condensed consolidated financial statements as of and for the three and nine months ended September 30, 2019.

Part I

ITEM 1 - FINANCIAL STATEMENTS

Bloom Energy Corporation
Condensed Consolidated Balance Sheets
(in thousands, unaudited)

	September 30, 2020	December 31, 2019
Assets		
Current assets:		
Cash and cash equivalents[1]	$ 325,241	$ 202,823
Restricted cash[1]	47,212	30,804
Accounts receivable[1]	50,481	37,828
Inventories	131,911	109,606
Deferred cost of revenue	59,627	58,470
Customer financing receivable[1]	5,341	5,108
Prepaid expenses and other current assets[1]	30,240	28,068
Total current assets	650,053	472,707
Property, plant and equipment, net[1]	601,929	607,059
Customer financing receivable, non-current[1]	46,725	50,747
Restricted cash, non-current[1]	131,916	143,761
Deferred cost of revenue, non-current	3,104	6,665
Other long-term assets[1]	40,632	41,652
Total assets	$ 1,474,359	$ 1,322,591
Liabilities, Redeemable Noncontrolling Interest, Stockholders' Deficit and Noncontrolling Interest		
Current liabilities:		
Accounts payable[1]	$ 64,282	$ 55,579
Accrued warranty	9,807	10,333
Accrued expenses and other current liabilities[1]	77,882	70,284
Deferred revenue and customer deposits[1]	95,546	89,192
Financing obligations	12,342	10,993
Current portion of recourse debt	115,657	304,627
Current portion of non-recourse debt[1]	14,000	8,273
Current portion of recourse debt from related parties	—	20,801
Current portion of non-recourse debt from related parties[1]	—	3,882
Total current liabilities	389,516	573,964
Derivative liabilities[1]	19,542	17,551
Deferred revenue and customer deposits, net of current portion[1]	103,517	125,529
Financing obligations, non-current	451,796	446,165
Long-term portion of recourse debt	227,481	75,962
Long-term portion of non-recourse debt[1]	213,209	192,180
Long-term portion of non-recourse debt from related parties[1]	—	31,087
Other long-term liabilities[1]	26,618	28,013
Total liabilities	1,431,679	1,490,451
Commitments and contingencies (Note 14)		
Redeemable noncontrolling interest	189	443
Stockholders' deficit:		
Common stock	15	12
Additional paid-in capital	3,054,376	2,686,759
Accumulated other comprehensive income (loss)	(9)	19
Accumulated deficit	(3,076,800)	(2,946,384)
Total stockholders' deficit	(22,418)	(259,594)
Noncontrolling interest	64,909	91,291
Total liabilities, redeemable noncontrolling interest, stockholders' deficit and noncontrolling interest	$ 1,474,359	$ 1,322,591

[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 13, Power Purchase Agreement Programs*).

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,	
	2020	2019 As Restated	2020	2019 As Restated
Revenue:				
Product	$ 131,076	$ 163,902	$ 346,832	$ 398,909
Installation	26,603	21,102	73,060	46,397
Service	26,141	23,665	77,496	70,158
Electricity	16,485	15,638	47,472	56,170
Total revenue	200,305	224,307	544,860	571,634
Cost of revenue:				
Product	72,037	91,697	227,653	293,697
Installation	27,872	26,141	86,938	59,586
Service	33,214	36,427	92,836	83,111
Electricity	11,195	27,317	35,266	62,601
Total cost of revenue	144,318	181,582	442,693	498,995
Gross profit	55,987	42,725	102,167	72,639
Operating expenses:				
Research and development	19,231	23,389	61,887	82,020
Sales and marketing	11,700	17,649	37,076	56,216
General and administrative	25,428	36,599	79,471	119,335
Total operating expenses	56,359	77,637	178,434	257,571
Loss from operations	(372)	(34,912)	(76,267)	(184,932)
Interest income	254	1,214	1,405	4,799
Interest expense	(19,902)	(21,323)	(55,030)	(65,845)
Interest expense to related parties	(353)	(1,605)	(2,513)	(4,823)
Other income (expense), net	(221)	525	(4,142)	568
Gain (loss) on extinguishment of debt	1,220	—	(12,878)	—
Gain (loss) on revaluation of embedded derivatives	1,505	(540)	2,201	(1,620)
Loss before income taxes	(17,869)	(56,641)	(147,224)	(251,853)
Income tax provision	7	136	272	602
Net loss	(17,876)	(56,777)	(147,496)	(252,455)
Less: Net loss attributable to noncontrolling interests and redeemable noncontrolling interests	(5,922)	(5,027)	(17,081)	(13,874)
Net loss attributable to Class A and Class B common stockholders	$ (11,954)	$ (51,750)	$ (130,415)	(238,581)
Net loss per share available to Class A and Class B common stockholders, basic and diluted	$ (0.09)	$ (0.44)	$ (1.01)	$ (2.09)
Weighted average shares used to compute net loss per share attributable to Class A and Class B common stockholders, basic and diluted	138,964	116,330	129,571	113,948

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,	
	2020	2019	2020	2019
		As Restated		As Restated
Net loss	$ (17,876)	$ (56,777)	$ (147,496)	$ (252,455)
Other comprehensive income (loss), net of taxes:				
Unrealized gain (loss) on available-for-sale securities	—	(12)	(23)	14
Change in derivative instruments designated and qualifying in cash flow hedges	573	(2,444)	(8,144)	(8,137)
Other comprehensive income (loss), net of taxes	573	(2,456)	(8,167)	(8,123)
Comprehensive loss	(17,303)	(59,233)	(155,663)	(260,578)
Less: Comprehensive loss attributable to noncontrolling interests and redeemable noncontrolling interests	(5,349)	(7,484)	(25,219)	(21,719)
Comprehensive loss attributable to Class A and Class B stockholders	$ (11,954)	$ (51,749)	$ (130,444)	$ (238,859)

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

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

	Three Months Ended September 30, 2020							
	Redeemable Noncontrolling Interest	Class A and Class B Common Stock[1]		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Deficit	Noncontrolling Interest
		Shares	Amount					
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 expense	—	—	—	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

	Three Months Ended September 30, 2019							
	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 June 30, 2019 (as Restated)	$ 505	113,949,343	$ 11	$ 2,604,034	$ (148)	$ (2,828,801)	$ (224,904)	$ 104,072
Issuance of restricted stock awards	—	2,837,343	1	—	—	—	1	—
ESPP purchase	—	1,022,397	—	4,267	—	—	4,267	—
Exercise of stock options	—	8,546	—	35	—	—	35	—
Stock-based compensation expense	—	—	—	39,537	—	—	39,537	—
Unrealized loss on available for sale securities	—	—	—	—	(12)	—	(12)	—
Change in effective portion of interest rate swap agreement	—	—	—	—	13	—	13	(2,457)
Distributions to noncontrolling interests	(288)	—	—	—	—	—	—	(1,042)
Net income (loss) (as restated)	340	—	—	—	—	(51,750)	(51,750)	(5,367)
Balances at September 30, 2019 (as Restated)	$ 557	117,817,629	$ 12	$ 2,647,873	$ (147)	$ (2,880,551)	$ (232,812)	$ 95,206

	Nine Months Ended September 30, 2020							
	Redeemable Noncontrolling Interest	Class A and Class B Common Stock[1]		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Deficit	Noncontrolling Interest
		Shares	Amount					
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 expense	—	—	—	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)
Proceeds from noncontrolling interest	—	—	—	—	—	—	—	4,314
Net income (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

	Nine Months Ended September 30, 2019							
	Redeemable Noncontrolling Interest	Class A and Class B Common Stock[1]		Additional Paid-In Capital	Accumulated Other Comprehensive Gain (Loss)	Accumulated Deficit	Total Stockholders' Deficit	Noncontrolling Interest
		Shares	Amount					
Balances at December 31, 2018 (as Restated)	$ 57,261	109,421,183	$ 11	$ 2,481,352	$ 131	$ (2,624,104)	$ (142,610)	$ 125,110
Cumulative effect upon adoption of new accounting standard (Note 3)	—	—	—	—	—	(17,996)	(17,996)	—
Issuance of restricted stock awards	—	6,341,441	1		—	—	1	—
ESPP purchase	—	1,718,433	—	11,183	—	—	11,183	—
Exercise of stock options	—	336,572	—	1,440	—	—	1,440	—
Stock-based compensation expense	—	—	—	153,898	—	—	153,898	—
Unrealized gain on available for sale securities	—	—	—	—	14	—	14	—
Change in effective portion of interest rate swap agreement	—	—	—	—	(292)	—	(292)	(7,845)
Distributions to noncontrolling interests	(3,825)	—	—	—	—	—	—	(5,250)
Mandatory redemption of noncontrolling interests	(55,684)	—	—	—	—	—	—	—
Cumulative effect of hedge accounting	—	—	—	—	—	130	130	(130)
Net income (loss) (as restated)	2,805	—	—	—	—	(238,581)	(238,581)	(16,679)
Balances at September 30, 2019 (as Restated)	$ 557	117,817,629	$ 12	$ 2,647,873	$ (147)	$ (2,880,551)	$ (232,812)	$ 95,206

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,	
	2020	2019
		As Restated
Cash flows from operating activities:		
Net loss	$ (147,496)	$ (252,455)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:		
Depreciation and amortization	38,888	64,948
Write-off of property, plant and equipment, net	36	2,987
Impairment of equity method investment	4,236	—
Write-off of PPA II and PPA IIIb decommissioned assets	—	25,613
Debt make-whole expense	—	5,934
Revaluation of derivative contracts	(2,339)	2,955
Stock-based compensation	57,385	160,233
Loss on long-term REC purchase contract	72	61
Loss on extinguishment of debt	11,785	—
Amortization of debt issuance and premium cost, net	(195)	16,295
Changes in operating assets and liabilities:		
Accounts receivable	(12,654)	63,426
Inventories	(22,772)	(1,775)
Deferred cost of revenue	1,562	(2,344)
Customer financing receivable and other	3,790	4,142
Prepaid expenses and other current assets	(2,647)	8,071
Other long-term assets	(3,217)	1,294
Accounts payable	8,704	14,171
Accrued warranty	(525)	(4,074)
Accrued expenses and other current liabilities	3,866	5,191
Deferred revenue and customer deposits	(15,658)	22,252
Other long-term liabilities	(2,811)	4,560
Net cash (used in) provided by operating activities	(79,990)	141,485
Cash flows from investing activities:		
Purchase of property, plant and equipment	(33,066)	(39,690)
Payments for acquisition of intangible assets	—	(1,478)
Proceeds from maturity of marketable securities	—	104,500
Net cash (used in) provided by investing activities	(33,066)	63,332
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	(92,546)	(93,263)
Repayment of debt to related parties	(2,105)	(1,691)
Debt make-whole payment	—	(5,934)
Debt issuance costs	(13,247)	—
Proceeds from financing obligations	14,807	20,333
Repayment of financing obligations	(7,828)	(6,419)
Proceeds from noncontrolling interest	4,314	—
Payments to noncontrolling and redeemable noncontrolling interests	—	(43,713)
Distributions to noncontrolling and redeemable noncontrolling interests	(6,103)	(9,363)
Proceeds from issuance of common stock	12,745	12,623
Net cash provided by (used in) financing activities	240,037	(127,427)
Net increase in cash, cash equivalents, and restricted cash	126,981	77,390
Cash, cash equivalents, and restricted cash:		
Beginning of period	377,388	280,485
End of period	$ 504,369	$ 357,875
Supplemental disclosure of cash flow information:		
Cash paid during the period for interest	$ 56,607	$ 53,772
Cash paid during the period for taxes	353	715
Non-cash investing and financing activities:		
Liabilities recorded for property, plant and equipment	$ 350	$ 2,574

Liabilities recorded for noncontrolling and redeemable noncontrolling interest	—	11,971
Equity investment in PPA II assets	—	27,809
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 distributions to Equity Investors	—	288
Accrued interest for notes	30	1,347
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 Condensed Consolidated Financial Statements

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

Nature of Business

We design, manufacture, sell and, in certain cases, install solid-oxide fuel cell systems ("Energy Servers") for on-site power generation. Our Energy Servers utilize an innovative fuel cell technology and provide efficient energy generation with reduced operating costs and lower greenhouse gas emissions as compared to conventional fossil fuel generation. By generating power where it is consumed, our energy producing systems offer increased electrical reliability and improved energy security while providing a path to energy independence.

Liquidity

We have generally incurred operating losses and negative cash flows from operations since our inception. On March 31, 2020, we extended the maturity of our current debt to reduce our required debt payments in the next 12 months. After the following new debt offerings, debt extensions and conversions to equity were completed, the current portion of our total recourse and non-recourse debt was $129.7 million as of September 30, 2020. Notable elements of our new debt offerings, debt extensions and conversions are as follows:

- On March 31, 2020, we entered into an Amendment Support Agreement (the “Amendment Support Agreement”) with the beneficial owners of our outstanding 6% Convertible Notes (the “6% Convertible Notes”) due December 1, 2020 pursuant to which the maturity date of the outstanding 6% Convertible Notes was extended to December 1, 2021, the interest rate increased from 6% to 10%, and the strike price on the conversion feature was reduced from $11.25 to $8.00 per share. The Amendment Support Agreement required that we repay at least $70.0 million of these 10% Convertible Notes due 2021 (the “10% Convertible Notes”) on or before September 1, 2020, which we satisfied through a cash payment of $70.0 million on May 1, 2020. The amended terms are reflected in the Amended and Restated Indenture, dated April 20, 2020, between Bloom Energy and U.S. Bank National Association, as trustee (the "Restated Indenture").
- In conjunction with entering into the Amendment Support Agreement on March 31, 2020, we also entered into a 10% Convertible Note Purchase Agreement with Foris Ventures, LLC, a new noteholder, and New Enterprise Associates 10, Limited Partnership, an existing noteholder, (both of the noteholders were previously considered related parties) and we issued an additional $30.0 million aggregate principal amount of 10% Convertible Notes. The Restated Indenture was also amended to reflect a new principal amount of $290.0 million to accommodate the additional $30.0 million in new 10% Convertible Notes. In August and September 2020, we called a total of $153.1 million of the 10% Convertible Notes and the noteholders, at their option, converted their notes into 19.1 million shares of our Class B common stock, which were subsequently exchanged for Class A common stock.
- On March 31, 2020, we entered into an Amended and Restated Subordinated Secured Convertible Note Modification Agreement (the “Constellation Note Modification Agreement”) with Constellation NewEnergy, Inc. (“Constellation”), pursuant to which Constellation agreed to extend the maturity date to December 31, 2021, increase the interest rate from 5% to 10% and reduce the strike price on the conversion feature from $38.64 to $8.00 per share. On June 18, 2020, Constellation exercised their voluntary conversion feature and exchanged their entire Constellation note at the conversion price of $8.00 per share into 4.7 million shares of Class B common stock, which at Constellation's option was converted into Class A common stock. At the time of this exchange, the unamortized premium of $3.4 million was recognized as an adjustment to additional paid in capital.
- On May 1, 2020, we entered into a note purchase agreement pursuant to which certain investors purchased $70.0 million of 10.25% Senior Secured Notes due 2027 (the “10.25% Senior Secured Notes”) in a private placement. The proceeds from this note were used to extinguish the $70.0 million of 10% Convertible Notes on May 1, 2020.
- In August 2020, we issued an additional $230.0 million aggregate principal amount of our 2.5% Green Convertible Senior Notes due 2025 (the “Green Notes”). The Green Notes were issued pursuant to, and are governed by, an indenture (the “Green Note Indenture”), dated as of August 11, 2020, between Bloom Energy and U.S. Bank National Association, as trustee.

The impact of the COVID-19 pandemic on our ability to execute our business strategy and on our financial position and results of operations is uncertain. Our future cash flow requirements may vary materially from those currently planned and will depend on many factors, including our rate of revenue growth, the timing and extent of spending on research and development

efforts and other business initiatives, the rate of growth in the volume of system builds, the expansion of sales and marketing activities, market acceptance of our product, our ability to secure financing for customer use, the timing of installations, and overall economic conditions including the impact of COVID-19 on our ongoing and future operations. However, 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, but we may access capital markets opportunistically to continue to improve our capital structure if market conditions are favorable.

For additional information, see Note 7, *Outstanding Loans and Security Agreements* and Note 17, *Subsequent Events*.

Basis of Presentation

We have prepared the unaudited 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, the condensed consolidated financial statements do not include all disclosures required by generally accepted accounting principles as applied in the United States ("U.S. GAAP"). However, we believe that the disclosures herein are adequate to ensure the information presented is not misleading. The condensed consolidated balance sheets as of September 30, 2020 and December 31, 2019 (the latter has been derived from the audited consolidated financial statements included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019), and the condensed consolidated statements of operations, of comprehensive loss, of redeemable noncontrolling interest, total stockholders' deficit and noncontrolling interest, and of cash flows for the periods ended September 30, 2020 and 2019, and related notes, should be read in conjunction with the audited financial statements and the notes thereto included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019, as filed with the SEC on March 31, 2020.

We believe that all necessary adjustments, which consisted only of normal recurring items, have been included in the accompanying financial statements to fairly state the results of the interim periods. The results of operations for the interim periods presented are not necessarily indicative of the operating results to be expected for any subsequent interim period or for our fiscal year ending December 31, 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 13, *Power Purchase Agreement Programs*. We evaluate our relationships with the PPA Entities on an ongoing basis to ensure that we continue to be the primary beneficiary. All intercompany transactions and balances have been eliminated in consolidation.

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, assumptions to compute the fair value of debt financings, lease and non-lease components and related financing obligations such as incremental borrowing rates, estimated output, efficiency and residual value of the Energy Servers, warranty, product performance guaranties and extended maintenance, derivative valuations, estimates for recapture of U.S. Treasury grants and similar grants, estimates relating to contractual indemnities provisions, estimates for income taxes and deferred tax asset valuation allowances, and stock-based compensation costs. The full extent to which the COVID-19 pandemic will directly or indirectly impact our business, results of operations and financial condition, including sales, expenses, our allowance for doubtful accounts, stock-based compensation, the carrying value of our long-lived assets, inventory, financial assets, and valuation allowances for tax assets, will depend on future developments that are highly uncertain, including as a result of new information that may emerge concerning the COVID-19 pandemic and the actions taken to contain it or treat it, as well as the economic impact on local,

regional, national and international customers, suppliers and markets. We have made estimates of the impact of COVID-19 within our financial statements and there may be changes to those estimates in future periods as new information becomes available. 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, 2020, total revenue in the Asia Pacific region was 24% and 30%, respectively, of our total revenue. In the three and nine months ended September 30, 2019, total revenue in the Asia Pacific region was 16% and 22%, respectively, of our total revenue.

Credit Risk - At September 30, 2020, two customers, CoreSite Realty Corp. and Market Nugget, Inc. accounted for approximately 18%, and 14% of accounts receivable, respectively. At December 31, 2019, two customers, Costco Wholesale Corporation and The Kraft Group LLC, accounted for approximately 19% and 17% of accounts receivable, respectively. At September 30, 2020 and December 31, 2019, we did not maintain any allowances for doubtful accounts as we deemed all of our receivables fully collectible. To date, we have neither provided an allowance for uncollectible accounts nor experienced any credit loss.

Customer Risk - In the quarter ended September 30, 2020, revenue from three customers, Duke Energy Corporation, SK Engineering & Construction Co., Ltd. ("SK E&C"), and Certain Solar, accounted for approximately 25%, 24% and 21%, respectively, of our total revenue. In the nine months ended September 30, 2020, revenue from two customers, SK E&C and Duke Energy, accounted for approximately 29% and 29%, respectively, of our total revenue. In the quarter ended September 30, 2019, revenue from two customers, The Southern Company and SK E&C, accounted for approximately 29% and 16%, respectively, of our total revenue. In the nine months ended September 30, 2019, revenue from two customers, The Southern Company and SK E&C, accounted for approximately 38% and 22%, respectively, of our total revenue. Duke Energy and The Southern Company are each Operating Companies party to their own portfolio of power purchase agreements (each, a “PPA”). Each Operating Company purchased the Energy Servers contemplated by each PPA from us. Operating Companies with a portfolio of PPAs, but which we have no equity interest, is called a “Third-Party PPA Transaction.”

Summary of Significant Accounting Policies

The significant accounting policies used in preparation of these condensed consolidated financial statements for the periods ended September 30, 2020 are consistent with those discussed in Note 1 to the consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2019, except as described below.

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 2020

Fair Value Measurement - In August 2018, the Financial Accounting Standards Board ("FASB") issued ASU 2018-13, *Fair Value Measurement Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement* ("ASU 2018-13"). ASU 2018-13 has eliminated, amended and added disclosure requirements for fair value measurements. Entities will no longer be required to disclose the amount of, and reasons for, transfers between Level 1 and Level 2 of the fair value hierarchy, the policy of timing of transfers between levels of the fair value hierarchy and the valuation processes for Level 3 fair value measurements. Companies will be required to disclose the range and weighted average used to develop significant unobservable inputs for Level 3 fair value measurements. ASU 2018-13 was effective for annual and interim periods beginning after December 15, 2019. Early adoption was permitted. We adopted ASU 2018-13 as of January 1, 2020 and the adoption did not have a material effect on our financial statements and related disclosures.

Stock Compensation - In June 2018, FASB issued ASU 2018-07, *Compensation - Stock Compensation: Improvements to Nonemployee Share-Based Payment Accounting* ("ASU 2018-07"), which aligns the accounting for share-based payment awards issued to employees and nonemployees. Measurement of equity-classified nonemployee awards will now be valued on the grant date and will no longer be remeasured through the performance completion date. ASU 2018-07 also changes the accounting for nonemployee awards with performance conditions to recognize compensation cost when achievement of the

performance condition is probable, rather than upon achievement of the performance condition, as well as eliminating the requirement to reassess the equity or liability classification for nonemployee awards upon vesting, except for certain award types. ASU 2018-07 was effective for us for interim and annual reporting periods beginning after December 15, 2019. Early adoption was permitted. We adopted ASU 2018-07 using a modified retrospective approach on January 1, 2020 and the adoption of ASU 2018-07 did not have a material effect on our financial statements and related disclosures.

Accounting Guidance Not Yet Adopted

We will no longer be an emerging growth company as of December 31, 2020, after which we will not be able to take advantage of the reduced disclosure requirements applicable to emerging growth companies. As a result, we expect to adopt the guidance below regarding *Leases* and *Financial Instruments* on a modified retrospective basis on December 31, 2020 and to reflect the adoption as of January 1, 2020 in our annual results for the period ended December 31, 2020.

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

Additionally, we expect to continue to enter into Managed Services related financing leases in the future and be the lessor of Energy Servers that are subject to power purchase agreements ("PPAs") with customers under our Managed Services Program and our PPA Program that are currently accounted for as leases. ASC 842 provides a number of optional practical expedients in transition. We will elect the package of practical expedients, which permits us to (1) not reassess whether existing contracts contain leases, (2) carryforward the existing lease classification, and (3) not reassess initial direct costs associated with existing leases.

While we continue to evaluate the effect of adopting ASC 842, we expect that these new standards will not have a material impact to our financial position. We expect to recognize ROU assets and lease liabilities on the consolidated balance sheets with corresponding ROU assets in the range of $24 million to $30 million and lease liabilities in the range of $36 million to $44 million based on the present value of the remaining minimum rental payments under current leasing standards for existing operating leases. While we do not expect that the adoption of ASC 842 will have a material effect on operating income (loss) and net cash flows, it will however impact the classification between cash flows from operations and cash flows from financing activities on the consolidated statements of cash flows.

Financial Instruments - In June 2016, FASB issued ASU 2016-13, *Financial Instruments- Credit Losses*: *Measurement of Credit Losses on Financial Instruments (Topic 326) as amended,* ("ASU 326"), including in February 2020, the FASB issued ASU 2020-02, which provides guidance regarding methodologies, documentation, and internal controls related to expected credit losses. The pronouncement eliminates the incurred credit loss impairment methodology and replaces it with an expected credit loss concept based on historical experience, current conditions, and reasonable and supportable forecasts. Early adoption is permitted. Topic 326 requires a modified retrospective approach by recording a cumulative-effect adjustment to retained earnings as of the beginning of the period of adoption. We do not expect ASU 326 to have a material impact on our financial statements and related disclosures.

Income taxes - In December 2019, FASB issued ASU 2019-12, *Simplifying the Accounting for Income Taxes (Topic 740)* ("ASU 2019-12"), wherein the accounting for income taxes is simplified by eliminating certain exceptions and implementing additional requirements, which result in a more consistent application of ASC 740 *Income Taxes*. ASU 2019-12 is effective as for public business entities, for fiscal years beginning after December 15, 2020, and interim periods within those fiscal years. We anticipate that we will no longer be an emerging growth company beginning on December 31, 2020, and expect to adopt this guidance on a prospective basis on January 1, 2021. We do not expect ASU 2019-12 to have a material impact on our financial statements and related disclosures.

Cessation of LIBOR - In March 2020, 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 and exceptions for applying GAAP to contract modifications and hedging relationships, subject to meeting certain criteria, that reference London Interbank Offered Rate (“LIBOR”) or another reference rate expected to be discontinued. The amendments in ASU 2020-04 are effective for all entities as of March 12, 2020 through December 31, 2022. An entity may elect to apply the

amendments for contract modifications as of any date from the beginning of an interim period that includes or is subsequent to March 12, 2020, or prospectively from a date within an interim period that includes or is subsequent to March 12, 2020, up to the date that the financial statements are available to be issued. We are currently evaluating the impact of the adoption of ASU 2020-04 on our financial statements.

Debt with Conversion Options - In August 2020, FASB issued 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. ASU 2020-06 removes certain accounting models that separate the embedded conversion features from the host contract for convertible instruments, requiring bifurcation only if the convertible debt feature qualifies as a derivative under ASC 815 or for convertible debt issued at a substantial premium. ASU 2020-06 removes certain settlement conditions required for equity contracts to qualify for the derivative scope exception, permitting more contracts to qualify for it. In addition, ASU 2020-06 eliminates the treasury stock method to calculate diluted earnings per share for convertible instruments and requires the use of the if-converted method. ASU 2020-06 is effective for annual reporting periods beginning after December 15, 2021, including interim reporting periods within those annual periods, with early adoption permitted no earlier than the fiscal year beginning after December 15, 2020. We are currently evaluating the impact of the adoption of ASU 2020-06 on our consolidated financial statements.

We do not expect any other new accounting standards to have a material impact on our financial position, results of operations or cash flows when they become effective.

2. Restatement of Previously Issued Condensed Consolidated Financial Statements

We have restated herein our condensed consolidated financial statements as of and for the three and nine months ended September 30, 2019. We have also restated related amounts within the accompanying footnotes to the condensed consolidated financial statements.

Restatement Background

As previously disclosed in our Annual Report on Form 10-K as filed on March 31, 2020, on February 11, 2020, our management, in consultation with the Audit Committee of our Board of Directors, determined that our previously issued consolidated financial statements as of and for the year ended December 31, 2018, as well as financial statements as of and for the three month period ended March 31, 2019, the three and six month periods ended June 30, 2019 and 2018 and the three and nine month periods ended September 30, 2019 and 2018 should no longer be relied upon due to misstatements related to our Managed Services Agreements and similar arrangements and we would restate such financial statements to make the necessary accounting corrections. The revenue for the Managed Services Agreements and similar transactions will now be recognized over the duration of the contract instead of upfront.

The misstatements impacting as of and for the three and nine months ended September 30, 2019 are described in greater detail below.

Description of Misstatements

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

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

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

The impact of the correction of the misstatement is to recognize amounts received from the bank financing party as a financing obligation, and the Energy Server is recorded within property, plant and equipment, net, on our consolidated balance sheets. We recognize revenue for the electricity generated by the systems, based on payments received by the bank from the

customer, and the corresponding financing obligations to the bank is also amortized as these payments are received by the bank from the customer, with interest thereon being calculated on an effective interest rate basis. Depreciation expense is also recognized over the estimated useful life of the Energy Server.

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

Also, as part of a review of historical revenue agreements as a result of the above errors, it was noted that we failed to identify embedded derivatives in certain revenue agreements for an escalator price protection ("EPP") feature given to our customers. As a result, we have recognized a derivative liability, with an offset to product revenue, to account for the fair value of this feature at inception and will record the liability at its then fair value at each period end with any changes in fair value recognized in gain (loss) on revaluation of embedded derivatives.

In addition to the impact of the restatement described above, in preparation of the condensed consolidated financial statements for the three months ended March 31, 2020, errors in our condensed consolidated statements of comprehensive loss were discovered. For the three and nine month periods ended September 30, 2019, the presentation of this statement and other errors identified in this statement have been corrected, which resulted in an additional $5.0 million and $13.9 million increase to comprehensive loss, and an increase of $9.9 million and $29.6 million in comprehensive loss attributable to noncontrolling interest and redeemable noncontrolling interests, respectively. In the consolidated statements of comprehensive loss for the years ended December 31, 2019 and 2018, comprehensive loss as previously reported is understated by $5.8 million and overstated by $1.8 million, respectively. In addition, the reconciliation of comprehensive loss to comprehensive loss attributable to Class A and Class B stockholders was erroneously omitted. As it relates to the impact of the errors to the consolidated statements of comprehensive loss for the years ended December 31, 2019 and 2018, management evaluated the impact of the errors to the previously issued financial statements and concluded the impacts were not material. Accordingly, these items for the periods disclosed are corrected herein.

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

Description of Restatement Reconciliation Tables

In the following tables, we have presented a reconciliation of our condensed consolidated balance sheet and statements of operations and cash flows from our prior periods as previously reported to the restated amounts as of and for the three and nine months ended September 30, 2019. In addition to the errors to the condensed consolidated statement of comprehensive loss discussed above, that Statement has been restated for the restatement impact to net loss. The condensed consolidated statement of redeemable noncontrolling interest, total stockholders' deficit and noncontrolling interest for the three and nine months ended September 30, 2019 has also been restated for the restatement impact to net loss. See the condensed consolidated statements of operations reconciliation table below for additional information on the restatement impact to net loss.

Bloom Energy Corporation
Condensed Consolidated Balance Sheet
(in thousands)

	September 30, 2019				
	As Previously Reported	Restatement Impacts	Restatement Reference	ASC 606 Adoption Impacts	As Restated
Assets					
Current assets:					
Cash and cash equivalents	$ 226,499	$ —		$ —	$ 226,499
Restricted cash	14,486	—		—	14,486
Accounts receivable	26,737	4,216	1	(4,600)	26,353
Inventories	140,372	(7,765)	2	—	132,607
Deferred cost of revenue	50,707	(9,665)	3	—	41,042
Customer financing receivable	5,919	—		—	5,919
Prepaid expenses and other current assets	25,639	2,830	4	173	28,642
Total current assets	490,359	(10,384)		(4,427)	475,548
Property, plant and equipment, net	384,377	243,008	5	—	627,385
Customer financing receivable, non-current	62,615	—		—	62,615
Restricted cash, non-current	116,890	—		—	116,890
Deferred cost of revenue, non-current	57,286	(53,562)	3	—	3,724
Other long-term assets	58,400	9,319	6	3,232	70,951
Total assets	$ 1,169,927	$ 188,381		$ (1,195)	$ 1,357,113
Liabilities, Redeemable Noncontrolling Interest, Stockholders' Deficit and Noncontrolling Interests					
Current liabilities:					
Accounts payable	$ 81,060	$ —		$ —	$ 81,060
Accrued warranty	15,295	(1,159)	7	(1,274)	12,862
Accrued expenses and other current liabilities	82,150	(2,534)	8	—	79,616
Financing obligations	—	10,420	9	—	10,420
Deferred revenue and customer deposits	88,060	(13,856)	10	3,347	77,551
Current portion of recourse debt	15,678	—		—	15,678
Current portion of non-recourse debt	7,983	—		—	7,983
Current portion of non-recourse debt from related parties	3,500	—		—	3,500
Total current liabilities	293,726	(7,129)		2,073	288,670
Derivative liabilities	14,648	5,636	11	—	20,284
Deferred revenue and customer deposits, net of current portion	179,712	(92,390)	10	34,954	122,276
Financing obligations, non-current	—	397,272	9	—	397,272
Long-term portion of recourse debt	359,959	—		—	359,959
Long-term portion of non-recourse debt	217,334	—		—	217,334
Long-term portion of recourse debt from related parties	27,734	—		—	27,734
Long-term portion of non-recourse debt from related parties	31,781	—		—	31,781
Other long-term liabilities	56,117	(27,264)	8	(1)	28,852
Total liabilities	1,181,011	276,125		37,026	1,494,162
Redeemable noncontrolling interest	557	—		—	557
Stockholders' deficit:					
Preferred stock	—	—		—	—
Common stock	12	—		—	12
Additional paid-in capital	2,647,118	756	12	—	2,647,874
Accumulated other comprehensive loss	(147)	—		—	(147)
Accumulated deficit	(2,753,830)	(88,500)		(38,221)	(2,880,551)
Total stockholders' deficit	(106,847)	(87,744)		(38,221)	(232,812)
Noncontrolling interest	95,206	—		—	95,206
Total liabilities, redeemable noncontrolling interest, stockholders' deficit and noncontrolling interest	$ 1,169,927	$ 188,381		$ (1,195)	$ 1,357,113

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

[2] Inventories — The correction of these misstatements resulted from the change of accounting for inventory, including net capitalization of stock-based compensation cost of $3.7 million.

[3] Deferred cost of revenue, current and non-current — The correction of these misstatements resulted from reclassifying deferred cost of revenue to property, plant and equipment, net, for the leased Energy Servers under the Managed Services Agreements and similar sale-leaseback arrangements of $7.4 million (short-term) and $53.6 million (long-term), net capitalization of stock-based compensation costs of $0.8 million into current deferred cost of revenue, and the correction of certain other immaterial misstatements identified to relieve installation deferred cost of revenue of $3.1 million.

[4] Prepaid expenses and other current assets — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements, whereby prepaid property tax and insurance

payments are now classified within prepaid expenses, rather than offset against deferred revenue.

[5] Property, plant and equipment, net — The correction of these misstatements resulted from the change of accounting for Managed Services transactions and similar arrangements, whereby product and install cost of revenue are now recorded as property, plant and equipment, net in the cases where the risks of ownership have not completely transferred to the financing party of $239.3 million. This includes a net capitalization of stock-based compensation cost for these assets of $3.7 million

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

[7] Accrued warranty — The correction of these misstatements resulted from the change of accounting for accrued warranty, which is now recorded on an as-incurred basis for our Managed Services Agreements and similar arrangements, reducing accrued warranty by $0.1 million and the change of accounting for the grid pricing escalation guarantees we provided in some of our sales arrangements, which are now recorded as derivative liabilities, reducing accrued warranty by $1.1 million

[8] Accrued expense and other current liabilities and other long-term liabilities — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements, for which historical accrued liabilities recorded at inception of the agreements, as well as subsequent reductions of those liabilities, were reversed.

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

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

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

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

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Bloom Energy Corporation
Condensed Consolidated Statement of Operations
(in thousands)

	Three Months Ended September 30, 2019				
	As Previously Reported	Restatement Impacts	Restatement Reference	ASC 606 Adoption Impacts	As Restated
Revenue:					
Product	$ 182,616	$ (1,292)	a	$ (17,422)	$ 163,902
Installation	19,010	(460)	a	2,552	21,102
Service	23,597	(779)	a	847	23,665
Electricity	8,248	7,390	a	—	15,638
Total revenue	233,471	4,859		(14,023)	224,307
Cost of revenue:					
Product	94,056	(2,085)	c, d	(274)	91,697
Installation	26,162	(21)	c	—	26,141
Service	36,539	2,073	b, d	(2,185)	36,427
Electricity	23,249	4,068	c	—	27,317
Total cost of revenue	180,006	4,035		(2,459)	181,582
Gross profit	53,465	824		(11,564)	42,725
Operating expenses:					
Research and development	23,389	—		—	23,389
Sales and marketing	18,125	43	e	(519)	17,649
General and administrative	36,599	—		—	36,599
Total operating expenses	78,113	43		(519)	77,637
Loss from operations	(24,648)	781		(11,045)	(34,912)
Interest income	1,214	—		—	1,214
Interest expense	(15,280)	(6,043)	f	—	(21,323)
Interest expense to related parties	(1,605)	—		—	(1,605)
Other expense, net	525	—		—	525
Loss on revaluation of warrant liabilities and embedded derivatives	—	(540)	g	—	(540)
Loss before income taxes	(39,794)	(5,802)		(11,045)	(56,641)
Income tax provision	136	—		—	136
Net loss	(39,930)	(5,802)		(11,045)	(56,777)
Less: net loss attributable to noncontrolling interests and redeemable noncontrolling interests	(5,027)	—		—	(5,027)
Net loss attributable to Class A and Class B common stockholders	$ (34,903)	$ (5,802)		$ (11,045)	$ (51,750)

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

[b] Service cost of revenue impacted by grid pricing escalation guarantees — The correction of these misstatements resulted in a change in the accounting for our grid escalation guarantees that resulted in a decrease in service cost of revenue of $0.1 million.

c Cost of revenue impacted by Managed Services restatements — The correction of these misstatements resulted from the change from upfront recognition of product and installation cost of revenue to recognition of the depreciation expense on the capitalized Energy Servers over their useful life of 21 years for our Managed Services Agreements and similar sale-leaseback transactions, resulting in a decrease in product cost of revenue of $1.1 million and installation cost of revenue of $0.6 million, offset by an increase in electricity cost of revenue of $4.0 million together with the correction of certain other immaterial misstatements identified to record installation cost of revenue of $0.6 million.

[d] Cost of revenue impacted by stock-based compensation allocation — The correction of these misstatements resulted from the capitalization of stock-based compensation costs, with a net benefit to product cost of revenue of $1.0 million, and an increase in service cost of revenue of $2.2 million due to the expensing of stock-based compensation related to field replacement units.

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

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

[g] Gain (loss) on revaluation of warrant liabilities and embedded derivatives — The correction of these misstatements resulted from the change of accounting for the grid pricing escalation guarantees we provided in some of our sales

arrangements which is now recorded as a derivative liability that needs to be fair valued each period end. The fair value increased in the period, resulting in a loss of $0.5 million.

Bloom Energy Corporation
Condensed Consolidated Statement of Operations
(in thousands)

	Nine Months Ended September 30, 2019				
	As Previously Reported	Restatement Impacts	Restatement Reference	ASC 606 Adoption Impacts	As Restated
Revenue:					
Product	$ 504,249	$ (72,220)	a	$ (33,120)	$ 398,909
Installation	58,553	(17,555)	a	5,399	46,397
Service	70,546	(1,939)	a	1,551	70,158
Electricity	34,612	21,558	a	—	56,170
Total revenue	667,960	(70,156)		(26,170)	571,634
Cost of revenue:					
Product	350,008	(56,070)	c, d	(241)	293,697
Installation	72,444	(12,858)	c	—	59,586
Service	83,695	4,324	b, d	(4,908)	83,111
Electricity	50,920	11,681	c	—	62,601
Total cost of revenue	557,067	(52,923)		(5,149)	498,995
Gross profit	110,893	(17,233)		(21,021)	72,639
Operating expenses:					
Research and development	82,020	—		—	82,020
Sales and marketing	56,947	62	e	(793)	56,216
General and administrative	119,335	—		—	119,335
Total operating expenses	258,302	62		(793)	257,571
Loss from operations	(147,409)	(17,295)		(20,228)	(184,932)
Interest income	4,799	—		—	4,799
Interest expense	(47,967)	(17,878)	f	—	(65,845)
Interest expense to related parties	(4,823)	—		—	(4,823)
Other expense, net	568	—		—	568
Loss on revaluation of warrant liabilities and embedded derivatives	—	(1,620)	g	—	(1,620)
Loss before income taxes	(194,832)	(36,793)		(20,228)	(251,853)
Income tax provision	602	—		—	602
Net loss	(195,434)	(36,793)		(20,228)	(252,455)
Less: net loss attributable to noncontrolling interests and redeemable noncontrolling interests	(13,874)	—		—	(13,874)
Net loss attributable to Class A and Class B common stockholders	$ (181,560)	$ (36,793)		$ (20,228)	$ (238,581)

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

[b] Service cost of revenue impacted by grid pricing escalation guarantees — The correction of these misstatements resulted in a change in the accounting for our grid escalation guarantees that resulted in a decrease in service cost of revenue of $0.3 million.

c Cost of revenue impacted by Managed Services restatements — The correction of these misstatements resulted from the change from upfront recognition of product and installation cost of revenue to recognition of the depreciation expense on the capitalized Energy Servers over their useful life of 21 years for our Managed Services Agreements and similar sale-leaseback transactions, resulting in a decrease in product cost of revenue of $56.7 million and installation cost of revenue of $15.0 million, offset by an increase in electricity cost of revenue of $11.6 million together with the correction of certain other immaterial misstatements identified to record installation cost of revenue of $2.1 million.

[d] Cost of revenue impacted by stock-based compensation allocation — The correction of these misstatements resulted from the capitalization of stock-based compensation costs, with a net benefit to product cost of revenue of $0.6 million, and an increase in service cost of revenue of $4.6 million due to the expensing of stock-based compensation related to field replacement units.

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

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

[g] Gain (loss) on revaluation of warrant liabilities and embedded derivatives — The correction of these misstatements resulted from the change of accounting for the grid pricing escalation guarantees we provided in some of our sales arrangements which is now recorded as a derivative liability that needs to be fair valued each period end. The fair value increased in the period, resulting in a loss of $1.6 million.

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

	Nine Months Ended September 30, 2019				
	As Previously Reported	Restatement Impacts	Restatement Reference	ASC 606 Adoption Impacts	As Restated
Cash flows from operating activities:					
Net loss	$ (195,434)	$ (36,793)		$ (20,228)	$ (252,455)
Adjustments to reconcile net loss to net cash provided by operating activities:					
Depreciation and amortization	55,816	9,132	A	—	64,948
Write-off of property, plant and equipment, net	2,987	—		—	2,987
Write-off of PPA II decommissioned costs	25,613	—		—	25,613
Debt make-whole payment	5,934	—		—	5,934

Revaluation of derivative contracts	1,335	1,620	[B]	—	2,955
Stock-based compensation	154,955	5,278	[C]	—	160,233
Loss on long-term REC purchase contract	61	—		—	61
Amortization of debt issuance cost	16,295	—		—	16,295
Changes in operating assets and liabilities:					
Accounts receivable	58,150	(318)	[D]	5,594	63,426
Inventories	(7,896)	6,121	[E]	—	(1,775)
Deferred cost of revenue	56,854	(59,198)	[F]	—	(2,344)
Customer financing receivable and other	4,142	—		—	4,142
Prepaid expenses and other current assets	7,928	176	[G]	(33)	8,071
Other long-term assets	3,281	(1,229)	[H]	(758)	1,294
Accounts payable	14,171	—		—	14,171
Accrued warranty	(3,941)	109	[I]	(242)	(4,074)
Accrued expense and other current liabilities	5,029	162	[J]	—	5,191
Deferred managed services revenue	—	—		—	—
Deferred revenue and customer deposits	(68,180)	74,765	[K]	15,667	22,252
Other long-term liabilities	2,083	2,477	[L]	—	4,560
Net cash provided by operating activities	139,183	2,302		—	141,485
Cash flows from investing activities:					
Purchase of property, plant and equipment	(23,474)	(16,216)	[M]	—	(39,690)
Payments for acquisition of intangible assets	(1,478)	—		—	(1,478)
Proceeds from maturity of marketable securities	104,500	—		—	104,500
Net cash provided by investing activities	79,548	(16,216)		—	63,332
Cash flows from financing activities:					
Repayment of debt	(93,263)	—		—	(93,263)
Repayment of debt to related parties	(1,691)	—		—	(1,691)
Debt make-whole payment	(5,934)	—		—	(5,934)
Proceeds from financing obligations	—	20,333	[N]	—	20,333
Repayment of financing obligations	—	(6,419)	[N]	—	(6,419)
Payments to noncontrolling and redeemable noncontrolling interests	(43,713)	—		—	(43,713)
Distributions to noncontrolling and redeemable noncontrolling interests	(9,363)	—		—	(9,363)
Proceeds from issuance of common stock	12,623	—		—	12,623
Net cash used in financing activities	(141,341)	13,914		—	(127,427)
Net increase in cash, cash equivalents, and restricted cash	77,390	—		—	77,390
Cash, cash equivalents, and restricted cash:					
Beginning of period	280,485	—		—	280,485
End of period	$ 357,875	$ —		$ —	$ 357,875
Supplemental disclosure of cash flow information:					
Cash paid during the period for interest	$ 35,894	$ 17,878	[N]	$ —	$ 53,772
Cash paid during the period for taxes	715	—		—	715

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

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

[C] Stock-based compensation — The correction of these misstatements resulted from the change of accounting for stock-based compensation, including net capitalization of stock-based compensation cost into inventory of $5.9 million The correction of this misstatement also resulted in the capitalization of $0.6 million of stock-based compensation costs related to assets under the Managed Services Programs now recorded as construction in progress within property, plant and equipment, net.

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

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

[F] Deferred cost of revenue, current and non-current — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements, whereby leased Energy Servers of $60.6 million previously classified as deferred cost of revenue is now recorded as construction in progress within property, plant and equipment, net, and the net release of stock-based compensation expenses of $1.4 million.

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

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

[I] Accrued warranty — The correction of these misstatements resulted from the change of accounting for accrued warranty which is now recorded on an as-incurred basis for our Managed Services Agreements and similar arrangements. The correction of these misstatements resulted from the change of accounting for the grid pricing escalation guarantees we've provided in some of our sales arrangements. These commitments were previously treated as a contingent liability that was considered remote. We now maintain a $0.4 million accrual, with the initial value treated as a reduction in product revenue and then any changes in the value adjusted through other expense, net each period thereafter.

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

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

[L] Other long-term liabilities — The correction of these misstatements resulted from the change of accounting for Managed Services Agreements and similar arrangements whereby instead of recognizing the bank financing as revenue, the bank financing loan proceeds received and due beyond the next 12 months are classified as a financing obligation.

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

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

3. Revenue Recognition

Deferred Revenue and Customer Deposits

Deferred revenue and customer deposits as of September 30, 2020 and December 31, 2019 consisted of the following (in thousands):

	September 30, 2020	December 31, 2019
Deferred revenue	$ 150,144	$ 168,223
Deferred incentive revenue	6,900	7,397
Customer deposits	42,019	39,101
Deferred revenue and customer deposits	$ 199,063	$ 214,721

Deferred revenue activity during the three and nine months ended September 30, 2020 and 2019 consisted of the following (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019 As Restated	2020	2019 As Restated
Beginning balance	$ 162,186	$ 157,986	$ 168,223	$ 140,130
Additions	166,398	190,168	463,652	497,665
Revenue recognized	(178,440)	(198,792)	(481,731)	(488,433)
Ending balance	$ 150,144	$ 149,362	$ 150,144	$ 149,362

Deferred revenue is equivalent to the total transaction price allocated to the performance obligations that are unsatisfied, or partially unsatisfied, as of the end of the period. The significant component of deferred revenue at the end of the period consists of performance obligations relating to the provision of maintenance services under current contracts and future renewal periods. These obligations provide customers with material rights over a period that we estimate will be largely commensurate with the period of their expected use of the associated Energy Server. As a result, we expect to recognize these amounts as revenue over a period of up to 21 years, predominantly on a cost-to-cost basis that reflects the cost of providing these services. Deferred revenue also includes performance obligations relating to product acceptance and installation. A significant amount of this deferred revenue is reflected as additions and revenue recognized in the same period and we expect to recognize all amounts within a year. The three and nine months ended September 30, 2020 included $14.2 million of previously deferred revenue that was recognized as revenue in the quarter that was not associated with acceptances or service in the quarter. This was a one-time recognition of deferred revenue related to a specific contract that changed scope.

Revenue by source

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,	
	2020	2019 As Restated	2020	2019 As Restated
Revenue from contracts with customers:				
Product revenue	$ 131,076	$ 163,902	$ 346,832	$ 398,909
Installation revenue	26,603	21,102	73,060	46,397
Services revenue	26,141	23,665	77,496	70,158
Electricity revenue	—	—	—	10,840
Total revenue from contract with customers	183,819	208,669	497,388	526,304
Revenue from contracts accounted for as leases:				
Electricity revenue	16,485	15,638	47,472	45,330
Total revenue	$ 200,305	$ 224,307	$ 544,860	$ 571,634

4. Financial Instruments

Cash, Cash Equivalents and Restricted Cash

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

	September 30, 2020	December 31, 2019
As Held:		
Cash	$ 66,135	$ 100,773
Money market funds	438,234	276,615
	$ 504,369	$ 377,388
As Reported:		
Cash and cash equivalents	$ 325,241	$ 202,823
Restricted cash	179,128	174,565
	$ 504,369	$ 377,388

Restricted cash consisted of the following (in thousands):

	September 30, 2020	December 31, 2019
Current:		
Restricted cash	$ 33,240	$ 28,494
Restricted cash related to PPA Entities [1]	13,972	2,310
Restricted cash, current	47,212	30,804
Non-current:		
Restricted cash	252	10
Restricted cash related to PPA Entities [1]	131,664	143,751
Restricted cash, non-current	131,916	143,761
	$ 179,128	$ 174,565

[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 13, *Power Purchase Agreement Programs*). In addition, the restricted cash held in the PPA II and PPA IIIb entities as of September 30, 2020, included $12.4 million and $0.5 million of current restricted cash, and $96.3 million and $20.0 million of non-current restricted cash, respectively, and these entities are not considered VIEs. The restricted cash held in the PPA II and PPA IIIb entities as of December 31, 2019, included $108.7 million and $20.0 million of non-current restricted cash, respectively, and these entities are not considered VIEs.

Derivative Instruments

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

5. Fair Value

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

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

	Fair Value Measured at Reporting Date Using			
September 30, 2020	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Cash equivalents:				
Money market funds	$ 438,234	$ —	$ —	$ 438,234
	$ 438,234	$ —	$ —	$ 438,234
Liabilities				
Accrued expenses and other current liabilities	$ —	$ —	$ —	$ —
Derivatives:				
Natural gas fixed price forward contracts	—	—	3,245	3,245
Embedded EPP derivatives	—	—	3,975	3,975
Interest rate swap agreements	—	17,272	—	17,272
	$ —	$ 17,272	$ 7,220	$ 24,492

	Fair Value Measured at Reporting Date Using			
December 31, 2019	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Cash equivalents:				
Money market funds	$ 276,615	$ —	$ —	$ 276,615
Interest rate swap agreements	—	3	—	3
	$ 276,615	$ 3	$ —	$ 276,618
Liabilities				
Accrued expenses and other current liabilities	$ 996	$ —	$ —	$ 996
Derivatives:				
Natural gas fixed price forward contracts	—	—	6,968	6,968
Embedded EPP derivatives	—	—	6,176	6,176
Interest rate swap agreements	—	9,241	—	9,241
	$ 996	$ 9,241	$ 13,144	$ 23,381

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

Interest Rate Swap Agreements - Interest rate swap agreements are valued using quoted prices for similar contracts and are therefore classified as Level 2 financial assets. Interest rate swaps are designed as hedging instruments and are recognized at fair value on our condensed consolidated balance sheets. As of September 30, 2020, we expect $1.9 million of the loss on the interest rate swaps accumulated in other comprehensive income (loss) to be reclassified into earnings in the next 12 months.

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

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

	September 30, 2020		December 31, 2019	
	Number of Contracts (MMBTU)[2]	Fair Value	Number of Contracts (MMBTU)[2]	Fair Value
Liabilities[1]:				
Natural gas fixed price forward contracts (not under hedging relationships)	1,112	$ 3,245	1,991	$ 6,968

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

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

For the three months ended September 30, 2020 and 2019, we recorded the fair value of our natural gas fixed price forward contracts and recorded an unrealized loss of $0.7 million and an unrealized loss of $0.8 million, respectively. For the three months ended September 30, 2020 and 2019, we recorded the fair value of our natural gas fixed price forward contracts and recognized a realized gain of $1.2 million and a realized gain of $1.1 million, 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, 2020 and 2019, we recorded the fair value of our natural gas fixed price forward contracts and recognized an unrealized loss of $1.5 million in 2019, with no material unrealized gains or losses in 2020. We recorded the fair value of our natural gas fixed price forward contracts and recognized realized gains of $3.7 million and $2.7 million for the nine months ended September 30, 2020 and 2019, respectively, on the settlement of these contracts in cost of revenue on our condensed consolidated statements of operations.

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

For the three months ended September 30, 2020 and 2019, we recorded the fair value of the embedded EPP derivatives and recognized an unrealized gain of $1.5 million and an unrealized loss of $0.5 million, respectively, in gain (loss) on revaluation of embedded derivatives on our condensed consolidated statements of operations. For the nine months ended September 30, 2020 and 2019, we recorded the fair value of the embedded EPP derivatives and recognized an unrealized gain of $2.2 million and an unrealized loss of $1.6 million, respectively, in gain (loss) on revaluation of embedded EPP derivatives on our condensed consolidated statements of operations.

There were no transfers between fair value measurement classifications during the three and nine months ended September 30, 2020 and 2019.

The changes in the Level 3 financial liabilities during the three months ended September 30, 2020 were as follows (in thousands):

	Natural Gas Fixed Price Forward Contracts	Embedded Derivative Liability	Total
Liabilities at June 30, 2020	$ 5,185	$ 5,480	$ 10,665
Settlement of natural gas fixed price forward contracts	(1,214)	—	(1,214)
Changes in fair value	(726)	(1,505)	(2,231)
Liabilities at September 30, 2020	$ 3,245	$ 3,975	$ 7,220

The changes in the Level 3 financial liabilities during the nine months ended September 30, 2020 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	(3,692)	—	(3,692)
Changes in fair value	(31)	(2,201)	(2,232)
Liabilities at September 30, 2020	$ 3,245	$ 3,975	$ 7,220

The following table presents the unobservable inputs related to our Level 3 liabilities:

	As of September 30, 2020					
Commodity Contracts	Derivative Liabilities	Valuation Technique	Unobservable Input	Units	Range	Average
	(in thousands)				($ per Units)	
Natural Gas	$ 3,245	Discounted Cash Flow	Forward basis price	MMBtu	$2.86 - $5.50	$ 3.85

	As of December 31, 2019					
Commodity Contracts	Derivative Liabilities	Valuation Technique	Unobservable Input	Units	Range	Average
	(in thousands)				($ per Units)	
Natural Gas	$ 6,968	Discounted Cash Flow	Forward basis price	MMBtu	$2.39 - $5.65	$ 3.23

The unobservable inputs used in the fair value measurement of the natural gas commodity types consist of inputs that are less observable due in part to lack of available broker quotes, supported by little, if any, market activity at the measurement date or are based on internally developed models. Certain basis prices (i.e., the difference in pricing between two locations) included in the valuation of natural gas contracts were deemed unobservable.

To estimate the liabilities related to the EPP contracts an option pricing method was implemented through a Monte Carlo simulation. The unobservable inputs were simulated based on the available values for avoided cost and cost of electricity as calculated for September 30, 2020 and December 31, 2019, using an expected growth rate of 7% over the contracts' life and volatility of 20%. The estimated growth rate and volatility were estimated based on the historical tariff changes for the period 2008 to 2020. Avoided cost is the transmission and distribution cost expressed in dollars per kilowatt hours avoided in the given year of the contract, calculated using the billing rates of the effective utility tariff applied during the year to the host account for which usage is offset by the generator. If the billing rates within the utility tariff change during the measurement period, the average of the amount of charge for each rate shall be weighted by the number of effective months for each amount.

The inputs listed above would have had a direct impact on the fair values of the above derivatives if they were adjusted. Generally, an increase in natural gas prices and a decrease in electric grid prices would each result in an increase in the estimated fair value of our derivative liabilities.

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, whereas the fair value approximates the present value of the receivables (Level 3). The senior secured notes, term loans and convertible promissory 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, 2020		December 31, 2019	
	Net Carrying Value	Fair Value	Net Carrying Value	Fair Value
Customer receivables				
Customer financing receivables	$ 52,066	$ 43,623	$ 55,855	$ 44,002
Debt instruments				
Recourse:				
LIBOR + 4% term loan due November 2020	278	287	1,536	1,590
5% convertible promissory Constellation note due December 2021	—	—	36,482	32,070
10% convertible promissory notes due December 2021[1]	99,379	234,816	273,410	302,047
10% notes due July 2024	76,743	71,385	89,962	97,512
10.25% senior secured notes due March 2027	68,526	59,747	—	—
2.5% green convertible senior notes due August 2025	98,212	293,135	—	—
Non-recourse:				
7.5% term loan due September 2028	32,717	36,665	34,969	41,108
6.07% senior secured notes due March 2030	77,846	89,079	80,016	87,618
LIBOR + 2.5% term loan due December 2021	117,145	117,457	120,437	120,510

[1]The fair value on the 10% convertible notes increased due to the increase in the fair value of the conversion feature.

Long-Lived Assets - Our long-lived assets include property, plant and equipment and Energy Servers capitalized in connection with our Managed Services Financing Program, Purchase Power Agreement Programs and other similar arrangements. The carrying amounts of our long-lived assets are periodically reviewed for impairment whenever events or changes in circumstances indicate that the carrying value of these assets may not be recoverable or that the useful life is shorter than originally estimated.

6. Balance Sheet Components

Inventories

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

	September 30, 2020	December 31, 2019
Raw materials	$ 77,936	$ 67,829
Work-in-progress	28,127	21,207
Finished goods	25,848	20,570
	$ 131,911	$ 109,606

We held Energy Server product inventory at customer locations pending installation and acceptance of $20.0 million and $14.6 million as of September 30, 2020 and December 31, 2019, respectively. As this Energy Server inventory was shipped to customer locations as a result of a signed sales contract, but where title has not transferred until acceptance occurs, these balances are recognized as deferred cost of revenues on the consolidated balance sheets. We recognized inventory provisions of $0.3 million and $0.9 million during the three months ended September 30, 2020 and 2019, respectively, and $2.2 million and $2.6 million during the nine months ended September 30, 2020 and 2019, respectively.

Prepaid Expenses and Other Current Assets

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

	September 30, 2020	December 31, 2019
Government incentives receivable	$ 762	$ 893
Prepaid maintenance	3,780	3,763
Receivables from employees	5,413	6,130
Other prepaid expenses and other current assets	20,285	17,282
	$ 30,240	$ 28,068

Property, Plant and Equipment, Net

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

	September 30, 2020	December 31, 2019
Energy Servers	$ 657,418	$ 650,600
Computers, software and hardware	21,278	20,275
Machinery and equipment	105,652	101,650
Furniture and fixtures	8,334	8,339
Leasehold improvements	37,497	35,694
Building	46,686	40,512
Construction in progress	22,935	12,611
	899,800	869,681
Less: Accumulated depreciation	(297,871)	(262,622)
	$ 601,929	$ 607,059

Construction in progress increased $10.3 million from December 31, 2019, primarily due to an increase of $14.1 million of Energy Servers under our Managed Services sale-leaseback program pending acceptance, partially offset by $3.8 million primarily due to the completion of our Delaware plant expansion.

Property, plant and equipment, net, under operating leases by the PPA Entities was $368.0 million and $371.4 million as of September 30, 2020 and December 31, 2019, respectively. The accumulated depreciation for these assets was $110.1 million and $95.5 million as of September 30, 2020 and December 31, 2019, respectively.

Our depreciation expense includes expense related to property, plant and equipment, plus depreciation expense related to assets held under operating leases held by us and our PPA entities. Depreciation expense related to assets under operating leases was $9.3 million and $9.5 million for the three months ended September 30, 2020 and 2019, respectively, and $28.0 million and $28.3 million for the nine months ended September 30, 2020 and 2019, respectively. Depreciation expense related to property, plant and equipment, net, was $3.7 million and $3.5 million for the three months ended September 30, 2020 and 2019, respectively, and $10.9 million and $10.1 million for the nine months ended September 30, 2020 and 2019, respectively. Additionally, we recorded decommissioning charges related to the PPA II transaction of $14.6 million and $25.6 million in cost of product revenue in the three and nine months ended September 30, 2019, respectively.

Customer Financing Receivable

The components of investment in sales-type financing leases consisted of the following (in thousands):

	September 30, 2020	December 31, 2019
Total minimum lease payments to be received	$ 71,020	$ 76,886
Less: Amounts representing estimated executory costs	(18,164)	(19,931)
Net present value of minimum lease payments to be received	52,856	56,955
Estimated residual value of leased assets	890	890
Less: Unearned income	(1,680)	(1,990)
Net investment in sales-type financing leases	52,066	55,855
Less: Current portion	(5,341)	(5,108)
Non-current portion of investment in sales-type financing leases	$ 46,725	$ 50,747

The future scheduled customer payments from sales-type financing leases were as follows as of September 30, 2020 (in thousands):

	Remainder of 2020	2021	2022	2023	2024	Thereafter
Future minimum lease payments, less interest	$ 1,319	$ 5,428	$ 5,784	$ 6,155	$ 6,567	$ 25,923

Other Long-Term Assets

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

	September 30, 2020	December 31, 2019
Prepaid and other long-term assets	$ 30,173	$ 29,153
Deferred commissions	6,524	5,007
Equity-method investments	2,040	5,733
Long-term deposits	1,895	1,759
	$ 40,632	$ 41,652

Accrued Warranty

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

	September 30, 2020	December 31, 2019
Product warranty	$ 2,951	$ 2,345
Product performance	6,749	7,535
Maintenance services contracts	107	453
	$ 9,807	$ 10,333

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

Balances at December 31, 2019	$ 9,881
Accrued warranty, net	6,049
Warranty expenditures during period	(6,230)
Balances at September 30, 2020	$ 9,700

Accrued Expenses and Other Current Liabilities

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

	September 30, 2020	December 31, 2019
Compensation and benefits	$ 18,908	$ 17,173
Current portion of derivative liabilities	4,949	4,834
Sales related liabilities	521	416
Accrued installation	13,212	10,348
Sales tax liabilities	1,880	3,849
Interest payable	2,841	3,875
Accrued payables	25,035	18,650
Other	10,536	11,139
	$ 77,882	$ 70,284

Other Long-Term Liabilities

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

	September 30, 2020	December 31, 2019
Delaware grant	$ 9,212	$ 10,469
Other	17,406	17,544
	$ 26,618	$ 28,013

In March 2012, we entered into an agreement with the Delaware Economic Development Authority to provide a grant of $16.5 million to us as an incentive to establish a new manufacturing facility in Delaware and to provide employment for full- time workers at the facility over a certain period of time. We have received $12.0 million of the grant, which is contingent upon us meeting certain milestones related to the construction of the manufacturing facility and the employment of full-time workers at the facility through September 30, 2023. We paid $1.5 million in 2017 for recapture provisions, and no additional amounts have been paid. As of September 30, 2020, we have recorded $1.3 million in current liabilities and $9.2 million in other long-term liabilities for potential repayments. See Note 14, *Commitments and Contingencies* for a full description of the grant.

7. Outstanding Loans and Security Agreements

The following is a summary of our debt as of September 30, 2020 (in thousands):

	Unpaid Principal Balance	Net Carrying Value			Unused Borrowing Capacity	Interest Rate	Maturity Dates	Entity	Recourse
		Current	Long-Term	Total					
LIBOR + 4% term loan due November 2020	$ 286	$ 278	$ —	$ 278	$ —	LIBOR plus margin	November 2020	Company	Yes
10% convertible promissory notes due December 2021	96,209	99,379	—	99,379	—	10.0%	December 2021	Company	Yes
10% notes due July 2024	79,000	16,000	60,743	76,743	—	10.0%	July 2024	Company	Yes
10.25% senior secured notes due March 2027	70,000	—	68,526	68,526	—	10.25%	March 2027	Company	Yes
2.5% green convertible senior notes due August 2025	230,000	—	98,212	98,212		2.5%	August 2025	Company	Yes
Total recourse debt	475,495	115,657	227,481	343,138	—				
7.5% term loan due September 2028	35,087	2,696	29,522	32,218	—	7.5%	September 2028	PPA IIIa	No
6.07% senior secured notes due March 2030	78,710	3,695	74,151	77,846	—	6.1%	March 2030	PPA IV	No
LIBOR + 2.5% term loan due December 2021	117,947	7,609	109,536	117,145	—	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	231,744	14,000	213,209	227,209	968				
Total debt	$ 707,239	$ 129,657	$ 440,690	$ 570,347	$ 968				

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

	Unpaid Principal Balance	Net Carrying Value			Unused Borrowing Capacity	Interest Rate	Maturity Dates	Entity	Recourse
		Current	Long-Term	Total					
LIBOR + 4% term loan due November 2020	$ 1,571	$ 1,536	$ —	$ 1,536	$ —	LIBOR plus margin	November 2020	Company	Yes
5% convertible promissory note due December 2020	33,104	36,482	—	36,482	—	5.0%	December 2020	Company	Yes
6% convertible promissory notes due December 2020	289,299	273,410	—	273,410	—	6.0%	December 2020	Company	Yes
10% notes due July 2024	93,000	14,000	75,962	89,962	—	10.0%	July 2024	Company	Yes
Total recourse debt	416,974	325,428	75,962	401,390	—				
7.5% term loan due September 2028	38,337	3,882	31,087	34,969	—	7.5%	September 2028	PPA IIIa	No
6.07% senior secured notes due March 2030	80,988	3,151	76,865	80,016	—	6.1%	March 2030	PPA IV	No
LIBOR + 2.5% term loan due December 2021	121,784	5,122	115,315	120,437	—	LIBOR plus margin	December 2021	PPA V	No
Letters of Credit due December 2021	—	—	—	—	1,220	2.25%	December 2021	PPA V	No
Total non-recourse debt	241,109	12,155	223,267	235,422	1,220				
Total debt	$ 658,083	$ 337,583	$ 299,229	$ 636,812	$ 1,220				

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 debt discounts and deferred financing costs. We were in compliance with all financial covenants as of September 30, 2020 and December 31, 2019.

Recourse Debt Facilities

LIBOR + 4% Term Loan due November 2020 - The weighted average interest rate as of September 30, 2020 and December 31, 2019 was 4.2% and 6.3%, respectively. As of September 30, 2020 and December 31, 2019, the unpaid principal balance of debt outstanding was $0.3 million and $1.6 million, respectively, and we are in compliance with all covenants, respectively.

10% Constellation Convertible Promissory Note due 2021 - On March 31, 2020, we entered the Constellation Note Modification Agreement, which amended the terms of the 5% Constellation Note to extend the maturity date to December 31, 2021 and increased the interest rate from 5% to 10% ("10% Constellation Note"). We further amended the 10% Constellation Note by reducing the strike price on the conversion feature from $38.64 per share to $8.00 per share.

When we evaluated the Constellation Note Modification Agreement in accordance with ASC 470-60, *Debt - Troubled Debt Restructurings by Debtors* ("ASC 470-60") and ASC 470-50, *Debt - Modifications and Extinguishments* ("ASC 470-50"), we concluded that the amendment did not constitute a troubled debt restructuring and, furthermore, the amendment qualified as a substantial modification as a result of the increase in the fair value of the conversion feature due to the reduced strike price. As a result, on March 31, 2020, the 10% Constellation Note, which consisted of $33.1 million in principal and $3.8 million in accrued and unpaid interest, was extinguished and the 10% Constellation Note was recognized at their fair market value, which equaled $40.7 million. The difference between the fair market value of the 10% Constellation Note and the carrying value of the 5% Constellation Note of $3.8 million was recognized as a loss on extinguishment of debt in the condensed consolidated statement of operations.

On June 18, 2020, Constellation exchanged their entire 10% Constellation Note at the conversion price of $8.00 per share into 4.7 million shares of Class A common stock. At the time of this exchange the unamortized premium of $3.4 million was recognized as an adjustment to additional paid-in capital.

10% Convertible Promissory Notes due December 2021 - On March 31, 2020, we entered into an Amendment Support Agreement with the noteholders of our outstanding 6% Convertible Notes pursuant to which such Noteholders agreed to extend the maturity date of the outstanding 6% Convertible Notes to December 1, 2021 and increase the interest rate from 6% to 10%. Additionally, the debt is convertible at the option of the Noteholders into common stock at any time through the maturity date and we further amended the 10% Convertible Notes by reducing the strike price on the conversion feature from $11.25 to $8.00 per share. In conjunction with entering into the Amendment Support Agreement, on March 31, 2020, we also entered into the 10% Convertible Note Purchase Agreement and issued an additional $30.0 million aggregate principal amount of 10% Convertible Notes to Foris Ventures, LLC, a new noteholder, and New Enterprise Associates 10, Limited Partnership, an existing noteholder. The 10% Convertible Notes and the $30.0 million new 10% Convertible Notes were all reflected in the Restated Indenture. The Amendment Support Agreement required that we repay at least $70.0 million of the 10% Convertible Notes on or before September 1, 2020. In return, collateral was released to support the collateral required under the 10.25% Senior Secured Notes, and 50% of the proceeds from the consummation of certain transactions, including equity offerings or additional indebtedness, will be applied to redeem the 10% Convertible Notes at a redemption price equal to 100% of the principal amount of the 10% Convertible Notes, plus accrued and unpaid interest, the aggregate sum of all remaining scheduled interest payments, discounted by a rate equal to the treasury rate plus fifty basis points, multiplied by a certain percentage ("Applicable Percentage") that ranges from 0% to 100%, which is determined based on the time of redemption. If the redemption were to occur on or before October 21, 2020, the Applicable Percentage would be 0% and therefore, no redemption penalty would be incurred. If the redemption were to happen after October 21, 2020, the Applicable Percentage would be between 25% and 100%, determined based on the time of redemption. On May 1, 2020, we repaid $70.0 million of the 10% Convertible Notes and accrued and unpaid interest and recognized an adjustment to the unamortized debt premium of $4.3 million.

We evaluated the Amendment Support Agreement in accordance with ASC 470-60 and ASC 470-50 and concluded that the amendment did not constitute a troubled debt restructuring and, furthermore, the amendment qualified as a substantial modification as a result of the increase in the fair value of the conversion feature due to the reduced strike price. As a result, on March 31, 2020, we recognized a $10.3 million loss on extinguishment of debt in the condensed consolidated statement of operations, which was calculated as the difference between the reacquisition price of the 6% Convertible Notes and the carrying value of the 6% Convertible Notes. The total carrying value of the 6% Convertible Notes equaled $279.0 million, which consisted of $289.3 million in principal and $1.4 million in accrued and unpaid interest, reduced by $10.7 million in unamortized discount and $1.0 million in unamortized debt issuance costs. The total reacquisition price of the 6% Convertible Notes equaled $289.3 million, which consisted of the $340.7 million fair value of the 10% Convertible Notes, $1.4 million in accrued and unpaid interest, and $1.2 million of fees paid to noteholders as part of the amendment, reduced by $24.0 million, the fair value at March 31, 2020 of the embedded derivative relating to the equity classified conversion feature was reclassified from additional paid-in capital at the time of the debt extinguishment, $20.0 million cash received from the additional 10% Convertible Notes that were issued to New Enterprise Associates 10, Limited Partnership, and the $10.0 million issuance to Foris Ventures, LLC.

The new net carrying amount of the 10% Convertible Notes of $99.4 million, which consists of the $96.2 million principal of the 10% Convertible Notes, $3.2 million net of premium paid for the 10% Convertible Notes and debt issuance

costs was classified as current as of September 30, 2020. Furthermore, the $14.1 million deemed premium net of debt issuance costs is being amortized over the term of the 10% Convertible Notes using the effective interest method. The $96.2 million principal balance of 10% Convertible Notes due to the Canada Pension Plan Investment Board ("CPPIB") will be converted to 12.0 million shares of common stock in October 2020, and the unamortized premium of $3.2 million will be an adjustment to additional paid in capital.

10% Senior Secured Notes due July 2024 - The outstanding unpaid principal balance of the 10% Senior Secured Notes due July 2024 (the "10% Notes") of $16.0 million and $14.0 million were classified as current as of September 30, 2020 and December 31, 2019, respectively, and the net carrying amount of the 10% Notes of $60.7 million and $76.0 million were classified as non-current as of September 30, 2020 and December 31, 2019, respectively. The accrued unpaid interest balance on the 10% Notes was $1.3 million and $3.9 million as on September 30, 2020 and December 31, 2019, respectively.

10.25% Senior Secured Notes due March 2027 - On May 1, 2020, we issued $70.0 million of 10.25% Senior Secured Notes in the Senior Secured Notes Private Placement. The 10.25% Senior Secured Notes are governed by an indenture (the “Senior Secured Notes Indenture”) entered into among us, the guarantors party thereto and U.S. Bank National Association, in its capacity as trustee and collateral agent. The 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. We used the proceeds of this issuance to repay $70.0 million of our 10% Convertible Notes on May 1, 2020. The 10.25% Senior Secured Notes are supported by a $150.0 million indenture between us and U.S. Bank National Association, which contains an accordion feature for an additional $80.0 million of notes that can be issued within the next 18 months.

Interest on the 10.25% Senior Secured Notes is payable on March 31, June 30, September 30 and December 31 of each year, 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 outstanding unpaid principal of the 10.25% Senior Secured Notes of $70.0 million was classified as non-current as of September 30, 2020.

2.5% *Green Convertible Senior Notes due August 2025* - In August 2020, we issued $230.0 million aggregate principal amount of our Green Notes unless earlier repurchased, redeemed or converted. The Green Notes were issued pursuant to, and are governed by, the Green Note Indenture. The principal amount of the Green Notes are $230.0 million, less initial purchaser's discount of $6.9 million and less 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. Before the close of business on the business day immediately before May 15, 2025, noteholders will have the right to convert their Green Notes only upon the occurrence of certain events. From and after May 15, 2025, noteholders may convert their Green Notes at any time at their election until the close of business on the second scheduled trading day immediately before the maturity date.

At our option, we may settle conversions by paying or delivering, as applicable, cash, shares of our Class A common stock or a combination of cash and shares of our Class A common stock, at our election.

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 will be 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 in the Green Note Indenture) occur, then the conversion rate will, in certain circumstances, be increased for a specified period of time.

In the accounting for the issuance of the Green Notes, we separated the $230.0 million aggregate principal amount into liability and equity components in accordance with ASC 470 – 20, *Debt with Conversion and Other Options*. The carrying amount of the liability components for the Green Notes of approximately $96.1 million was calculated by measuring the fair value of similar debt instruments that do not have an associated convertible feature and was classified as non-current debt on the condensed consolidated balance sheet. The carrying amount of the equity components for the Green Notes of approximately $133.9 million, representing the conversion option, was determined by deducting the carrying amount of the liability components from the principal amount of the notes. This difference between the principal amount of the notes and the liability

components represents the debt discount, presented as a reduction to the notes on our condensed consolidated balance sheets, and is amortized to interest expense using the effective interest method over the remaining term of the notes. The equity components of the notes are included in additional paid-in capital on our condensed consolidated balance sheets and is not remeasured as long as it continues to meet the conditions for equity classification.

We incurred issuance costs related to the Green Notes of approximately $9.9 million, consisting of the initial purchaser's discount of $6.9 million and other issuance costs of approximately $3.0 million. In accounting for the issuance costs, we allocated the total amount incurred to the liability and equity components using the same proportions determined above for the notes. Transaction costs attributable to the liability components for the Green Notes of approximately $4.3 million were recorded as debt issuance costs, presented as a reduction to the notes on our condensed consolidated balance sheets, and are amortized to interest expense using the effective interest method over the term of the notes. The issuance costs attributable to the equity components for the Green Notes were approximately $5.6 million and were recorded as a reduction to the equity component included in additional paid-in capital.

As of September 30, 2020, the remaining lives of the Green Notes are approximately 4.9 years, and are classified as long-term debt. The effective interest rate of the liability components for the Green Notes is 21.2% and is based on the interest rate of similar debt instruments, at the time of our offering, that do not have associated convertible features. Total interest expense recognized related to the Green Notes for the three and nine months ended September 30, 2020 was $2.9 million, comprised of contractual interest expense of $0.7 million, amortization of debt discount of $2.1 million and amortization of issuance costs of $0.1 million.

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 help fund the purchase and installation of our Energy Servers. The loan bears a fixed interest rate of 7.5% payable quarterly. The loan requires quarterly principal payments which began in March 2014. The credit agreement requires us to maintain a debt service reserve for all funded systems, the balance of which was $3.8 million and $3.8 million as of September 30, 2020 and December 31, 2019, 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 2025 - 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 notes are secured by all the assets of the PPA IV. The note purchase agreement requires us to maintain a debt service reserve, the balance of which was $8.4 million as of September 30, 2020 and $8.0 million as of December 31, 2019, 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 - The outstanding debt balance of the LIBOR + 2.5% Term Loan of $7.6 million and $5.1 million were classified as current and $109.5 million and $115.3 million were classified as non-current as of September 30, 2020 and December 31, 2019, respectively.

In accordance with the credit agreement, PPA V was issued a floating rate debt based on LIBOR plus a margin, paid quarterly. The applicable margins used for calculating interest expense are 2.25% for years 1-3 following the Term Conversion Date and 2.5% thereafter. For the Lenders' commitments to the loan and the commitments to a letter of credit ("LC") facility, the PPA V also pays commitment fees at 0.50% per annum over the outstanding commitments, paid quarterly. The loan is secured by all the assets of the PPA V and requires quarterly principal payments which began in March 2017. In connection with the floating-rate credit agreement, in July 2015, PPA V entered into pay-fixed, receive-float interest rate swap agreements to convert its floating-rate loan into a fixed-rate loan.

Letters of Credit due December 2021 - In June 2015, PPA V entered into a $131.2 million term loan due December 2021. The agreement also included commitments to a LC facility with the aggregate principal amount of $6.4 million, later adjusted down to $6.2 million. The amount reserved under the letter of credit as of September 30, 2020 and December 31, 2019 was $5.2 million and $5.0 million, respectively. The unused capacity as of September 30, 2020 and December 31, 2019 was $1.0 million and $1.2 million, respectively.

Related Party Debt

Portions of the above described recourse and non-recourse debt were held by various related parties. See Note 16, *Related Party Transactions* for a full description.

Repayment Schedule and Interest Expense

The following table presents detail of our outstanding loan principal repayment schedule as of September 30, 2020 (in thousands):

Remainder of 2020	$ 100,063
2021	138,590
2022	34,393
2023	42,166
2024	49,886
Thereafter	342,141
	$ 707,239

Total interest expense of $20.3 million and $22.9 million for the three months ended September 30, 2020 and 2019, respectively, was recorded in interest expense on the condensed consolidated statements of operations. Interest expense of $57.5 million and $70.7 million for the nine months ended September 30, 2020 and 2019, respectively, was recorded in interest expense and interest expense to related parties on the condensed consolidated statements of operations.

8. Derivative Financial Instruments

Interest Rate Swaps

We use various financial instruments to minimize the impact of variable market conditions on our results of operations. We use interest rate swaps to minimize the impact of fluctuations of interest rate changes on our outstanding debt where LIBOR is applied. We do not enter into derivative contracts for trading or speculative purposes.

The fair values of the derivatives designated as cash flow hedges as of September 30, 2020 and December 31, 2019 on our condensed consolidated balance sheets were as follows (in thousands):

	September 30, 2020	December 31, 2019
Assets		
Prepaid expenses and other current assets	$ —	$ 3
	$ —	$ 3
Liabilities		
Accrued expenses and other current liabilities	$ 2,075	$ 782
Derivative liabilities	15,197	8,459
	$ 17,272	$ 9,241

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 21, 2021 and the remaining three will mature on September 30, 2031. We evaluate and calculate the effectiveness of the hedge at each reporting date. The effective change was recorded in accumulated other comprehensive income (loss) and was recognized as interest expense on settlement. The notional amounts of the swaps were $182.4 million and $184.2 million as of September 30, 2020 and December 31, 2019, 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 months ended September 30, 2020 and 2019, respectively, and were included in other income (expense), net, in the condensed consolidated statements of operations. We realized a gain of $0.1 million and an immaterial gain attributable to the change in valuation during the nine months ended September 30, 2020 and 2019, respectively, and they were included in other income (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 were as follows (in thousands):

	Three Months Ended September 30,		Nine months ended September 30,	
	2020	2019	2020	2019
Beginning balance	$ 17,881	$ 9,146	$ 9,238	$ 3,548
(Gain) loss recognized in other comprehensive income/loss	(72)	2,472	9,212	8,062
Amounts reclassified from other comprehensive loss to earnings	(501)	(28)	(1,068)	75
Net (gain) loss recognized in other comprehensive income/loss	(573)	2,444	8,144	8,137
Gain recognized in earnings	(36)	(48)	(110)	(143)
Ending balance	$ 17,272	$ 11,542	$ 17,272	$ 11,542

For the three months ended September 30, 2020 and 2019, we recorded the fair value of our natural gas fixed price forward contract and recognized an unrealized gain of $0.7 million and an unrealized loss of $0.8 million, respectively. For the nine months ended September 30, 2020 and 2019, we recorded the fair value of our natural gas fixed price forward contract and recognized an immaterial unrealized gain and an unrealized loss of $1.5 million, respectively.

For the three months ended September 30, 2020 and 2019, we recognized a realized gain of $1.2 million and a realized gain of $1.1 million, respectively, on the settlement of these contracts. Gains and losses are recorded in cost of revenue on the condensed consolidated statements of operations. For the nine months ended September 30, 2020 and 2019, we recognized a realized gain of $3.7 million and a realized gain of $2.7 million, respectively, on the settlement of these contracts. Gains and losses are recorded in cost of revenue on the condensed consolidated statements of operations.

Embedded EPP Derivatives in Sales Contracts

Embedded EPP Derivatives in Sales Contracts - We estimated the fair value of the embedded EPP derivatives in certain sales contracts using a Monte Carlo simulation model, which considers various potential electricity price forward curves over the sales contracts' terms. We use historical grid prices and available forecasts of future electricity prices to estimate future electricity prices. The grid pricing EPP guarantees that we provided in some of our sales arrangements represent an embedded derivative, with the initial value accounted for as a reduction in product revenue and any changes, reevaluated quarterly, in the fair market value of the derivative recorded in gain (loss) on revaluation of embedded derivatives. We recognized an unrealized gain of $1.5 million and an unrealized loss of $0.5 million attributable to the change in fair value for the three months ended September 30, 2020 and 2019, respectively. We recognized an unrealized gain of $2.2 million and an unrealized loss of $1.6 million attributable to the change in fair value for the nine months ended September 30, 2020 and 2019, respectively. These gains and losses were included within loss on revaluation of embedded derivatives in the condensed consolidated statements of operations. The fair value of these derivatives was $4.0 million and $6.2 million as of September 30, 2020 and December 31, 2019, respectively.

9. Stockholders' Equity

Our capitalization as of September 30, 2020 and December 31, 2019 is described as follows:

	Authorized	September 30, 2020	December 31, 2019
Shares issued and outstanding:			
Total common stock - Class A[1]	600,000,000	125,729,561	84,549,511
Total common stock - Class B[1]	600,000,000	28,067,011	36,486,778
Total preferred stock	10,000,000	—	—
		153,796,572	121,036,289
Rights to acquire stock			
Stock Plans' options and awards outstanding:			
2002 stock plan		1,595,345	1,856,154
2012 equity incentive plan		10,545,571	16,638,850
2018 equity incentive plan		12,057,826	9,454,578
		24,198,742	27,949,582
Warrants outstanding:			
Common stock warrants [2]		494,121	494,121
		24,692,863	28,443,703
Total diluted shares		178,489,435	149,479,992
Total options/RSUs available for grant - 2018 EIP plan		19,987,416	17,233,144
Total shares available for grant - 2018 ESPP		2,587,874	3,030,407
		201,064,725	169,743,543

[1] We have two classes of authorized common stock, Class A common stock and Class B common stock. The rights of the holders of Class A common stock and Class B common stock are identical, except with respect to voting and conversion rights. Each share of Class A common stock is entitled to one vote per share. Each share of Class B common stock is entitled to ten votes per share and is convertible into one share of Class A common stock at the discretion of its holder, or automatically upon 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.

[2] As of September 30, 2020 and December 31, 2019, we had Class B common stock warrants outstanding to purchase 481,181 and 12,940 shares of Class B common stock at exercise prices of $27.78 and $38.64, respectively.

10. Stock-Based Compensation and Employee Benefit Plans

Share-based grants are designed to reward employees for their long-term contributions to us and provide incentives for them to remain with us.

2002 Stock Plan

As of September 30, 2020, options to purchase 1,595,345 shares of Class B common stock were outstanding with a weighted average exercise price of $25.52 per share. The 2002 Stock Plan has been canceled; however, it continues to govern outstanding grants under the 2002 Stock Plan.

2012 Equity Incentive Plan

As of September 30, 2020, stock options to purchase 9,191,693 shares of Class B common stock were outstanding with a weighted average exercise price of $27.28 per share and no shares were available for future grant. As of September 30, 2020, we had outstanding restricted stock units ("RSUs") that may be settled for 1,353,878 shares of Class B common stock under the plan. The 2012 Equity Incentive Plan has been canceled; however, it continues to govern outstanding grants under the 2012 Equity Incentive Plan.

2018 Equity Incentive Plan

As of September 30, 2020, stock options to purchase 5,817,989 shares of Class A common stock were outstanding with a weighted average exercise price of $9.16 per share and 6,239,837 shares of outstanding RSUs that may be settled for Class A common stock which were granted pursuant to the 2018 Equity Incentive Plan (the "2018 EIP").

Stock-Based Compensation Expense

We used the following weighted-average assumptions in applying the Black-Scholes valuation model for determination of option valuation:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Risk-free interest rate	—%	1.9%- 2.0%	0.6%	1.9% - 2.6%
Expected term (years)	—	6.4 - 6.7	6.6	6.4 - 6.7
Expected dividend yield	—	—	—	—
Expected volatility	—%	45.7%	71.0%	45.7% - 50.2%

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,	
	2020	2019 As Restated	2020	2019 As Restated
Cost of revenue	$ 3,568	$ 7,985	$ 13,811	$ 36,835
Research and development	4,103	6,589	14,913	33,037
Sales and marketing	2,234	5,823	8,358	26,270
General and administrative	5,830	20,650	20,303	64,091
	$ 15,735	$ 41,047	$ 57,385	$ 160,233

Stock-based Compensation - During the three months ended September 30, 2020 and 2019, we recognized $0.7 million and $5.7 million, respectively, of stock-based compensation expense previously capitalized in inventory and property, plant and equipment. During the nine months ended September 30, 2020 and 2019, we recognized $3.8 million and $22.7 million, respectively, of stock-based compensation expense previously capitalized in inventory and property, plant and equipment.

Stock Option and RSU Activity

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

	Outstanding Options			
	Number of Shares	Weighted Average Exercise Price	Remaining Contractual Life (Years)	Aggregate Intrinsic Value
				(in thousands)
December 31, 2019	17,837,316	$ 20.76	6.94	$ 14,964
Granted	200,000	7.30		
Exercised	(443,929)	9.56		
Cancelled	(988,360)	23.01		
Balances at September 30, 2020	16,605,027	20.76	6.24	66,358
Vested and expected to vest at Current period end	16,188,459	21.08	6.18	62,085
Exercisable at Current period end	10,047,183	27.82	4.71	5,338

Stock Options - During the three months ended September 30, 2020 and 2019, we recognized $4.4 million and $8.5 million of stock-based compensation costs for stock options, respectively. During the nine months ended September 30, 2020 and 2019, we recognized $14.9 million and $26.7 million of stock-based compensation costs for stock options, respectively.

We granted zero and 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, 2020 and 2019, we had unrecognized compensation costs related to unvested stock options of $25.1 million and $48.0 million, respectively. This cost is expected to be recognized over the remaining weighted-average period of 2.1 years and 2.6 years, respectively. We had no excess tax benefits in the quarters ended September 30, 2020 and 2019. Cash received from stock options exercised totaled $4.2 million and $1.4 million for the nine months ended September 30, 2020 and 2019, respectively.

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

	Number of Awards Outstanding	Weighted Average Grant Date Fair Value
Unvested Balance at December 31, 2019	10,112,266	$ 17.29
Granted	4,421,528	11.73
Vested	(6,524,088)	17.59
Forfeited	(415,991)	15.05
Balances at September 30, 2020	7,593,715	13.92

Restricted Stock Units - The estimated fair value of RSU awards is based on the fair value of our Class A common stock on the date of grant. For the three months ended September 30, 2020 and September 30, 2019, we recognized $9.6 million and $27.8 million of stock-based compensation costs for RSUs, respectively. For the nine months ended September 30, 2020 and September 30, 2019, we recognized $33.3 million and $118.5 million of stock-based compensation costs for RSUs, respectively.

As of September 30, 2020, we had $62.0 million of unrecognized stock-based compensation cost related to unvested RSUs. This cost is expected to be recognized over a weighted average period of 2.2 years. As of September 30, 2019, we had $76.9 million of unrecognized stock-based compensation cost related to unvested RSUs. This expense was expected to be recognized over a weighted average period of 1.1 years.

The following table presents the stock activity and the total number of RSUs available for grant under our stock plans as of September 30, 2020:

	Plan Shares Available for Grant
Balances at December 31, 2019	17,233,144
Added to plan	6,928,556
Granted	(4,621,528)
Cancelled	1,396,524
Expired	(949,280)
Balances at September 30, 2020	19,987,416

2018 Employee Stock Purchase Plan

During the three months ended September 30, 2020 and 2019, we recognized $0.5 million and $3.2 million of stock-based compensation costs under our 2018 Employee Stock Purchase Plan (the "2018 ESPP"), respectively. During the nine months ended September 30, 2020 and 2019, we recognized $5.2 million and $8.4 million of stock-based compensation costs for the 2018 ESPP, respectively. We issued 1,937,825 shares in the nine months ended September 30, 2020. During the first nine months of 2020, we added an additional 1,494,819 shares and there were 2,587,401 shares available for issuance as of September 30, 2020.

As of September 30, 2020, we had $2.6 million of unrecognized stock-based compensation costs. This cost is expected to be recognized over a weighted average period of 0.5 years.

We used the following weighted-average assumptions in applying the Black-Scholes valuation model for determination of the ESPP share valuation:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Risk-free interest rate	0.12% - 0.14%	1.90% - 2.00%	0.12% - 1.51%	1.9% - 2.6%
Expected term (years)	0.5 - 2.0	0.5 - 2.0	0.5 - 2.0	0.6 - 2.1
Expected dividend yield	—	—	—	—
Expected volatility	98.9% - 119.2%	45.7%	61.0% - 119.2%	47.0% - 50.2%

2019 and 2020 Executive Awards

In November 2019, the Board approved stock options ("2019 Executive Awards") to certain executive staff. The 2019 Executive Awards were granted pursuant to the 2018 EIP and consist of three vesting tranches with a vesting schedule based on the attainment of market conditions and assuming continued employment and service through each vesting date. Stock-based compensation costs associated with the 2019 Executive Awards are recognized over the service period, even though no tranches of the 2019 Performance Awards vest unless a market condition is achieved. The grant date fair value of the options is determined using a Monte Carlo simulation.

In June 2020, the Board approved stock awards ("2020 Executive Awards") to certain executive staff. The 2020 Executive Awards were granted pursuant to the 2018 EIP and consist of three vesting tranches with an annual vesting schedule based on the attainment of performance conditions and assuming continued employment and service through each vesting date. Stock-based compensation costs associated with the 2020 Executive Awards is recognized over the service period as we evaluate the probability of the achievement of the performance conditions.

11. Income Taxes

For the three months ended September 30, 2020 and 2019, we recorded provisions for income taxes of an immaterial amount and $0.1 million on pre-tax losses of $17.9 million and $56.6 million for effective tax rates of 0.0% and (0.2)%, respectively. For the nine months ended September 30, 2020 and 2019, we recorded provisions for income taxes of $0.3 million and $0.6 million on pre-tax losses of $147.2 million and $251.9 million for effective tax rates of (0.2)%, and (0.2)%, respectively.

The effective tax rate for the three and nine months ended September 30, 2020 and 2019 is lower than the statutory federal tax rate primarily due to a full valuation allowance against U.S. deferred tax assets.

12. Net Loss per Share Attributable to Common Stockholders

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
		As Restated		Restated
Numerator:				
Net loss attributable to Class A and Class B common stockholders	$ (11,954)	$ (51,750)	$ (130,415)	$ (238,581)
Denominator:				
Weighted average shares of common stock, basic and diluted	138,964	116,330	129,571	113,948
Net loss per share available to Class A and Class B common stockholders, basic and diluted	$ (0.09)	$ (0.44)	$ (1.01)	$ (2.09)

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Convertible notes	$ 32,957	$ 27,264	$ 31,765	$ 27,264
Stock options and awards	6,321	4,571	5,518	4,990
	$ 39,278	$ 31,835	$ 37,283	$ 32,254

13. Power Purchase Agreement Programs

Overview

In mid-2010, we began offering our Energy Servers through our Bloom Electrons program, which we denote as our PPA Program, financed via investment entities (each, an "Investment Company") with our tax equity investors ("Equity Investors"). For additional information, see our Annual Report on Form 10-K for the fiscal year ended December 31, 2019.

PPA Entities' Activities Summary

The table below shows the details of the three Investment Company VIEs that were active during the nine months ended September 30, 2020 and their cumulative activities from inception to the periods indicated (dollars in thousands):

	PPA IIIa	PPA IV	PPA V
Overview:			
Maximum size of installation (in megawatts)	10	21	40
Installed size (in megawatts)	10	19	37
Term of power purchase agreements (in years)	15	15	15
First system installed	Feb-13	Sep-14	Jun-15
Last system installed	Jun-14	Mar-16	Dec-16
Income (loss) and tax benefits allocation to Equity Investor	99%	90%	99%
Cash allocation to Equity Investor	99%	90%	90%
Income (loss), tax and cash allocations to Equity Investor after the flip date	5%	No flip	No flip
Equity Investor [1]	US Bank	Exelon Corporation	Exelon Corporation
Put option date [2]	1st anniversary of flip point	N/A	N/A
Company cash contributions	$ 32,223	$ 11,669	$ 27,932
Company non-cash contributions [3]	$ 8,655	$ —	$ —
Equity Investor cash contributions	$ 36,967	$ 84,782	$ 227,344
Debt financing	$ 44,968	$ 99,000	$ 131,237
Activity as of September 30, 2020:			
Distributions to Equity Investor	$ 4,837	$ 8,582	$ 74,397
Debt repayment—principal	$ 9,882	$ 20,290	$ 13,289
Activity as of December 31, 2019:			
Distributions to Equity Investor	$ 4,803	$ 6,692	$ 70,591
Debt repayment—principal	$ 6,631	$ 18,012	$ 9,453

[1] Investor name represents ultimate parent of subsidiary financing the project.

[2] Investor right on the certain date, upon giving us advance written notice, to sell the membership interests to us or resign or withdraw from the investment partnership.

[3] Non-cash contributions consisted of warrants that were issued by us to respective lenders to each PPA Entity, as required by such entity's credit agreements. The corresponding values are amortized using the effective interest method over the debt term.

The noncontrolling interests in PPA IIIa are redeemable as a result of the put option held by the Equity Investors as of September 30, 2020 and December 31, 2019. At September 30, 2020 and December 31, 2019, the carrying value of redeemable noncontrolling interests of $0.2 million and $0.4 million, respectively, exceeded the maximum redemption value.

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. 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, 2020	December 31, 2019
Assets		
Current assets:		
Cash and cash equivalents	$ 1,221	$ 1,894
Restricted cash	1,095	2,244
Accounts receivable	4,158	4,194
Customer financing receivable	5,341	5,108
Prepaid expenses and other current assets	3,942	3,587
Total current assets	15,757	17,027
Property and equipment, net	257,907	275,481
Customer financing receivable, non-current	46,725	50,747
Restricted cash	15,327	15,045
Other long-term assets	248	607
Total assets	$ 335,964	$ 358,907
Liabilities		
Current liabilities:		
Accrued expenses and other current liabilities	$ 2,311	$ 1,391
Deferred revenue and customer deposits	662	662
Current portion of debt	13,999	12,155
Total current liabilities	16,972	14,208
Derivative liabilities	15,197	8,459
Deferred revenue	6,239	6,735
Long-term portion of debt	213,209	223,267
Other long-term liabilities	2,862	2,355
Total liabilities	$ 254,479	$ 255,024

As of January 1, 2020, the flip date, we are the majority owner shareholder in PPA IIIa receiving 95% of all cash distributions and profits and losses. In addition, we consolidated each PPA Entity as VIEs in the PPA IV transaction and PPA V transaction, as we remain the minority shareholder in each of these transactions but have determined that we are the beneficial owner 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. Although we will continue to offer customers the ability to purchase electricity without the purchase of our Energy Servers, we do not intend to be a minority investor in any new PPA Entities.

We believe that by presenting assets and liabilities separate from the PPA Entities, we provide a better view of the true operations of our core business. The table below provides detail into the assets and liabilities of Bloom Energy separate from the PPA Entities. The table provides Bloom Energy's stand-alone assets and liabilities, those of the PPA Entities combined, and our consolidated balances as of September 30, 2020 and December 31, 2019 (in thousands):

	September 30, 2020			December 31, 2019		
	Bloom Energy	PPA Entities	Consolidated	Bloom Energy	PPA Entities	Consolidated
Assets						
Current assets	$ 634,296	$ 15,757	$ 650,053	$ 455,680	$ 17,027	$ 472,707
Long-term assets	504,099	320,207	824,306	508,004	341,880	849,884
Total assets	$ 1,138,395	$ 335,964	$ 1,474,359	$ 963,684	$ 358,907	$ 1,322,591
Liabilities						
Current liabilities	$ 256,886	$ 2,973	$ 259,859	$ 234,328	$ 2,053	$ 236,381
Current portion of debt	115,658	13,999	129,657	325,428	12,155	337,583
Long-term liabilities	577,175	24,298	601,473	599,709	17,549	617,258
Long-term portion of debt	227,481	213,209	440,690	75,962	223,267	299,229
Total liabilities	$ 1,177,200	$ 254,479	$ 1,431,679	$ 1,235,427	$ 255,024	$ 1,490,451

14. Commitments and Contingencies

Commitments

Facilities Leases

We lease most of our facilities, office buildings and equipment under operating leases that expire at various dates through December 2028. Our headquarters is used for administration, research and development and sales and marketing.

Additionally, we lease various manufacturing facilities in Sunnyvale, Fremont and Mountain View, California. Our current lease for our Sunnyvale manufacturing facilities, was entered into in April 2005, and expires in December 2021. Our current lease for our manufacturing facilities at Mountain View, was entered into in December 2011, and expired in December 2019, but was extended on a month to month arrangement. In June 2020, we signed a lease in Fremont to replace the manufacturing facility in Mountain View that will expire in 2027. The existing leased plants together comprise approximately 370,601 square feet of space. We lease additional office space as field offices in the United States and around the world including in India, the Republic of Korea, China and Taiwan.

During the three months ended September 30, 2020 and 2019, rent expense for all occupied facilities was $2.8 million and $1.9 million, respectively. During the nine months ended September 30, 2020 and 2019, rent expense for all occupied facilities was $6.8 million and $5.7 million, respectively.

Equipment Leases

We are a party to master lease agreements that provide for the sale of our Energy Servers to third parties and the simultaneous leaseback of the systems which we then sublease to customers. The lease agreements expire on various dates through 2025 and there was no recorded rent expense for the three and nine months ended September 30, 2020 and 2019.

At September 30, 2020, future minimum lease payments under operating leases and financing obligations were as follows (in thousands):

	Operating Leases Obligations	Financing Obligations	Sublease Payments[1]
Remainder of 2020	$ 2,292	$ 9,843	$ (9,843)
2021	9,848	39,898	(39,898)
2022	6,076	40,878	(40,878)
2023	6,195	41,806	(41,806)
2024	6,380	39,693	(39,693)
Thereafter	23,931	122,376	(122,376)
Total lease payments	$ 54,722	294,494	$ (294,494)
Less: imputed interest		(172,699)	
Total lease obligations		121,795	
Less: current obligations		(12,342)	
Long-term lease obligations		$ 109,453	

[1] Sublease Payments primarily represents the fees received by the bank from our end customer for the electricity generated by our Energy Servers leased under our Managed Services and other similar arrangements, which also pay down our financing obligation to the bank.

Managed Services Financing Obligations - Our Managed Services arrangements are classified as capital leases and are recognized as financing transactions, while the sublease arrangements with the end customer are classified as operating leases. Payments received from the financier are recognized as financing obligations. These 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 long-term financing obligations were $451.8 million and $446.2 million as of September 30, 2020 and December 31, 2019, respectively. The difference between these obligations and the principal obligations in the table above will be offset against the carrying value of the related Energy Servers at the end of the lease and the remainder recognized as a gain at that point. We recognize revenue for the electricity generated by allocating the total proceeds of the sublease payments based on the relative standalone selling prices to electricity revenue and to service revenue.

Purchase Commitments with Suppliers and Contract Manufacturers - In order to reduce manufacturing lead-times and to ensure an adequate supply of inventories, we have agreements with our component suppliers and contract manufacturers to allow long lead-time component inventory procurement based on a rolling production forecast. We are contractually obligated to purchase long lead-time component inventory procured by certain manufacturers in accordance with our forecasts. We can generally give notice of order cancellation at least 90 days prior to the delivery date. However, we issue purchase orders to our component suppliers and third-party manufacturers that may not be cancellable. As of September 30, 2020 and December 31, 2019, we had no material open purchase orders with our component suppliers and third-party manufacturers that are not cancellable.

Power Purchase Agreement Program - Under the terms of the PPA I transaction, customers agree to purchase power from our Energy Servers at negotiated rates, generally for periods of up to 15 years. We are responsible for all operating costs necessary to maintain, monitor and repair the Energy Servers, including the fuel necessary to operate the systems under certain PPAs. The risk associated with the future market price of fuel purchase obligations is mitigated with commodity contract futures. For additional information on the Bloom Electrons program, see our Annual Report on Form 10-K for the fiscal year ended December 31, 2019 and Note 13, *Power Purchase Agreement Programs.*

We guarantee the performance of Energy Servers at certain levels of output and efficiency to its customers over the contractual term. The PPA Entities monitor the need for any accruals arising from such guaranties, which are calculated as the difference between committed and actual power output or between natural gas consumption at warranted efficiency levels and actual consumption, multiplied by the contractual rates with the customer. Amounts payable under these guaranties are accrued in periods when the guaranties are not met and are recorded in cost of service revenue in the condensed consolidated statements of operations. We paid $5.7 million and $3.5 million for the nine months ended September 30, 2020 and 2019, respectively.

Letters of Credit - In June 2015, PPA V entered into a $131.2 million credit agreement to fund the purchase and installation of our Energy Servers. The lenders have commitments to a LC facility with the aggregate principal amount of $6.2

million. The LC facility is to fund the debt service reserve account. The amount reserved under the LC as of September 30, 2020, was $5.2 million.

In 2019, pursuant to the PPA II upgrade of Energy Servers, we agreed to indemnify SPDS for losses that may be incurred in the event of certain regulatory, legal or legislative development and established a cash-collateralized letter of credit for this purpose. As of September 30, 2020, the balance of this cash-collateralized LC was $108.7 million, of which $12.4 million and $96.3 million is recognized as short-term and long-term restricted cash, respectively.

Pledged Funds - In 2019, pursuant to the PPA IIIb upgrade of Energy Servers, we have restricted cash of $20.0 million, which has been pledged for a seven-year period to secure our operations and maintenance obligations with respect to the totality of our obligations to the financier. All or a portion of such funds would be released if we meet certain credit rating and/or market capitalization milestones prior to the end of the pledge period. If we do not meet the required criteria within the first five-year period, the funds would still be released to us over the following two years as long as the Energy Servers continue to perform in compliance with our warranty obligations.

Contingencies

Indemnification Agreements - We enter into standard indemnification agreements with our customers and certain other business partners in the ordinary course of business. Our exposure under these agreements is unknown because it involves future claims that may be made against us but have not yet been made. To date, we have not paid any claims or been required to defend any action related to our indemnification obligations. However, we may record charges in the future as a result of these indemnification obligations.

Delaware Economic Development Authority - In March 2012, we entered into an agreement with the Delaware Economic Development Authority to provide a grant of $16.5 million to us as an incentive to establish a new manufacturing facility in Delaware and to provide employment for full time workers at the facility over a certain period of time. The grant contains two types of milestones that we must complete to retain the entire amount of the grant proceeds. The first milestone was to provide employment for 900 full time workers in Delaware by the end of the first recapture period of September 30, 2017. The second milestone was to pay these full-time workers a cumulative total of $108.0 million in compensation by September 30, 2017. There are two additional recapture periods at which time we must continue to employ 900 full time workers and the cumulative total compensation paid by us is required to be at least $324.0 million by September 30, 2023. As of September 30, 2020, we had 396 full time workers in Delaware and paid $144.5 million in cumulative compensation. As of December 31, 2019, we had 323 full time workers in Delaware and paid $120.1 million in cumulative compensation. We have so far received $12.0 million of the grant, which is contingent upon meeting the milestones through September 30, 2023. In the event that we do not meet the milestones, we may have to repay the Delaware Economic Development Authority, up to $2.2 million on September 30, 2021 and up to an additional $2.5 million on September 30, 2023. As of September 30, 2020, we paid $1.5 million for recapture provisions and have recorded $1.3 million in current liabilities and $9.2 million in other long-term liabilities for potential recapture.

Investment Tax Credits ("ITCs") - Our Energy Servers are eligible for federal ITCs that accrued to qualified property under Internal Revenue Code Section 48 when placed into service. However, the ITC program has operational criteria that extend for five years. If the energy property is disposed or otherwise ceases to be qualified investment credit property before the close of the five-year recapture period is fulfilled, it could result in a partial reduction of the incentives. Energy Servers are purchased by the PPA Entities, other financial sponsors, or customers and, therefore, these 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. On July 30, 2020, claimants notified us that they intend to file a complaint in the Northern District of California seeking to stay the arbitration, and disqualify the arbitration panel on procedural grounds. We believe claimants have no basis to bring this complaint and that doing so will breach the Confidential Agreement. Claimants have not yet filed such complaint.

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 has been stayed pending the outcome of the arbitration. As the arbitration has now been dismissed, on October 2, 2020, plaintiffs filed a motion to lift the stay and on October 20, 2020, over our objection, the motion was granted. We intend to file a motion to dismiss the complaint. We believe the complaint to be without merit and the issues previously tried and dismissed in the arbitration. We have recorded no loss contingency related to this claim.

In March 2019, the Lincolnshire Police Pension Fund filed a class action complaint in the Superior Court of the State of California, County of Santa Clara, against us, certain members of our senior management, certain of our directors and the underwriters in our 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 our 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.

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 our 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 the underwriters in our initial public offering, claims under Sections 10b and 20a of the Securities Exchange Act of 1934, as amended (the Exchange Act"), and extending the 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 allegations pertaining to the restatement and, as to claims under the Exchange Act, extends the class period through February 12, 2020. On July 1, 2020, we filed a motion to dismiss the second amended complaint. We believe the complaint to be without merit and we intend to defend this action vigorously. Because this action is in the early stages, we are unable to predict the outcome of this litigation at this time.

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 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. A trial date for this matter has been set for December 7, 2020. We believe the complaint to be without merit.

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. We are still investigating the plaintiff's allegations and intend to vigorously defend against the complaint, but any range of potential loss is not currently estimable.

15. Segment Information

Segment and the Chief Operating Decision Maker

Our chief operating decision makers ("CODMs"), our 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 Chief Executive Officer. The CODMs assess performance, including incentive compensation, based upon consolidated operations performance and financial results on a consolidated basis. As such, we have a single operating unit structure and are a single reporting segment.

16. Related Party Transactions

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Total revenue from related parties	$ 742	$ 66,658	$ 2,672	$ 149,012
Interest expense to related parties	353	1,605	2,513	4,823

Bloom Energy Japan Limited

In May 2013, we entered into a joint venture with Softbank Corp., which is accounted for as an equity method investment. Under this arrangement, we sell Energy Servers and provide maintenance services to the joint venture. For the three months ended September 30, 2020 and September 30, 2019, we recognized related party total revenue of $0.7 million and $1.0 million, respectively. For the nine months ended September 30, 2020 and September 30, 2019, we recognized related party total revenue of $2.7 million and $2.5 million, respectively. Accounts receivable from this joint venture was immaterial as of September 30, 2020 and $2.4 million as of December 31, 2019.

Debt to Related Parties

We had no debt or convertible notes from investors considered to be related parties as of September 30, 2020.

The following is a summary of our debt and convertible notes from investors considered to be related parties as of December 31, 2019 (in thousands):

		Net Carrying Value		
	Unpaid Principal Balance	Current	Long-Term	Total
Recourse debt from related parties:				
6% convertible promissory notes due December 2020 from related parties	$ 20,801	$ 20,801	$ —	$ 20,801
Non-recourse debt from related parties:				
7.5% term loan due September 2028 from related parties	38,337	3,882	31,088	34,970
Total debt from related parties	$ 59,138	$ 24,683	$ 31,088	$ 55,771

In November 2019, one related-party note holder exchanged $6.9 million of their 6% Convertible Notes at the conversion price of $11.25 per share into 616,302 shares of Class A common stock. On March 31, 2020, we issued $30.0 million of new 10% Convertible Notes to two related-party note holders. In May 2020, the 7.5% term loan note holder ceased to be considered a related party. We made no payments to this note holder prior to them terminating their related party relationship with us in the three months ended September 30, 2020, and we paid $0.5 million on this non-recourse 7.5% term loan principal

balance in the three months ended September 30, 2019. We paid no interest and $0.8 million of interest in the three months ended September 30, 2020 and September 30, 2019, respectively. We repaid $2.1 million and $1.7 million of the non-recourse 7.5% term loan principal balance in the nine months ended September 30, 2020 and September 30, 2019, respectively, and we paid $0.7 million and $2.3 million of interest in the nine months ended September 30, 2020 and September 30, 2019, respectively. In August 2020, NEA, Foris Ventures, LLC, and KPCB converted their notes of $33.9 million, $10.0 million and $6.9 million, plus accrued and unpaid interest, into 4.2 million, 1.3 million and 0.9 million shares of Class B common stock respectively. All of the noteholders subsequently converted their shares into Class A common stock during August and September 2020. The unamortized premium of $2.3 million was reclassified to additional paid in capital. See Note 7, *Outstanding Loans and Security Agreements* for additional information on our debt facilities.

17. Subsequent Events

On October 7, 2020, the remaining $96.2 million principal balance of the 10% Convertible Notes due to CPPIB were converted to 12.0 million shares of our Class B common stock that were subsequently converted into our Class A common stock. The unamortized premium of $3.2 million will be reclassified to additional paid in capital.

On October 8, 2020, we sent a notice of redemption for the 10% Notes. The redemption price for the 10% Notes being called is 104% of the principal amount thereof, amounting to $82.2 million plus accrued and unpaid interest of $2.1 million. The redemption date is expected to occur on November 8, 2020.

Other Events

There have been no other subsequent events that occurred during the period subsequent to the date of these financial statements that would require adjustment to our disclosure in the financial statements as presented.

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

Note Regarding Forward-Looking Information

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, 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," "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, 2019 filed on March 31, 2020. 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

Restatement of Previously Issued Condensed Consolidated Financial Statements

We have restated our previously reported financial information as of and for the three and nine months ended September 30, 2019, in this Item 2, Management's Discussion and Analysis of Financial Condition and Results of Operations, including but not limited to information within *Results of Operations* and *Liquidity and Capital Resources* sections.

See Note 2, *Restatement of Previously Issued Condensed Consolidated Financial Statements*, in Part I, Item 1, *Financial Statements*, for additional information related to the restatement, including descriptions of the misstatements and the impacts on our condensed consolidated financial statements.

Description of Bloom Energy

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

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

Our typical target commercial or industrial customer has historically been either an investment-grade entity or a customer with investment-grade attributes such as size, assets and revenue, liquidity, geographically diverse operations and general financial stability. We have recently expanded our product and financing options to the below-investment-grade customers and have also expanded internationally to target customers with deployments on a wholesale grid. Given that our

customers are typically large institutions with multi-level decision making processes, we generally experience a lengthy sales process.

COVID-19 Pandemic

General

We have been and will continue monitoring and adjusting 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, notwithstanding government "shelter in place" orders. For the safety of our employees and others, many of our employees are still working from home unless they are directly supporting essential manufacturing production operations, installation work, service and maintenance activities and R&D. We have established protocols to minimize the risk of COVID-19 transmission within our facilities, including enhanced cleaning, and temperature screenings upon entry. In addition, all individuals entering our facilities are required to wear face coverings and are directed not to enter if they have COVID-19-like symptoms. We follow all CDC guidelines when notified of possible exposures. For more information regarding the risks posed to our company by the COVID-19 pandemic, refer to Risk Factors – Risks Related to Our Products and Manufacturing – *Our business has been and will continue to be adversely affected by the COVID-19 pandemic.*

Liquidity and Capital Resources

In March 2020, we successfully extended the maturity of our 10% Convertible Notes due 2021 (the "10% Convertible Notes"), our 10% Constellation Note to December 2021 (the "10% Constellation Note"), and additionally entered into a note purchase agreement to issue $70.0 million of 10.25% Senior Secured Notes due 2027 (the "10.25% Senior Secured Notes") in a private placement that was subsequently completed on May 1, 2020. Since then, the 10% Convertible Notes and the 10% Constellation Note were converted into equity and the potential liabilities associated with these notes have been extinguished. In August 2020, we issued $230,000,000 aggregate principal amount of our 2.50% Green Convertible Senior Notes due 2025 (the "Green Notes"). In October 2020, we sent a notice of redemption for the 10% Senior Secured Notes due 2024 (the "10% Notes") and the redemption date is expected to occur on November 8, 2020.

Now that debt with a maturity prior to 2024 has been extinguished and/or converted, we do not expect it will be necessary to access capital markets for cash to operate our business over the next 12 months unless the impact of COVID-19 to our business is more extensive than expected. Capital markets have been volatile and there is no assurance that we would have access to capital markets at a reasonable cost, or at all, at times when capital was needed. We continue to be 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. Please refer to Note 7, *Outstanding Loans and Security Agreements*; Management's Discussion and Analysis of Financial Condition and Results of Operations - Liquidity and Capital Resources; and Risk Factors – Risks Related to Our Liquidity – *Our substantial indebtedness, and restrictions imposed by the agreements governing our and our PPA Entities' outstanding indebtedness, may limit our financial and operating activities and may adversely affect our ability to incur additional debt to fund future needs,* and *We may not be able to generate sufficient cash to meet our debt service obligations*, for more information regarding the terms of and risks associated with our debt.

Sales

In some markets, we have experienced an increase in the time necessary to obtain new business as our customers deal with the impact of the COVID-19 pandemic. Decision makers in organizations such as education and entertainment have shifted their focus to the immediate needs of the pandemic, thus delaying their purchase decisions and capital outlays. While there may ultimately be a reduction in electricity needs due to decrease in economic activity, the current impact generally equates to a longer transaction cycle.

Our ability to continue to expand our business both domestically and internationally and develop customer relationships also has been negatively impacted by current travel restrictions. Our marketing efforts historically have often involved customer visits to our manufacturing centers in California or Delaware, which we have suspended.

On the other hand, a significant portion of our customers are hospitals, healthcare companies, retailers and data centers. These industries are composed of essential businesses that still need the resiliency and reliability offered by our products. We

have seen an increase in demand for our products in these sectors where the COVID-19 pandemic has highlighted the benefits of always-on, on-site power in times of disaster and uncertainty though tempered by the issues noted above. In addition, the pandemic has had no significant effect on our business in the Republic of Korea.

We have also had some unique opportunities to deploy our systems on an emergency basis to support temporary hospitals. We believe deploying clean electrical power with no oxides of nitrogen (NOx) or sulfur (SOx) emissions, especially as atmospheric pollutants, is important for facilities preparing to treat a respiratory disease like COVID-19. As a result of this opportunity to introduce our products to more healthcare providers, demand for our products at some permanent hospitals has also increased.

Customer Financing

COVID-19 has not yet had any significant impact on our ability to obtain financing for our customers' use of our products, but we are finding it more difficult to find financiers who are able to monetize tax credit. A majority of the installations we have planned in the United States in 2020 have obtained financing. We are actively working with new sources of capital that could finance projects for our 2021 installations. We have experienced in the current environment an increase in the time needed to solidify new relationships, which may negatively impact the time required to achieve funding. In addition, our ability to obtain financing for our Energy Servers partly depends on the creditworthiness of our customers. Some of our customers' credit ratings have recently fallen, which may make it difficult for us to obtain financing for their use of an Energy Server. Our recent experience has been that financing parties have capital to deploy and are interested in financing our Energy Servers and, at present, cash flow and results of operations including revenue have not been impacted by our inability to obtain financing for customer installations.

Installations of Energy Servers

The COVID-19 pandemic has caused delays that affected nearly all of our installations with varying degrees of severity. Since we do not recognize revenue on the sales of our products until installation and acceptance, installation delays have a negative impact on our results of operations including revenue. Since we generally earn cash as we progress through the installation process, delays to installation activity also adversely affects our cash flows.

While our installation activity has been deemed "essential business" and allowed to proceed in many jurisdictions, the essential business designations for our activities (and those of our suppliers and other third-party organizations that are critical to our success) has been inconsistent from region to region and across the various third parties upon whom we are critically dependent to complete our installations.

In addition, we have experienced delays and interruptions to our installations where customers have shut down or otherwise limited access to their facilities.

Some of our backlog can only be deployed when the customer brings on sufficient load for our systems. Facility closings and diminished economic activity delay that load coming online, leading customers to postpone the completion of installations.

We use general contractors and sub-contractors, and need supplies of various types of ancillary equipment, for our installations. Some of our suppliers have had COVID-19 outbreaks among their workforces, which have caused installation delays. In addition, the availability and productivity of contractors, sub-contractors, and suppliers has generally been negatively impacted by social distancing requirements and other safety measures.

Nearly all of our installations completed in the quarter ended September 30, 2020 were impacted by COVID-19 to some extent and some installations were unable to achieve acceptance in light of the delays due to COVID-19, further compounded by weather-related events, which impacted our cash flows and results of operation including revenue for the quarter ended September 30, 2020.

Supply Chain

In the second quarter, we experienced COVID-19 related delays from certain vendors and suppliers, however, we were able to find and qualify alternative suppliers and our production to date has not been impacted. During the third quarter, our supply chain stabilized; however, if spikes in COVID-19 occur in regions in which our supply chain operates we could experience a delay in materials, which could in turn impact production and installations and our cash flow and results of operations, including revenue.

Manufacturing

As an essential business, we have continued to manufacture Energy Servers, but have adopted strict measures to keep our employees safe. These measures have decreased productivity to an extent, but our deployments, maintenance and installations have not yet been constrained by our current pace of manufacturing. As described above, we have established protocols to minimize the risk of COVID-19 transmission within our manufacturing facilities and follow all CDC guidelines when notified of possible exposures. We also instituted testing of anyone who comes into any of our facilities. Even with these precautions, it is possible an asymptomatic individual could enter our facilities and transmit the virus to others. We have had positive tests and in such cases, we have followed CDC Guidelines. To date, it has not impacted our production.

If we become aware of any cases of COVID-19 among any of our employees, we notify those with whom the person is known to have been in contact, send the exposed employees home for at least 14 days and require each employee to be tested negative before returning to work. Certain roles within our facilities involve greater mobility throughout our facilities and potential exposure to more employees. In the event one of such employees suffers from COVID-19, or if we otherwise believe that a significant number of employees have been exposed and sent home, particularly in our manufacturing facilities, our production could be significantly impacted. Furthermore, since our manufacturing process requires tasks performed at both our California facility and Delaware facility, significant exposure at either facility would have a substantial impact on our overall production, and could adversely affect our cash flow and results of operations including revenue.

Purchase and Lease Options

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

Our capacity to offer our Energy Servers through any of these financed arrangements depends in large part on the ability of the financing party or parties involved to monetize the related investment tax credits, accelerated tax depreciation and other incentives. Interest rate fluctuations may also impact the attractiveness of any financing offerings for our customers, and currency exchange fluctuations may also impact the attractiveness of international offerings. Each of these financings is limited by the creditworthiness of the customer. Additionally, the Traditional Lease and Managed Services Financing options, as with all leases, 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 purchase options, we typically perform the functions of a project developer, including identifying end customers and financiers, leading the negotiations of the customer agreements and financing agreements, securing all necessary permitting and interconnections approvals, and overseeing the design and construction of the project up to and including commissioning the Energy Servers.

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

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 Energy Server is commissioned. In each case, underperformance obligates us to make a payment to the owner of the applicable Energy Server. As of September 30, 2020, our obligation to make payments for underperformance on the direct purchase projects was capped at an aggregate total of approximately $78.7 million (including payments both for low output and for low efficiency). As of September 30, 2020, our aggregate remaining potential liability under this cap was approximately $60.4 million.

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

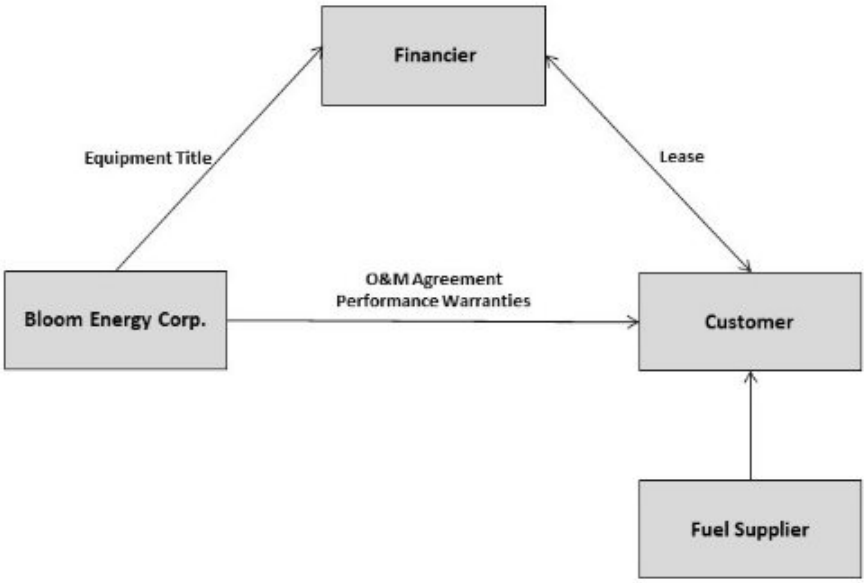
Under the Managed Services Financing option, the warranties and guaranties are included for the fixed period specified in the customer agreement. This period is typically 10 years, which may be extended at the option of the parties for additional years.

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

The substantial majority of bookings made in recent periods have been made through our Managed Services Financing option and our PPA Program.

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

Traditional Lease



Under the Traditional Lease option the customer enters into a lease directly with a financier, which pays us for our Energy Servers purchased pursuant to a sales agreement (the "Financing 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 operations and maintenance services agreements with us, under which we receive annual service payments from the customer. The price for the annual operations and maintenance services is set at the time we enter into the Financing Agreement. The term of a lease in a Traditional Lease option ranges from five to eight years.

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

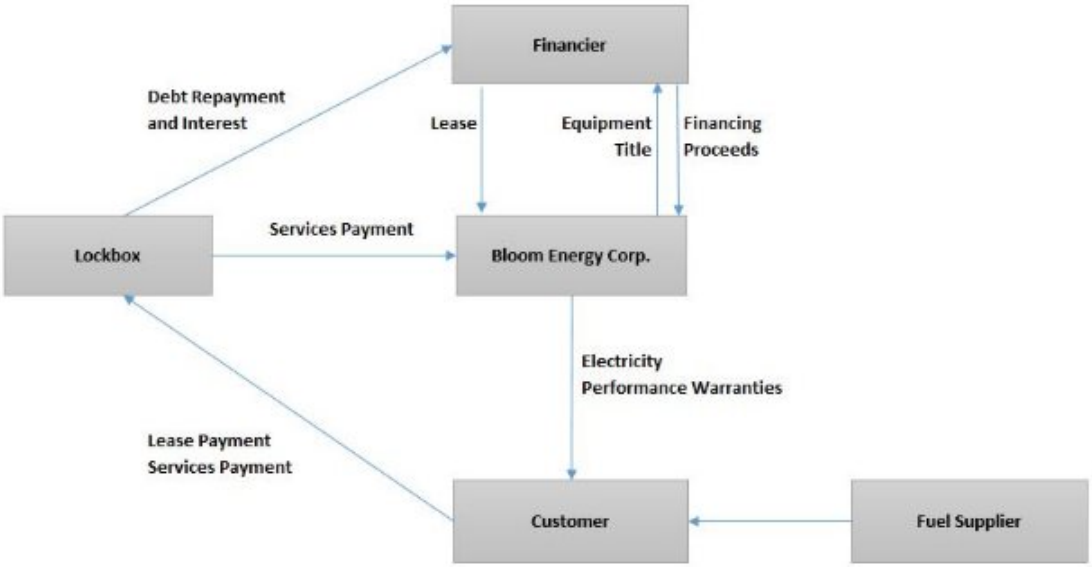
The Financing Agreement provides for the installation of our Energy Servers and includes a standard one-year warranty, to the financier, which includes the performance guaranties described below, with the warranty offered on an annually renewing basis at the discretion of, and to, the customer. The customer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

This option typically provide for warranties and guaranties of both the efficiency and output of our Energy Servers, all of which are written in favor of the customer and contained in the operations and maintenance services agreement. These warranties and guaranties may be measured on a monthly, annual, cumulative or other basis. As of September 30, 2020, we had incurred no liabilities due to failure to repair or replace our Energy Servers pursuant to these warranties. Our obligation to make payments for underperformance against the performance guaranties for Traditional Lease projects was capped contractually under the sales 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 $3.8 million.

Remarketing at Termination of Lease

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

Managed Services Financing



Under our Managed Services Financing option, we enter into a Managed Services Agreement with a customer, pursuant to which the customer is able to use the Energy Server for a certain term. Under the Managed Services Agreement, the customer makes a monthly payment for the use of the Energy Server. The customer payment typically has two components: (i) a fixed monthly capacity-based payment and (ii) a performance-based payment based on the output of electricity that month from the Energy Server. The fixed capacity-based payments made by the customer under the Managed Services Agreement are applied toward our obligation to pay down our liability under the master lease with the financier. The performance payment is transferred to us as compensation for operations and maintenance services and recognized as services revenue within the

condensed consolidated statements of operations. In some cases, the customer's monthly payment consists solely of the first component, a fixed monthly capacity-based payment.

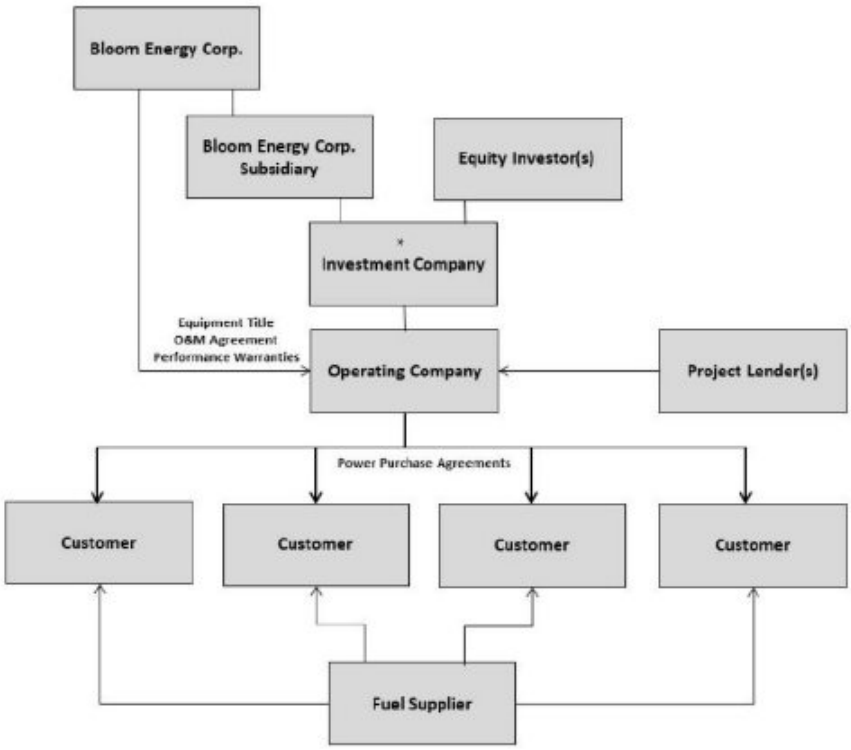
Once a financier is identified and the Energy Server's installation is complete, we sell the Energy Server contemplated by the Managed Services Agreement directly to a financier and the financier, as lessor, leases it back to us, as lessee, pursuant to a master lease in a sale-leaseback transaction.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

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

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

Our Managed Services deployments typically provide only for warranties of both the efficiency and output of the Energy Server, all of which are written in favor of the customer and contained in the operations and maintenance services agreement. These warranties may be measured on a monthly, annual, cumulative or other basis. Managed Services projects typically do not include guaranties above the warranty commitments, but in projects where the customer agreement includes a service payment for our operations and maintenance, that payment is typically proportionate to the output generated by the Energy Server(s) and our pricing assumes service revenues at the 95% output level. This means that our service revenues may be lower than expected if output is less than 95% and higher if output exceeds 95%. As of September 30, 2020, we had incurred no liabilities due to failure to repair or replace our Energy Servers pursuant to these warranties and the fleet of our Energy Servers deployed pursuant to the Managed Services Program was performing at a lifetime average output of approximately 87%.

Power Purchase Agreement Programs, including Third-Party PPA Transactions



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

A power purchase agreement is an agreement pursuant to which the owner of an Energy Server sells electricity to an end customer on a dollar-per-kilowatt-hour basis (a "PPA"). We finance PPAs through two types of transactions under our PPA Program. In one 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 included an equity investment by us in the PPA Entity for which we were the primary beneficiary and consolidated the entities, we recognized revenue as the electricity was produced. We also finance PPAs through our Third-Party PPA Transactions in which we do not have an equity interest, pursuant to which we recognize revenue on acceptance. For further discussion on our Bloom Electrons Programs, see Note 13, *Power Purchase Agreement Programs,* in Part I, Item 1*, Financial Statements*.

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

The sales of our Energy Servers to the Operating Company in connection with the various PPA Programs have many of the same terms and conditions as a direct sale. Payment of the purchase price is generally broken down into multiple installments, which may include payments prior to shipment, upon shipment or delivery of the Energy Server, and upon acceptance of the Energy Server. Acceptance typically occurs when the Energy Server is installed and running at full power as defined in the applicable EPC and O&M Agreement. A one-year service warranty is provided with the initial sale. After the expiration of the initial standard one-year warranty, the Operating Company has the option to extend our operations and maintenance services under the EPC and O&M Agreement on an annual basis at a price determined at the time of purchase of our Energy Server, which may be renewed annually for each Energy Server for up to 30 years. After the standard one-year

warranty period, the Operating Company has almost always exercised the option to renew our operations and maintenance services under the EPC and O&M Agreement.

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

As of September 30, 2020, we had incurred no liabilities due to failure to repair or replace Energy Servers pursuant to these warranties. Our obligation to make payments for underperformance against the performance guaranties for PPA Program projects was capped at an aggregate total of approximately $110.6 million (including payments both for low output and for low efficiency) and our aggregate remaining potential liability under this cap was approximately $105.5 million.

Obligations to Operating Companies

In addition to our obligations to the end customers, our PPA Programs involve many obligations to the Operating Company that purchases our Energy Servers. These obligations are set forth in the applicable EPC and O&M Agreement, 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 and O&M Agreements,
- operating and maintaining the Energy Servers in compliance with all applicable laws, permits and regulations,
- satisfying the efficiency and output warranties set forth in such EPC and O&M Agreements and the PPAs ("performance warranties"), and
- complying with any specific requirements contained in the PPAs with individual end-customers.

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

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

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

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

Administration of Operating Companies - In each of our PPA Entities, we perform certain administrative services on behalf of the applicable Operating Company, including invoicing the end customers for amounts owed under the PPAs, administering the cash receipts of the Operating Company in accordance with the requirements of the financing arrangements, interfacing with applicable regulatory agencies, and other similar obligations. We are compensated for these services on a fixed dollar-per-kilowatt basis.

The Operating Company in each of our PPA Entities (other than PPA I) has incurred debt in order to finance the acquisition of Energy Servers. The lenders for these projects are a combination of banks and/or institutional investors. In each

case, the debt is secured by all of the assets of the applicable Operating Company, such assets being primarily comprised of the Energy Servers and a collateral assignment of each of the contracts to which the Operating Company is a party, including the O&M Agreement entered into with us and the off take agreements entered into with the Operating Company's customers, and is senior to all other debt obligations of the Operating Company. As further collateral, the lenders receive a security interest in 100% of the membership interest of the Operating Company. However, as is typical in structured finance transactions of this nature, although the project debt is secured by all of the Operating Company's assets, the lenders have no recourse to us or to any of the other tax equity investors (the "Equity Investors") in the project. The applicable debt agreements include provisions that implement a customary "payment waterfall" that dictates the priority in which the Operating Company will use its available funds to satisfy its payment obligations to us, the lenders, the Equity Investors and other third parties.

We have determined that we are the primary beneficiary in the PPA Entities, subject to reassessments performed as a result of upgrade transactions (see Note 13, *Power Purchase Agreement Programs*, in Part I, Item 1, *Financial Statements*.) 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 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 PPA Programs, see Note 13, *Power Purchase Agreement Programs*, in Part I, Item 1, *Financial Statements*.

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

Prior to 2018, we consummated a small number of sales outside the United States, including in India and Japan.

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

Japan. In Japan, sales are conducted pursuant to a Japanese joint venture established between us and subsidiaries of SoftBank Corp, called Bloom Energy Japan Limited ("Bloom Energy Japan"). Under this arrangement, we sell Energy Servers to Bloom Energy Japan and we recognize revenue once the Energy Servers leave the port in the United States. Bloom Energy Japan enters into the contract with the end customer and performs all installation work as well as some of the operations and maintenance work.

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

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

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

SK E&C Joint Venture Agreement. In September 2019, we entered into a joint venture agreement with SK E&C to establish a light-assembly facility in 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, the joint venture will be funded by SK E&C. SK E&C, 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.

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 the state of Connecticut has instituted a similar program and we expect that other states may adopt similar programs in the future.

We have entered into sales, installation, operations and maintenance agreements with two developers for the deployment of our Energy Servers pursuant to the New York CDG program, and we subsequently recognized revenue associated with 75 systems in the three months ended September 30, 2020. 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, the projects that were already under contract were grandfathered into the program under the previous compensation structure. Irrespective of this development, we believe that these types of subscriber-based programs could be a source of future revenue and will continue to look to generate future sales through these programs.

Key Operating Metrics

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

- **Product accepted** - the number of customer acceptances of our Energy Servers in any period. We recognize revenue when an acceptance is achieved. We use this metric to measure the volume of deployment activity. We measure each Energy Server manufactured, shipped and accepted in terms of 100 kilowatt equivalents.
- **Billings for product accepted in the period** - the total contracted dollar amount of the product component of all Energy Servers that are accepted in a period. We use this metric to gauge the dollar value of the product acceptances and to evaluate the change in dollar amount of acceptances between periods.

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

Comparison of the Three and Nine Months Ended September 30, 2020 and 2019

Acceptances

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

The product acceptances in the periods were as follows:

	Three Months Ended September 30,		Change		Nine Months Ended September 30,		Change	
	2020	2019	Amount	%	2020	2019	Amount	%
Product accepted during the period (in 100 kilowatt systems)	314	302	12	4.0 %	876	808	68	8.4 %

Product accepted increased by 12 systems and 68 systems, or 4.0% and 8.4%, for the three and nine months ended September 30, 2020 compared to the three and nine months ended September 30, 2019, respectively. Acceptance volume increased as demand increased for our Energy Servers.

As discussed in the Purchase and Lease Options section above, 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, 2020 and 2019 was as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Direct Purchase (including Third Party PPAs and International Channels)	92 %	100 %	97 %	97 %
Managed Services	8 %	— %	3 %	3 %
	100 %	100 %	100 %	100 %

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Direct Purchase (including Third Party PPAs and International Channels)	88 %	89 %	87 %	85 %
Traditional Lease	1 %	1 %	1 %	1 %
Managed Services	5 %	5 %	6 %	5 %
Bloom Electrons	6 %	5 %	6 %	9 %
	100 %	100 %	100 %	100 %

Billings Related to Our Products

Total billings attributable to each revenue classification for the three and nine months ended September 30, 2020 and 2019 was as follows (in thousands, except percentages):

	Three Months Ended September 30,		Change		Nine Months Ended September 30,		Change	
	2020	2019	Amount	%	2020	2019	Amount	%
Billings for product accepted in the period	$ 130,363	$ 181,227	$ (50,864)	(28.1)%	$ 359,617	$ 453,037	$ (93,420)	(20.6)%
Billings for installation on product accepted in the period	27,672	18,376	9,296	50.6 %	70,124	46,008	24,116	52.4 %
Billings for annual maintenance services agreements	19,477	20,681	(1,204)	(5.8)%	58,611	53,459	5,152	9.6 %

Billings for product accepted decreased by approximately $50.9 million, or 28.1%, for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. The decrease is primarily due to a higher average selling price mix in the three months ended September 30, 2019, driven mainly by the PPA II upgrade that occurred in the three months ended September 30, 2019. Billings for installation on product accepted increased $9.3 million for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. Although product acceptances in the period increased only 4.0%, billings for installation on product accepted increased 50.6%, primarily due to the mix in installation billings driven by site complexity, site size, personalized applications, and the customer's option to complete the installation of our Energy Servers themselves. Billings for annual maintenance service agreements decreased $1.2 million, or 5.8%, for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. This decrease was driven primarily by the timing of annual maintenance service agreement renewals, as compared to the prior year.

Billings for product accepted decreased by approximately $93.4 million, or 20.6%, for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. The decrease is primarily due to a higher average selling price mix in the nine months ended September 30, 2019, driven mainly by the PPA II upgrade that occurred in the nine months ended September 30, 2019. Billings for installation on product accepted increased $24.1 million for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. Although product acceptances in the period increased only 8.4%, billings for installation on product accepted increased 52.4%, primarily due to the mix in installation billings driven by site complexity, site size, personalized applications, and the customer's option to complete the installation of our Energy Servers themselves. Billings for annual maintenance service agreements increased $5.2 million, or 9.6%, for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. This increase was driven primarily by the increase in our installed base.

Costs Related to Our Products

Total product related costs for the three and nine months ended September 30, 2020 and 2019 was as follows:

	Three Months Ended September 30,		Change		Nine Months Ended September 30,		Change	
	2020	2019	Amount	%	2020	2019	Amount	%
Product costs of product accepted in the period	$2,292 /kW	$2,850 /kW	$(558) /kW	(19.6)%	$2,398 /kW	$3,019 /kW	$(621) /kW	(20.6)%
Period costs of manufacturing related expenses not included in product costs (in thousands)	$ 4,000	$ 1,969	$ 2,031	103.1 %	$ 15,267	$ 12,227	$ 3,040	24.9 %
Installation costs on product accepted in the period	$926 /kW	$733 /kW	$193 /kW	26.3 %	$980/kW	$681/kW	$299/kW	43.9 %

Product costs of product accepted decreased by approximately $558 per kilowatt, or 19.6%, for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. The product cost reduction was driven generally by our ongoing cost reduction efforts to reduce material costs in conjunction with our suppliers and our reduction in labor and overhead costs through improved processes and automation at our manufacturing facilities.

Product costs of product accepted decreased by approximately $621 per kilowatt, or 20.6%, for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. The product cost reduction was driven generally by our ongoing cost reduction efforts to reduce material costs in conjunction with our suppliers and our reduction in labor and overhead costs through improved processes and automation at our manufacturing facilities.

Period costs of manufacturing related expenses increased by approximately $2.0 million, or 103.1%, for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. The increase in period costs for the period was primarily driven by a lower capitalization of stock-based compensation overhead costs to inventory in the current year.

Period costs of manufacturing related expenses increased by approximately $3.0 million, or 24.9%, for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. The increase in period costs for the period was primarily driven by a lower capitalization of stock-based compensation overhead costs to inventory in the current year.

Installation costs on product accepted increased by approximately $193 per kilowatt, or 26.3%, for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. 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, and the customer's option to complete the installation of our Energy Servers themselves. As such, installation on a per kilowatt basis can vary significantly from period-to-period.

Installation costs on product accepted increased by approximately $299 per kilowatt, or 43.9%, for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. 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, and the customer's option to complete the installation of our Energy Servers themselves. As such, installation on a per kilowatt basis can vary significantly from period-to-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, 2020 and 2019 is presented below (in thousands, except percentage data).

Comparison of the Three and Nine Months Ended September 30, 2020 and 2019

Revenue

	Three Months Ended September 30,		Change		Nine Months Ended September 30,		Change	
	2020	2019 As Restated	Amount	%	2020	2019 As Restated	Amount	%
Product	$ 131,076	$ 163,902	$ (32,826)	(20.0)%	$ 346,832	$ 398,909	$ (52,077)	(13.1)%
Installation	26,603	21,102	5,501	26.1 %	73,060	46,397	26,663	57.5 %
Service	26,141	23,665	2,476	10.5 %	77,496	70,158	7,338	10.5 %
Electricity	16,485	15,638	847	5.4 %	47,472	56,170	(8,698)	(15.5)%
Total revenue	$ 200,305	$ 224,307	$ (24,002)	(10.7)%	$ 544,860	$ 571,634	$ (26,774)	(4.7)%

Total Revenue

Total revenue decreased approximately $24.0 million, or 10.7%, for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. This decrease was driven primarily by the decrease in product revenue for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019, offset partially by an increase in installation revenue. The product revenue decrease was primarily due to a higher average selling price mix in the three months ended September 30, 2019, driven mainly by the PPA II upgrade that occurred in the three months ended September 30, 2019, and due to weather and COVID-19 related delays in product acceptances. Product revenue for the three months ended September 30, 2020 also included $14.2 million of previously deferred revenue that was recognized in the quarter that was not associated with acceptances or services in the quarter. This was a one-time recognition of deferred revenue related to a specific contract that changed scope.

Total revenue decreased approximately $26.8 million, or 4.7%, for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. This decrease was primarily driven by the decrease in product revenue and electricity revenue for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019, offset partially by an increase in installation revenue. The product revenue decrease was primarily due to a higher average selling price mix in the nine months ended September 30, 2019, driven mainly by the PPA II upgrade that occurred in the nine months ended September 30, 2019, and due to weather and COVID-19 related delays in product acceptances. Product revenue for the nine months ended September 30, 2020 also included $14.2 million of previously deferred revenue that was recognized in the quarter that was not associated with acceptances or services in the quarter. This was a one-time recognition of deferred revenue related to a specific contract that changed scope.

Product Revenue

Product revenue decreased approximately $32.8 million, or 20.0%, for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. The product revenue decrease was primarily due to a higher average selling price mix in the three months ended September 30, 2019, driven mainly by the PPA II upgrade that occurred in the three months ended September 30, 2019, and due to weather and COVID-19 related delays in product acceptances, offset by $14.2 million of previously deferred revenue that was recognized in the three months ended September 30, 2020 that was not associated with acceptances or services in the quarter. This was a one-time recognition of deferred revenue related to a specific contract that changed scope.

Product revenue decreased approximately $52.1 million, or 13.1%, for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. The product revenue decrease was, again, primarily due to a higher average selling price mix in the nine months ended September 30, 2019, driven mainly by the PPA II upgrade that occurred in the nine months ended September 30, 2019, and due to weather and COVID-19 related delays in product acceptances, offset by $14.2 million of previously deferred revenue that was recognized in the three months ended September 30, 2020 that was not associated with acceptances or services in the quarter. This was a one-time recognition of deferred revenue related to a specific contract that changed scope.

Installation Revenue

Installation revenue increased approximately $5.5 million, or 26.1%, for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. This increase was driven by the increase in product acceptances of approximately 12 systems, or 4.0%, for the three months ended September 30, 2020 and due to the change in mix of installations driven by site complexity, site size, and the customer's option to complete the installation of our Energy Servers themselves.

Installation revenue increased approximately $26.7 million, or 57.5%, for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. This increase was driven by the increase in product acceptances of approximately 68 systems, or 8.4%, for the nine months ended September 30, 2020 and due to the change in mix of installations driven by site complexity, site size, and the customer's option to complete the installation of our Energy Servers themselves.

Service Revenue

Service revenue increased approximately $2.5 million, or 10.5%, for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. This was primarily due to the increase in the number of annual maintenance contract renewals driven by our growing fleet of installed Energy Servers.

Service revenue increased approximately $7.3 million, or 10.5% for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. This was primarily due to the increase in the number of annual maintenance contract renewals driven by our growing fleet of installed Energy Servers.

Electricity Revenue

Electricity revenue increased approximately $0.8 million, or 5.4%, for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019, due to the addition of Managed Service agreements, partially offset by a reduction in electricity revenues resulting from the decommissioning and upgrade of PPA II in the three months ended September 30, 2019. Electricity revenue is driven by our Bloom Electrons program, which included PPA II, as well as from our Managed Services Agreements. When the PPA Entities associated with our Bloom Electrons Program are decommissioned, we no longer recognize electricity revenue for them.

Electricity revenue decreased approximately $8.7 million, or 15.5%, for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019, due to a reduction in electricity revenues resulting from the decommissioning and an upgrade of PPA II in the nine months ended September 30, 2019. Electricity revenue is driven by our Bloom Electrons Program, which included PPA II, as well as from our Managed Services Agreements. When the PPA Entities associated with our Bloom Electrons Program are decommissioned, we no longer recognize electricity revenue for them.

Cost of Revenue

	Three Months Ended September 30,		Change		Nine Months Ended September 30,		Change	
	2020	2019 As Restated	Amount	%	2020	2019 As Restated	Amount	%
	(dollars in thousands)				(dollars in thousands)			
Cost of revenue:								
Product	$ 72,037	$ 91,697	$ (19,660)	(21.4)%	$ 227,653	$ 293,697	$ (66,044)	(22.5)%
Installation	27,872	26,141	1,731	6.6 %	86,938	59,586	27,352	45.9 %
Service	33,214	36,427	(3,213)	(8.8)%	92,836	83,111	9,725	11.7 %
Electricity	11,195	27,317	(16,122)	(59.0)%	35,266	62,601	(27,335)	(43.7)%
Total cost of revenue	$ 144,318	$ 181,582	$ (37,264)	(20.5)%	$ 442,693	$ 498,995	$ (56,302)	(11.3)%

Total Cost of Revenue

Total cost of revenue decreased approximately $37.3 million, or 20.5%, for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. Included as a component of total cost of revenue, stock-based compensation decreased approximately $4.4 million for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. In addition, cost of revenue for the three months ended September 30, 2019 included $14.6 million of one-time expenses associated with the PPA II upgrade. Total cost of revenue, excluding stock-based compensation and the one-time expenses, decreased approximately $18.3 million, or 11.5%, for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019, despite a 4.0% increase in product acceptances, due to ongoing cost reduction efforts to reduce material, labor and overhead costs.

Total cost of revenue decreased approximately $56.3 million, or 11.3%, for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. Included as a component of total cost of revenue, stock-based compensation decreased approximately $23.0 million, or 62.5%, for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. In addition, cost of revenue for the nine months ended September 30, 2019 included $48.3 million of one-time expenses associated with the PPA II upgrade. Total cost of revenue, excluding stock-based compensation and the one-time expenses, increased approximately $15.0 million, or 3.6%, for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019 due to the 8.4% increase in product acceptances and higher cost of installation revenue due to the change in mix of installations.

Cost of Product Revenue

Cost of product revenue decreased approximately $19.7 million, or 21.4%, for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. Stock-based compensation, which is included as a component of cost of product revenue, decreased approximately $3.0 million for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. Cost of product revenue, excluding stock-based compensation decreased approximately $16.7 million, or 19.3%, for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019, despite a 4.0% increase in product acceptances, due to ongoing cost reduction efforts to reduce material, labor and overhead costs.

Cost of product revenue decreased approximately $66.0 million, or 22.5%, for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. Stock-based compensation, which is included as a component of cost of product revenue, decreased approximately $18.8 million for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. In addition, cost of product revenue for the nine months ended September 30, 2019 included $25.6 million of one-time expenses associated with the PPA II upgrade. Cost of product revenue, excluding stock-based compensation and the one-time expenses, decreased approximately $21.6 million, or 9.0%, for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019, despite an 8.4% increase in product acceptances, due to ongoing cost reduction efforts to reduce material, labor and overhead costs.

Cost of Installation Revenue

Cost of installation revenue increased approximately $1.7 million, or 6.6%, for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019, primarily due to the increase in product acceptances of approximately 12 systems, or 4.0%, for the three months ended September 30, 2020 and due to the change in mix of installations driven by site complexity, size, local ordinance requirements, location of utility interconnect, and the customer's option to complete the installation of our Energy Servers themselves.

Cost of installation revenue increased approximately $27.4 million, or 45.9%, for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019, primarily due to the increase in product acceptances of approximately 68 systems, or 8.4%, for the nine months ended September 30, 2020 and due to the change in mix of installations driven by site complexity, size, local ordinance requirements, location of utility interconnect and, the customer's option to complete the installation of our Energy Servers themselves.

Cost of Service Revenue

Cost of service revenue decreased approximately $3.2 million, or 8.8%, for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. This improvement was primarily due to a lower number of required power module replacements as a result of the longer lives of our Energy Servers.

Cost of service revenue increased approximately $9.7 million, or 11.7%, for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. This increase in service cost was primarily due to more power module replacements required in the fleet as our fleet of installed Energy Servers grows with acceptances and additional extended service contracts are executed and renewed.

Cost of Electricity Revenue

Cost of electricity revenue decreased approximately $16.1 million, or 59.0%, for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019, mainly due to the $14.6 million of one-time expenses associated with the PPA II upgrade recognized in the three months ended September 30, 2019.

Cost of electricity revenue decreased approximately $27.3 million, or 43.7%, for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019, mainly due to the $22.7 million of one-time expenses associated with the PPA II upgrade recognized in the nine months ended September 30, 2019.

Gross Profit (Loss)

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2020	2019 As Restated	Change	2020	2019 As Restated	Change
	(dollars in thousands)					
Gross profit:						
Product	$ 59,039	$ 72,205	$ (13,166)	$ 119,179	$ 105,212	$ 13,967
Installation	(1,269)	(5,039)	3,770	(13,878)	(13,189)	(689)
Service	(7,074)	(12,762)	5,688	(15,340)	(12,953)	(2,387)
Electricity	5,290	(11,679)	16,969	12,207	(6,431)	18,638
Total gross profit	$ 55,987	$ 42,725	$ 13,262	$ 102,167	$ 72,639	$ 29,528
Gross margin:						
Product	45 %	44 %		34 %	26 %	
Installation	(5) %	(24) %		(19) %	(28) %	
Service	(27) %	(54) %		(20) %	(18) %	
Electricity	32 %	(75) %		26 %	(11) %	
Total gross margin	28 %	19 %		19 %	13 %	

Total Gross Profit

Gross profit improved $13.3 million in the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. Stock-based compensation, which is included as a component of total cost of revenue, decreased approximately $4.4 million for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. Total gross profit, excluding stock-based compensation, increased approximately $8.9 million, or 17.5%, for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019 due to the improvement in the service losses and $14.2 million of previously deferred revenue that was recognized in the three months ended September 30, 2020, which was not associated with acceptances or services in the quarter. This improvement was partially offset by the higher margin site mix of installations driven primarily by the PPA II upgrade in the three months ended September 30, 2019.

Gross profit improved $29.5 million in the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. Stock-based compensation, which is included as a component of total cost of revenue, decreased approximately $23.0 million for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. Total gross profit, excluding stock-based compensation, improved approximately $6.5 million, or 5.9%, for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019, despite an 8.4% increase in product acceptances due to the higher margin site mix of installations driven primarily by the PPA II upgrade in the nine months ended September 30, 2019, partially offset by $14.2 million of previously deferred revenue that was recognized in the nine months ended September 30, 2020, which was not associated with acceptances or services in the period.

Product Gross Profit

Product gross profit decreased $13.2 million in the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. Excluding stock-based compensation, product gross profit decreased $16.2 million, or 20.8%, in the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. The product gross profit decrease in the three months ended September 30, 2020, as compared to the three months ended September 30, 2019 was primarily due to a higher margin site mix in the three months ended September 30, 2019, driven primarily by the PPA II upgrade that occurred in the three months ended September 30, 2019, partially offset by $14.2 million of previously deferred revenue that was recognized in the three months ended September 30, 2020, which was not associated with acceptances or services in the quarter.

Product gross profit increased $14.0 million in the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. Excluding stock-based compensation, product gross profit decreased $4.9 million, or 3.7%, in the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. This was primarily due to a higher margin site mix in the nine months ended September 30, 2019, driven by the PPA II upgrade that occurred in the nine months ended September 30, 2019, partially offset by $14.2 million of previously deferred revenue that was recognized in the nine months ended September 30, 2020, which was not associated with acceptances or services in the quarter.

Installation Gross Loss

Installation gross loss decreased $3.8 million in the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. Excluding stock-based compensation, install gross loss decreased $2.9 million, or 83.3%, in the three months ended September 30, 2020, as compared to the three months ended September 30, 2019 driven by the change in mix of installations driven by site complexity, size, local ordinance requirements, location of utility interconnect and, the customer's option to complete the installation of our Energy Servers themselves.

Installation gross loss increased $0.7 million in the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. Excluding stock-based compensation, install gross loss increased $3.8 million, or 48.2%, in the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019, driven by the change in mix of installations driven by site complexity, size, local ordinance requirements, location of utility interconnect and, the customer's option to complete the installation of our Energy Servers themselves.

Service Gross Profit (Loss)

Service gross loss decreased $5.7 million in the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. This improvement was due to an increase in service revenue and reduction in cost driven primarily by the timing of our service schedule for power module replacements required in our fleet of installed Energy Servers.

Service gross loss increased $2.4 million in the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. This increase was primarily due to an increase in service cost driven primarily by the timing of our service schedule for power module replacements required in our fleet of installed Energy Servers.

Electricity Gross Profit (Loss)

Electricity gross profit (loss) improved $17.0 million, or 145.3%, in the three months ended September 30, 2020, as compared to the three months ended September 30, 2019, mainly due to the $14.6 million of one-time expenses associated with the PPA II upgrade recognized in the three months ended September 30, 2019.

Electricity gross profit (loss) improved $18.6 million, or 289.8%, in the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019, mainly due to the $22.7 million of one-time expenses associated with the PPA II upgrade recognized in the nine months ended September 30, 2019.

Operating Expenses

	Three Months Ended September 30,		Change		Nine Months Ended September 30,		Change	
	2020	2019	Amount	%	2020	2019	Amount	%
		As Restated				As Restated		
	(dollars in thousands)				(dollars in thousands)			
Research and development	$ 19,231	$ 23,389	$ (4,158)	(17.8)%	$ 61,887	$ 82,020	$ (20,133)	(24.5)%
Sales and marketing	11,700	17,649	(5,949)	(33.7)%	37,076	56,216	(19,140)	(34.0)%
General and administrative	25,428	36,599	(11,171)	(30.5)%	79,471	119,335	(39,864)	(33.4)%
Total operating expenses	$ 56,359	$ 77,637	$ (21,278)	(27.4)%	$ 178,434	$ 257,571	$ (79,137)	(30.7)%

Total Operating Expenses

Total operating expenses decreased $21.3 million, or 27.4%, in the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. Included as a component of total operating expenses, stock-based compensation expenses decreased approximately $20.9 million for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. The decrease in stock-based compensation expense was primarily attributable to lower stock-based compensation expenses attributed to a one-time employee grant of restricted stock units ("RSUs") awarded prior to our initial public offering (the "IPO") with a performance condition of an IPO of our securities. These RSUs had a two-year vesting period starting on the day of our IPO and were issued as an employee retention vehicle to bring our stock-based compensation in line with our peer group. These RSUs completed their vesting in July of 2020, and stock-based compensation expenses associated with these RSUs decreased quarter-over-quarter until the final vesting date. In addition to the one-time grant, stock-based compensation expense includes some previously granted RSUs with vesting beginning upon the completion of our IPO. Total operating expenses, excluding stock-based compensation, decreased approximately $0.4 million, or 0.9%, in the three months ended September 30, 2020, as compared to the three months ended September 30, 2019.

Total operating expenses decreased $79.1 million, or 30.7%, in the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. Included as a component of total operating expenses, stock-based compensation expenses decreased approximately $79.8 million for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. The decrease in stock-based compensation expense was primarily attributable to lower stock-based compensation expenses attributed to a one-time employee grant of RSUs awarded prior to our IPO with a performance condition of an IPO of our securities. These RSUs had a two-year vesting period starting on the day of our IPO and were issued as an employee retention vehicle to bring our stock-based compensation in line with our peer group. These RSUs completed their vesting in July of 2020, and the stock-based compensation expenses associated with these RSUs decreased quarter-over-quarter until the final vesting date. In addition to the one-time grant, the stock-based compensation expenses include some previously granted RSUs with vesting beginning upon the completion of our IPO. Total operating expenses, excluding stock-based compensation, increased approximately $0.7 million, or 0.5%, in the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. This increase was primarily due to compensation related expenses associated with hiring new employees, investments for next generation technology, and fees for restatement related expenses in 2020, offset by a $5.9 million one-time expense in the nine months ended September 30, 2019 associated with the PPA II upgrade.

Research and Development

Research and development expenses decreased approximately $4.2 million, or 17.8%, in the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. Included as a component of research and development expenses, stock-based compensation expenses decreased by approximately $2.5 million for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. Total research and development expenses, excluding stock-based compensation expenses, decreased by approximately $1.7 million, or 10.0%, for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. This decrease was primarily due to timing of investments made in our next generation technology development, sustaining engineering projects for the current Energy Server platform, and investments made for customer personalized applications, such as microgrids, and new fuel solutions utilizing biogas.

Research and development expenses decreased by approximately $20.1 million, or 24.5%, in the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. Included as a component of research and development expenses, stock-based compensation expenses decreased by approximately $18.1 million for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. Total research and development expenses, excluding stock-based compensation, decreased by approximately $2.0 million, or 4.1%, for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. This decrease was primarily due to timing of investments made in our next generation technology development, sustaining engineering projects for the current Energy Server platform, and investments made for customer personalized applications, such as microgrids, and new fuel solutions utilizing biogas.

Sales and Marketing

Sales and marketing expenses decreased by approximately $5.9 million, or 33.7%, in the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. Included as a component of sales and marketing expenses, stock-based compensation expenses decreased by approximately $3.6 million for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. Total sales and marketing expenses, excluding stock-based compensation, decreased by approximately $2.4 million, or 19.9%, for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019.

Sales and marketing expenses decreased by approximately $19.1 million, or 34.0%, in the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. Included as a component of sales and marketing expenses, stock-based compensation expenses decreased by approximately $17.9 million for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. Total sales and marketing expenses, excluding stock-based compensation, decreased by approximately $1.2 million, or 4.1%, for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019.

General and Administrative

General and administrative expenses decreased by approximately $11.2 million, or 30.5%, in the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. Included as a component of general and administrative expenses, stock-based compensation expenses decreased by approximately $14.8 million for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. Total general and administrative expenses, excluding stock-based compensation, increased by approximately $3.6 million, or 22.9%, for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. The increase in general and administrative expenses was mainly due to increased personnel costs and fees for SOX compliance activities and debt refinancing.

General and administrative expenses decreased by approximately $39.9 million, or 33.4%, in the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. Included as a component of general and administrative expenses, stock-based compensation expenses decreased by approximately $43.8 million for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. Total general and administrative expenses, excluding stock-based compensation, increased by approximately $3.9 million, or 7.1%, for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. The increase in general and administrative expenses was mainly due to increased personnel costs and fees for restatement related expenses, debt refinancing and SOX compliance activities in 2020, offset by a $5.9 million one-time expense in the nine months ended September 30, 2019 associated with the PPA II upgrade.

Stock-Based Compensation

	Three Months Ended September 30,		Change		Nine Months Ended September 30,		Change	
	2020	2019 As Restated	Amount	%	2020	2019 As Restated	Amount	%
						(dollars in thousands)		
Cost of revenue	$ 3,568	$ 7,985	$ (4,417)	(55.3)%	$ 13,811	$ 36,835	$ (23,024)	(62.5)%
Research and development	4,103	6,589	(2,486)	(37.7)%	14,913	33,037	(18,124)	(54.9)%
Sales and marketing	2,234	5,823	(3,589)	(61.6)%	8,358	26,270	(17,912)	(68.2)%
General and administrative	5,830	20,650	(14,820)	(71.8)%	20,303	64,091	(43,788)	(68.3)%
Total stock-based compensation	$ 15,735	$ 41,047	$ (25,312)	(61.7)%	$ 57,385	$ 160,233	$ (102,848)	(64.2)%

Total stock-based compensation decreased $25.3 million, or 61.7%, in the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. Of the $15.7 million in stock-based compensation for the three months ended September 30, 2020, approximately $1.5 million was related to one-time employee grants of RSUs that were issued at the time of our IPO and that had a two-year vesting period. These RSUs provided us an employee retention vehicle to bring our stock-based compensation in line with our peer group. In addition, the stock-based compensation included some previously granted RSUs that vested upon the completion of our IPO.

Total stock-based compensation decreased $102.8 million, or 64.2%, in the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. Of the $57.4 million in stock-based compensation for the nine months ended September 30, 2020, approximately $13.0 million was related to one-time employee grants of RSUs that were issued at the time of our IPO and that had a two-year vesting period. These RSUs provided us an employee retention vehicle to bring our stock-based compensation in line with our peer group. In addition, the stock-based compensation included some previously granted RSUs that vested upon the completion of our IPO.

Other Income and Expense

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2020	2019 As Restated	Change	2020	2019 As Restated	Change
			(in thousands)			
Interest income	$ 254	$ 1,214	$ (960)	$ 1,405	$ 4,799	$ (3,394)
Interest expense	(19,902)	(21,323)	1,421	(55,030)	(65,845)	10,815
Interest expense, related parties	(353)	(1,605)	1,252	(2,513)	(4,823)	2,310
Other income (expense), net	(221)	525	(746)	(4,142)	568	(4,710)
Loss on extinguishment of debt	1,220	—	1,220	(12,878)	—	(12,878)
Gain (loss) on revaluation of embedded derivatives	1,505	(540)	2,045	2,201	(1,620)	3,821
Total	$ (17,497)	$ (21,729)	$ 4,232	$ (70,957)	$ (66,921)	$ (4,036)

Total Other Expense

Total other expense decreased $4.2 million in the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. This decrease was primarily due a decrease in interest expense with the debt buy-out due to the PPA II and PPA IIIb upgrades.

Total other expense increased $4.0 million in the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. This increase was primarily due to the loss on extinguishment of debt of $14.1 million.

Interest Income

Interest income decreased $1.0 million in the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. This decrease was primarily due to the decrease in the rates of interest earned on our cash balances.

Interest income decreased $3.4 million in the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. This decrease was primarily due to the decrease in the rates of interest earned on our cash balances.

Interest Expense

Interest expense decreased $1.4 million in the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. This decrease was primarily due a decrease in interest expense with the debt buy-out due to the PPA II and PPA IIIb upgrades.

Interest expense decreased $10.8 million in the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. This decrease was primarily due a one-time credit of $4.3 million due to premium amortization on the convertible notes and a decrease in interest expense with the debt buy-out due to the PPA II and PPA IIIb upgrades.

Interest Expense, Related Parties

Interest expense, related parties decreased $1.3 million in the three months ended September 30, 2020, as compared to the three months ended September 30, 2019 due to the normal interest amortization.

Interest expense, related parties decreased $2.3 million in the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019 due to the normal interest amortization.

Other Income (Expense), net

Other income (expense), net worsened $0.7 million in the three months ended September 30, 2020, as compared to the three months ended September 30, 2019, due to changes in foreign currency translation expense.

Other income (expense), net worsened $4.7 million in the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019, due to an impairment in our investment in the Bloom Energy Japan joint venture and changes in foreign currency translation expense.

Loss on Extinguishment of Debt

There was no debt extinguishment in the three months ended September 30, 2020. Loss on extinguishment of debt of $12.9 million was recorded in the nine months ended September 30, 2020. There was no debt extinguishment in the three and nine months ended September 30, 2019.

Gain (Loss) on Revaluation of Embedded Derivatives

Gain (loss) on revaluation of embedded derivatives improved $2.0 million in the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. This improvement was primarily due to 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 improved $3.8 million in the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. This improvement was primarily due to 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.

Provision for Income Taxes

	Three Months Ended September 30,		Change		Nine Months Ended September 30,		Change	
	2020	2019	Amount	%	2020	2019	Amount	%
	(dollars in thousands)							
Income tax provision	$ 7	$ 136	$ (129)	(94.9)%	$ 272	$ 602	$ (330)	(54.8)%

Income tax provision decreased in the three months ended September 30, 2020, as compared to the three months ended September 30, 2019, and was primarily due to fluctuations in the effective tax rates on income earned by international entities.

Income tax provision decreased in the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019, and was primarily due to fluctuations in the effective tax rates on income earned by international entities.

Net Loss Attributable to Noncontrolling Interests and Redeemable Noncontrolling Interests

	Three Months Ended September 30,		Change		Nine Months Ended September 30,		Change	
	2020	2019	Amount	%	2020	2019	Amount	%
					(dollars in thousands)			
Less: Net loss attributable to noncontrolling interests and redeemable noncontrolling interests	5,922	5,027	$ 895	17.8 %	$ 17,081	$ 13,874	$ 3,207	23.1 %

Total loss attributable to noncontrolling interests increased $0.9 million, or 17.8%, in the three months ended September 30, 2020, as compared to the three months ended September 30, 2019. The net loss increased due to increased losses in our PPA Entities, which are allocated to our noncontrolling interests.

Total loss attributable to noncontrolling interests increased $3.2 million, or 23.1%, in the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019. The net loss increased due to increased losses in our PPA Entities, which are allocated to our noncontrolling interests.

Liquidity and Capital Resources

As of September 30, 2020, we had an accumulated deficit of approximately $3.1 billion. We have financed our operations, including the costs of acquisition and installation of our Energy Servers, mainly through a variety of financing arrangements and PPA Entities, credit facilities from banks, sales of our common stock, debt financings and cash generated from our operations. As of September 30, 2020, we had $343.1 million of total outstanding recourse debt, $227.2 million of non-recourse debt and $26.6 million of other long-term liabilities. See Note 7, *Outstanding Loans and Security Agreements*, in Part I, Item 1, *Financial Statements* for a complete description of our outstanding debt. As of September 30, 2020 and December 31, 2019, we had cash and cash equivalents of $325.2 million and $202.8 million, respectively.

In March 2020, we successfully extended the maturity of our outstanding 10% Convertible Notes, our 10% Constellation Note and additionally entered into a note purchase agreement to issue $70.0 million of 10.25% Senior Secured Notes due 2027 in a private placement that was subsequently completed on May 1, 2020. Since then, the 10% Convertible Notes and the 10% Constellation Note were converted into equity and the potential liabilities associated with these notes have been extinguished. In August 2020, we issued the Green Notes and in October 2020, we sent a notice of redemption for the 10% Senior Secured Notes and the redemption date is expected to occur on November 8, 2020. The combination of our existing cash and cash equivalents, and the issuance of the Green Notes, are expected to be sufficient to meet our operational and capital cash flow requirements and other cash flow needs and we do not expect that it will be necessary to access capital markets for cash to operate our business for the next 12 months. If the impact of COVID-19 to our business and financial position is more extensive than expected, we may access capital markets opportunistically to continue to improve our capital structure if market conditions are favorable. As of September 30, 2020, the current portion of our total debt is $129.7 million.

Additionally, the impact of COVID-19 on our ability to execute our business strategy and on our financial position and results of operation is uncertain. Our future cash flow requirements may vary materially from those currently planned and will depend on many factors, including our rate of revenue growth, the timing and extent of spending on research and development efforts and other business initiatives, the rate of growth in the volume of system builds, the expansion of sales and marketing activities, market acceptance of our products, the timing of receipt by us of distributions from our PPA Entities and overall economic conditions including the impact of COVID-19 on our future operations, as described in the *COVID-19 Pandemic* section above. We do not expect to receive significant cash distributions from our PPA Entities. For further discussion on our PPA Entities, see Note 13, *Power Purchase Agreement Programs,* in Part I, Item 1*, Financial Statements.*

Cash Flows

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

	Nine Months Ended September 30,	
	2020	2019
		As Restated
Net cash provided by (used in):		
Operating activities	$ (79,990)	$ 141,485
Investing activities	(33,066)	63,332
Financing activities	240,037	(127,427)

Net cash provided by (used in) our PPA Entities, which are incorporated into the condensed consolidated statements of cash flows for the three months ended September 30, 2020 and 2019, was as follows (in thousands):

	Nine Months Ended September 30,	
	2020	2019
PPA Entities [1]		
Net cash provided by PPA operating activities	$ 15,676	$ 233,152
Net cash used in PPA financing activities	(17,217)	(148,241)

[1] The PPA Entities' operating and financing cash flows are a subset of our consolidated cash flows and represents the stand-alone cash flows prepared in accordance with U.S. GAAP. Operating activities consist principally of cash used to run the operations of the PPA Entities, the purchase of Energy Servers from us and principal reductions in loan balances. Financing activities consist primarily of changes in debt carried by our PPAs, and payments from and distributions to 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 consolidated cash flows of the PPA Entities in which we have only a minority interest.

Operating Activities

Net cash used in operating activities for the nine months ended September 30, 2020 was $80.0 million and was primarily the result of net cash loss of $37.6 million plus the net increase in working capital of $42.4 million. Net cash loss is primarily comprised of a net loss of $147.5 million, adjusted for non-cash benefit items including: (i) depreciation and amortization of $38.9 million; (ii) impairment of equity method investment of $4.2 million; (iii) a gain on revaluation of derivative contracts of $2.3 million; (iv) stock-based compensation of $57.4 million; and (v) net loss on extinguishment of debt of $11.8 million; net of (vi) recovery of debt issuance cost of $0.2 million. Net cash used by changes in working capital consisted primarily of increases in: (i) accounts receivable of $12.7 million; (ii) inventories of $22.8 million; (iii) prepaid expenses and other current assets of $2.6 million; and (iv) other long-term assets of $3.2 million; plus decreases in: (v) deferred revenue and customer deposits of $15.7 million; and (iv) other long-term liabilities of $2.8 million. These uses of cash from working capital were mostly offset by decreases in: (i) deferred cost of revenue of $1.6 million; and (ii) customer financing receivable and other of $3.8 million; plus increases in: (iii) accounts payable of $8.7 million; and (iv) accrued expenses and other current liabilities of $3.9 million.

Net cash provided by operating activities for the nine months ended September 30, 2019 was $141.5 million and was the result of net cash earnings of $26.6 million plus net decrease in working capital of $114.9 million. Net cash earnings is primarily comprised of a net loss of $252.5 million, adjusted for non-cash benefit items including: (i) depreciation and amortization of approximately $64.9 million; (ii) write-off of property, plant and equipment, net of $3.0 million; (iii) write-off of PPA II decommissioned assets of $25.6 million; (iv) debt make-whole payment reclassification of $5.9 million; (v) revaluation of derivatives contracts of $3.0 million; (vi) stock-based compensation of $160.2 million; and (vii) amortization of debt issuance cost of $16.3 million. Net cash provided by changes in working capital consisted primarily of decreases in: (i) accounts receivable of $63.4 million; (ii) customer financing receivable and other of $4.1 million; and (iv) prepaid expenses and other current assets of $8.1 million; and (iii) other long-term assets of $1.3 million; plus increases in: (v) (iii) accounts payable of $14.2 million; accrued expenses and other current liabilities of $5.2 million; (vi) deferred revenue and customer deposits of $22.3 million; and (vi) other long term liabilities of $4.6 million. These sources of cash from working capital were partially offset by increases in: (i) inventory of $1.8 million; and (ii) deferred cost of revenue of $2.3 million; plus a decrease in: (iii) accrued warranty of $4.1 million.

Investing Activities

Net cash used in investing activities in the nine months ended September 30, 2020 was $33.1 million entirely related to the purchase of long-lived assets.

Net cash provided by investing activities in the nine months ended September 30, 2019 was $63.3 million, which was primarily the result of net proceeds from maturities of marketable securities of $104.5 million, partially offset by $41.2 million used for the purchase of long-lived assets.

Financing Activities

Net cash provided by financing activities in the nine months ended September 30, 2020 was $240.0 million, which included borrowings from issuance of debt of $300.0 million, borrowings from issuance of debt to related parties of $30.0 million, proceeds from financing obligations of $14.8 million, and proceeds from issuance of common stock of $12.7 million. This was partially offset by repayment of debt of $94.7 million, debt issuance costs of $13.2 million, repayment of financing obligations of $7.8 million, and distributions paid to our PPA Entity Investors of $6.1 million.

Net cash used in financing activities in the nine months ended September 30, 2019 was $127.4 million and resulted primarily from distributions paid to our PPA Entity Investors of $9.4 million, and repayments of long-term debt of $95.0 million, the debt make-whole payment reclassification of $5.9 million, payments to noncontrolling and redeemable noncontrolling interests of $43.7 million, and distributions to noncontrolling and redeemable noncontrolling interests of $9.4 million, partially offset by proceeds from the issuance of common stock of $12.6 million and the net proceeds from financing obligations of $13.9 million.

Outstanding Loans and Security Agreements

The following is a summary of our debt as of September 30, 2020 (in thousands):

	Unpaid Principal Balance	Net Carrying Value			Unused Borrowing Capacity
		Current	Long-Term	Total	
LIBOR + 4% term loan due November 2020	$ 286	$ 278	$ —	$ 278	$ —
10% convertible promissory notes due December 2021	96,209	99,379	—	99,379	—
10% notes due July 2024	79,000	16,000	60,743	76,743	—
10.25% notes due March 2027	70,000		68,526	68,526	
Total recourse debt	475,495	115,657	227,481	343,138	—
7.5% term loan due September 2028	35,087	2,696	29,522	32,218	—
6.07% senior secured notes due March 2030	78,710	3,695	74,151	77,846	—
LIBOR + 2.5% term loan due December 2021	117,947	7,609	109,536	117,145	—
Letters of Credit due December 2021	—	—	—	—	968
Total non-recourse debt	231,744	14,000	213,209	227,209	968
Total debt	$ 707,239	$ 129,657	$ 440,690	$ 570,347	$ 968

In August 2020, we issued the Green Notes. The Green Notes had a face value of $200.0 million and included a “Greenshoe Option” of up to $30.0 million, which was fully exercised by the initial purchaser, resulting in net proceeds to us after offering expenses of $220.1 million and resulted in new debt totaling $230.0 million. The primarily purpose and use of the proceeds from the Green Notes was to call and retire earlier issued notes that were priced at higher rates of interest and with other consideration.

In August 2020, we called a portion of the 10% Convertible Notes, which totaled $153.1 million, and the holders of those notes then chose to convert those notes to equity in place of receiving cash. With the holders exercising this option, in September 2020, we then issued 19.1 million shares of our Class B common stock, which was subsequently converted to Class A common stock.

In September 2020, we called the remaining portion of the 10% Convertible Notes due 2021, which totaled $96.2 million. In October 2020, the holders of those remaining notes chose to convert to equity in lieu of receiving cash. With the holders exercising this option, in October 2020, we issued 12.0 million shares of our Class B common stock, which was subsequently converted to Class A common stock.

In October 2020, we called our 10% Notes, with a face value of $70.0 million. After redemption fees, accrued and unpaid interest, we expect to pay $84.3 million during November 2020.

These transactions improve our overall financial condition and our working capital, while reducing interest expense. The changes in our overall debt structure are expected to reduce our debt service from more than $44 million to under $13 million annually, resulting in an improved working capital position.

For additional information, see Note 7, *Outstanding Loans and Security Agreements* and Note 17, *Subsequent Events* of the *Notes to Condensed Consolidated Financial Statements* in this Form 10-Q.

Contractual Obligations and Other Commitments

The following table summarizes our contractual obligations and the debt of our consolidated PPA entities that is non-recourse to Bloom as of September 30, 2020:

	Payments Due By Period				
	Total	Less than 1 Year	1-3 Years	3-5 Years	More than 5 Years
			(in thousands)		
Contractual Obligations and Other Commitments:					
Recourse debt[1]	$ 475,495	$ 112,495	$ 44,034	$ 281,385	$ 37,581
Non-recourse debt[2]	231,745	13,999	127,135	22,694	67,916
Operating leases	54,722	9,647	13,207	12,858	19,010
Service arrangements	2,167	1,308	859	—	—
Financing obligations	294,514	39,692	82,200	79,241	93,381
Natural gas fixed price forward contracts	3,245	2,708	537	—	—
Grant for Delaware facility	10,469	1,257	9,212	—	—
Interest rate swap	17,272	2,075	5,410	4,558	5,229
Supplier purchase commitments	1,201	562	639	—	—
Renewable energy credit obligations	566	483	83	—	—
Asset retirement obligations	500	500	—	—	—
Total	$ 1,091,896	$ 184,726	$ 283,316	$ 400,736	$ 223,117

[1] Our 10% Convertible Notes and our credit agreements related to the building of our facility in Newark, Delaware each contain cross-default or cross-acceleration provisions. See "Recourse Debt Facilities" above for more details.

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

Off-Balance Sheet Arrangements

We include in our condensed consolidated financial statements all assets and liabilities and results of operations of our PPA Entities that we have entered into and over which we have substantial control. For additional information, see Note 13, *Power Purchase Agreement Programs,* in Part I, Item 1*, Financial Statements.*

We have not entered into any other transactions that have generated relationships with unconsolidated entities or financial partnerships or special purpose entities. Accordingly, as of September 30, 2020 and December 31, 2019, we had no off-balance sheet arrangements.

ITEM 3 - QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

There were no significant changes to our quantitative and qualitative disclosures about market risk during the first nine months of fiscal year ended December 31, 2020. 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, 2019 for a more complete discussion of the market risks we encounter.

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, 2020. Based on such evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that as of September 30, 2020, our disclosure controls and procedures were not effective because of the material weakness described below.

Material Weakness

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis. We identified a material weakness, whereby we did not design and maintain an effective control environment with a sufficient complement of resources with an appropriate level of accounting knowledge, expertise and training to evaluate the accounting for and disclosure of complex or non-routine transactions commensurate with our financial reporting requirements. This material weakness resulted in errors in the accounting for certain transactions, which resulted in a restatement of our consolidated financial statements as of and for the year ended December 31, 2018, as of and for the three month period ended March 31, 2019, as of and for the three and nine month periods ended June 30, 2019 and 2018 and as of and for the three and nine month periods ended September 30, 2019 and 2018, and revisions to our consolidated financial statements as of and for the year ended December 31, 2017 and as of and for the three month period ended March 31, 2018. This material weakness will also result in revisions to our consolidated financial statements as of and for the years ended December 31, 2019 and 2018, when those periods are next reported.

Additionally, this material weakness could result in a misstatement of substantially all account balances or disclosures that would result in a material misstatement to the annual or interim consolidated financial statements that would not be prevented or detected.

Remediation Activities

We are currently in the process of remediating the material weakness and have taken and continue to take steps that we believe will address the underlying causes of the material weakness, which resulted from an insufficient complement of resources with an appropriate level of accounting knowledge, expertise and training to evaluate the accounting for and disclosure of complex or non-routine transactions commensurate with our financial reporting requirements. Steps we are taking include increasing the use of qualified internal and third-party technical resources with accounting expertise on complex or non-routine transactions who are providing accounting interpretation guidance to assist us in identifying and addressing any issues that affect our consolidated financial statements.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting during the quarter ended September 30, 2020 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Part II

ITEM 1 - LEGAL PROCEEDINGS

For a discussion of legal proceedings, see "Legal Matters" under Note 14 - *Commitments and Contingencies*, in Part I, Item 1, *Financial Statements*.

We are, and from time to time we may become, involved in legal proceedings or be subject to claims arising in the ordinary course of our business. We are not presently a party to any other legal proceedings that in the opinion of our management and if determined adversely to us, would individually or taken together have a material adverse effect on our business, operating results, financial condition or cash flows.

ITEM 1A - RISK FACTORS

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

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

Risks Related to Our Business, Industry and Sales

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

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

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

From our inception in 2001 through 2009, we were focused principally on research and development activities relating to our Energy Server technology. We did not deploy our first Energy Server and did not recognize any revenue until 2009. Since that initial deployment, our business has expanded significantly over a comparatively short time, given the characteristics of the electric power industry. As a result, we have a limited history operating our business at its current scale. Furthermore, our Energy Server is a new type of product in the nascent distributed energy industry. Consequently, predicting our future revenue and appropriately budgeting for our expenses is difficult, and we have limited insight into trends that may emerge and affect our business. If actual results differ from our estimates or if we adjust our estimates in future periods, our operating results and financial position could be materially and adversely affected.

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

Our sales cycle is typically 12 to 18 months but can vary considerably. In order to make a sale, we must typically provide a significant level of education to prospective customers regarding the use and benefits of our product and our technology. The period between initial discussions with a potential customer and the eventual sale of even a single product typically depends on a number of factors, including the potential customer's budget and decision as to the type of financing it chooses to use as well as the arrangement of such financing. Prospective customers often undertake a significant evaluation process 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 we do not recognize revenue on the sales of our products until installation and acceptance, a small fluctuation in the timing of the completion of our sales transactions could cause operating results to vary materially from period to period.

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

Our Energy Servers have significant upfront costs. In order to expand our offerings to customers who lack the financial capability to purchase our Energy Servers directly (including customers who are unable to optimize the use of the tax credits available to purchasers of our Energy Servers) and/or who prefer to lease the product or contract for our services on a pay-as-you-go model, we subsequently developed the Traditional Lease, Managed Services and PPA Programs. Our PPA Program, in which financing the cost of the Energy Server is provided by an Operating Company and funded by an Investment Company, was in the past financed by us and/or in combination with Equity Investors, and tax equity partnerships in the PPA Entities. In recent periods, the substantial majority of our end customers have elected to finance their purchases through Third Party PPA transactions, which are financed by Equity Investors and tax equity partnerships in the PPA Entities and not financed by us. As of September 30, 2020, we still had not secured funding for all of our planned installations in 2021. If we are not able to secure funding in a timely fashion, our results of operations and financial condition will be negatively impacted.

We will need to grow committed financing capacity with existing partners or attract additional partners to support our growth. Generally, at any point in time, the deployment of a portion of our backlog is contingent on securing available financing. Our ability to attract third-party financing depends on many factors that are outside of our control, including the Equity 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.

In attempting to attract new customers to support our growth, we are constantly innovating our customer contracts. These new types of product offerings may require us to find partners willing to finance these new projects, which may have different terms and financing conditions from prior transactions. If the terms of these transactions or the structure of these projects fails to attract financiers, we may not be able to proceed with growing our business and our potential for growth may be limited.

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

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

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

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

Further, the local electric utility or regulatory authorities may impose "departing load," "standby," power factor charges, greenhouse gas emissions charges, or other charges on our customers in connection with their acquisition or use of our Energy Servers, the amounts of which are outside of our control and which may have a material impact on the economic benefit of our Energy Servers to our customers. Changes in the rates offered by local electric utilities and/or in the applicability or amounts of charges and other fees imposed or incentives granted by such utilities on customers acquiring our Energy Servers could adversely affect the demand for our Energy Servers.

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

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

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

Because our Energy Servers are designed to operate at a constant output twenty-four hours a day, seven days a week, and our customers' demand for electricity typically fluctuates over the course of the day or week, there are often periods when our Energy Servers are producing more electricity than a customer may require, and such excess electricity must be exported to the local electric utility. Many, but not all, local electric utilities provide compensation to our customers for such electricity under "net metering" programs. Utility tariffs and fees, interconnection agreements and net metering requirements are subject to changes in availability and terms and some jurisdictions do not allow interconnections or export at all. At times in the past, such changes have had the effect of significantly reducing or eliminating the benefits of such programs. Changes in the availability of, or benefits offered by, utility tariffs, the net metering requirements or interconnection agreements in place in the jurisdictions in which we operate or in which we anticipate expanding into in the future could adversely affect the demand for our Energy Servers. For example, in California, changes are expected in the eligibility requirements for the net metering tariffs applicable to fuel cells that are currently in effect from investor-owned utilities. Although we are and will continue to remain an active participant in regulatory proceedings addressing such requirements, we cannot predict the outcome of the proceedings.

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 could come from a relatively small number of customers. As an example, in the year ended December 31, 2019, two customers, The Southern Company and SK E&C accounted for approximately 34% and 23% of our total revenue, respectively. A unit of The Southern Company wholly owns a Third-Party PPA, and that entity purchases Energy Servers, which are then provided to various end customers under PPAs. The loss of any large customer order or any delays in installations of new Energy Servers with any large customer would materially and adversely affect our business results.

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.

We continue to develop products for emerging markets and, as we move into those markets, we may need to identify new business partners in order to facilitate such development and expansion. Identifying new business and development partners is a lengthy process and is subject to significant risks and uncertainties. If we are unable to identify reliable partners in a new market or are unable to negotiate mutually-acceptable terms to form the basis of new partnership arrangements, our ability to expand our business could be limited and our financial condition and results of operations could be harmed

Risks Related to Our Products and Manufacturing

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

We have been and will continue monitoring and adjusting as appropriate our operations in response to the COVID-19 pandemic. 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, notwithstanding government “shelter in place” orders. For the safety of our employees and others, many of our employees are still working from home unless they are directly supporting essential manufacturing production operations, installation work, service and maintenance activities and R&D. We have established protocols to minimize the risk of COVID-19 transmission within our facilities, including enhanced cleaning, and temperature screenings upon entry. In addition, all individuals entering Bloom facilities are required to wear face coverings and are directed not to enter if they have COVID-19-like symptoms. We follow all CDC guidelines when notified of possible exposures. Even with these precautions, it is possible an asymptomatic individual could enter our facilities and transmit the virus to others.

If we become aware of any cases of COVID-19 among any of our employees, we notify those with whom the person is known to have been in contact, send the exposed employees home for at least 14 days and require each employee to be tested negative before returning to work. We have had a couple of positive cases to date. Certain roles within our facilities involve greater mobility throughout our facilities and potential exposure to more employees. In the event one of such employees suffers from COVID-19, or if we otherwise believe that a significant number of employees have been 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 facility and Delaware facility, significant exposure 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. To date, we have been able to offset any issues with alternative suppliers, but in the future, it may not be possible to find replacement products or supplies, and ongoing delays could affect our business and growth. For example, particular suppliers on which we rely were shut down, and we were not able to obtain the needed parts. While we have identified and qualified alternative suppliers for these parts, we may experience 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.

We also rely on third party financing for our customers' purchases of our Energy Servers. If third party financiers experience liquidity problems or elect to suspend or cancel investments in our projects, we may be unable to secure financing for our customer purchases, which in turn would impact our ability to deploy our Energy Servers and impact our cash flows and results of operations, including revenue. We believe the current environment may also increase the time to solidify new relationships, which could impact the time required to achieve funding. Our ability to obtain financing for our Energy Servers also partly depends on the creditworthiness of our customers. Some of our current and prospective customers' credit ratings have recently fallen, which may make it difficult for us to obtain financing for their use of an Energy Server. For current customers whose Energy Servers are not yet installed, an inability to obtain financing may impact our cash flows and results of operations including revenue. For prospective customers, it may decrease demand for our Energy Servers if financing is not available in light of their credit. If our customers cannot obtain financing to purchase our Energy Servers, our cash flow and results of operations including revenue will be adversely affected. Although the impact of the COVID-19 pandemic on our ability to obtain financing for our customers' use of our Energy Servers has not yet had a significant impact on our business, delays in obtaining financing for our Energy Servers would lead to a decrease in our cash flows and results of operations, including revenue. Furthermore, in cases where the inability to obtain financing only becomes apparent after we have installed an Energy Server, there would be no offsetting decrease in our expenses.

Our installation and maintenance operations have also been, and will continue to be, adversely impacted by the COVID-19 pandemic. For example, our installation projects have experienced delays and may continue to experience delays relating to, among other things, shortages in available labor for design, installation and other work; the 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 may in the future face increased competition for scarce resources, which may result in continuing delays or increases in the cost of obtaining such services, including increased labor costs and/or fees to expedite permitting. In addition, while construction activities have to date been deemed "essential business" and allowed to proceed in many jurisdictions, we have experienced interruptions and delays caused by confusion related to exemptions for "essential business" among our suppliers and their sub-contractors and the relevant permitting utilities. Future changes in applicable government orders or regulations, or changes in the interpretation of existing orders or regulations, could result in reductions in the scope of permitted construction activities or prohibitions on such activities. An inability to install our Energy Servers would negatively impact our acceptances, 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. These adverse impacts may increase in severity or continue indefinitely, including following the lifting of "shelter in place" orders.

We cannot predict with certainty at this time the full extent to which the COVID-19 pandemic will impact our business, cash flows and results of operations including revenue. It will depend on many factors. These include, among others, the extent of harm to public health, the willingness of our employees to travel and work in our manufacturing facilities and at our service

and installation sites even if permitted to do so, the disruption to the global economy and to our supply base and potential customer base, and impacts on liquidity and the availability of capital. We are staying in close communication with our manufacturing facilities, employees, customers, suppliers and partners, and acting to mitigate the impact of this dynamic and evolving situation, but there is no guarantee that we will be able to do so.

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

To the extent we are successful in growing our business, we may need to increase our production capacity. For example, our current manufacturing capacity is not sufficient to meet our planned 2021 production targets and we are currently seeking to expand our capacity. Our ability to plan, construct, and equip additional manufacturing facilities is subject to significant risks and uncertainties, including the following:

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

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

If we are not able to continue to reduce our cost structure in the future, our ability to become profitable may be impaired.

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

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

Our Energy Servers are complex products and they may contain undetected or latent errors or defects. In the past, we have experienced latent defects only discovered once the Energy Server is deployed in the field. Changes in our supply chain or the failure of our suppliers to otherwise provide us with components or materials that meet our specifications could 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. Although we believe we have designed new generations of our Energy Servers to better withstand the variety of field conditions we have encountered, as we move into new geographies and deploy new service configurations, we may encounter new and unanticipated field conditions. Adverse impacts on performance may require us to incur significant 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 warranties and performance guaranties, or is we fail to accrue adequate warranty and guaranty reserves, our business and financial results could be harmed.

We offer certain customers the opportunity to renew their O&M agreements on an annual basis, for up to 30 years, at prices predetermined at the time of purchase of the Energy Server. We also provide 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.

As of September 30, 2020, we had a total of 30 megawatts in total deployed early generation servers, including our first and second generation servers, out of our total acceptances, net of 526 megawatts. None of these early generation servers are recognized as our property, plant and equipment. We expect that our deployed early generation Energy Servers, if not upgraded with our more current generation power modules, may continue to perform at a lower output and efficiency level and, as a result, the maintenance costs may exceed the contracted prices that we expect to generate if our customers continue to renew their maintenance service agreements with respect to those servers. Further, the Energy Servers held on our consolidated financial statements, including those acquired through our Managed Services Financing option and our PPA Programs, could be impaired or have their useful life shortened in the future if adequate maintenance services are not performed or if a determination is made to upgrade the Energy Servers.

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

Because we generally do not recognize revenue on the sales of our Energy Servers until installation and acceptance except where a third party is responsible for installation (such as in our sales in South Korea), our financial results depend to a large extent on the timeliness of the installation of our Energy Servers. Furthermore, in some cases, the installation of our Energy Servers may be on a fixed price basis, which subjects us to the risk of cost overruns or other unforeseen expenses in the installation process.

The construction, installation, and operation of our Energy Servers at a particular site is also generally subject to oversight and regulation in accordance with national, state, and local laws and ordinances relating to building codes, safety, environmental protection, and related matters, and typically require various local and other governmental approvals and permits, including environmental approvals and permits, that vary by jurisdiction. In some cases, these approvals and permits require periodic renewal. It is difficult and costly to track the requirements of every individual authority having jurisdiction over our installations, to design our Energy Servers to comply with these varying standards, and to obtain all applicable approvals and permits. We cannot predict whether or when all permits required for a given project will be granted or whether the conditions associated with the permits will be achievable. The denial of a permit or utility connection essential to a project or the imposition of impractical conditions would impair our ability to develop the project. In addition, we cannot predict whether the permitting process will be lengthened due to complexities and appeals. Delay in the review and permitting process for a project can impair or delay our and our customers' abilities to develop that project or may increase the cost so substantially that the project is no longer attractive to us or our customers. Furthermore, unforeseen delays in the review and permitting process could delay the timing of the installation of our Energy Servers and could therefore adversely affect the timing of the recognition of revenue related to the installation, which could harm our operating results in a particular period.

In addition, the completion of many of our installations depends on the availability of and timely connection to the natural gas grid and the local electric grid. In some jurisdictions, local utility companies or the municipality have denied our request for connection or have required us to reduce the size of certain projects. In addition, some municipalities have recently adopted restrictions that prohibit any new construction that allows for the use of natural gas. For more information regarding these restrictions, please see the risk factor entitled "*As a fossil fuel-based technology, we may be subject to a heightened risk of regulation, to a potential for the loss of certain incentives, and to changes in our customers' energy procurement policies.*" Any delays in our ability to connect with utilities, delays in the performance of installation-related services, or poor performance of installation-related services by our general contractors or sub-contractors will have a material adverse effect on our results and could cause operating results to vary materially from period to period.

Furthermore, we rely on the ability of our third-party general contractors to install Energy Servers at our customers' sites and to meet our installation requirements. We currently work with a limited number of general contractors, which has impacted and may continue to impact our ability to make installations as planned. Our work with contractors or their sub-contractors may have the effect of 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 manufacturing facilities could delay the production of our Energy Servers, which would harm our business and results of operations.

We manufacture our Energy Servers in a limited number of manufacturing facilities, any of which could become unavailable either temporarily or permanently for any number of reasons, including equipment failure, material supply, public health emergencies or catastrophic weather or geologic events. For example, several of our manufacturing facilities are located in an area prone to earthquakes. In the event of a significant disruption to our manufacturing process, we may not be able to easily shift production to other facilities or to make up for lost production, which could result in harm to our reputation, increased costs, and lower revenues.

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

We rely on a limited number of third-party suppliers for some of the raw materials and components for our Energy Servers, including certain rare earth materials and other materials that may be of limited supply. If our suppliers provide insufficient inventory at the level of quality required to meet customer demand or if our suppliers are unable or unwilling to provide us with the contracted quantities (as we have limited or in some case no alternatives for supply), our results of operations could be materially and negatively impacted. If we fail to develop or maintain our relationships with our suppliers, or if there is otherwise a shortage or lack of availability of any required raw materials or components, we may be unable to manufacture our Energy Servers or our Energy Servers may be available only at a higher cost or after a long delay. Such delays could prevent us from delivering our Energy Servers to our customers within required time frames and cause order cancellations. We have had to create our own supply chain for some of the components and materials utilized in our fuel cells. We have made significant expenditures in the past to develop our supply chain. In many cases, we entered into contractual relationships with suppliers to jointly develop the components we needed. These activities are time and capital intensive. Accordingly, the number of suppliers we have for some of our components and materials is limited and, in some cases, sole sourced. 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.

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

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

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

We have, in some instances, entered into long-term supply agreements that could result in insufficient inventory and negatively affect our results of operations.

We have entered into long-term supply agreements with certain suppliers. Some of these supply agreements provide for fixed or inflation-adjusted pricing, substantial prepayment obligations and in a few cases, supplier purchase commitments. These arrangements could mean that we end up paying for inventory that we did not need or that was at a higher price than the market. Further, we face significant specific counterparty risk under long-term supply agreements when dealing with suppliers without a long, stable production and financial history. Given the uniqueness of our product, many of our suppliers do not have a long operating history and are private companies that may not have substantial capital resources. In the event any such supplier experiences financial difficulties, it may be difficult or impossible, or may require substantial time and expense, for us

to recover any or all of our prepayments. We do not know whether we will be able to maintain long-term supply relationships with our critical suppliers or whether we may secure new long-term supply agreements. Additionally, many of our parts and materials are procured from foreign suppliers, which exposes us to risks including unforeseen increases in costs or interruptions in supply arising from changes in applicable international trade regulations such as taxes, tariffs, or quotas. Any of the foregoing could materially harm our financial condition and our results of operations.

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

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

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

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

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

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

To the extent practicable, given the limitations in supply chain previously discussed, although we currently maintain alternative sources for raw materials, our business is subject to the risk of price fluctuations and periodic delays in the delivery of certain raw materials, which tariffs may exacerbate. Disruptions in the supply of raw materials and components could temporarily impair our ability to manufacture our Energy Servers for our customers or require us to pay higher prices in order to obtain these raw materials or components from other sources, which could affect our business and our results of operations. While it is too early to predict how the recently enacted tariffs on imported steel will impact our business, the imposition of tariffs on items imported by us from China or other countries could increase our costs and could have a material adverse effect on our business and our results of operations.

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

We have established two foreign trade zones, one in California and one in Delaware, through qualification with U.S. Customs, and are approved for "zone to zone" transfers between our California and Delaware facilities. Materials received in a foreign trade zone are not subject to certain U.S. duties or tariffs until the material enters U.S. commerce. We benefit from the adoption of foreign trade zones by reduced duties, deferral of certain duties and tariffs, and reduced processing fees, which help us realize a reduction in duty and tariff costs. However, the operation of our foreign trade zones requires compliance with applicable regulations and continued support of U.S. Customs with respect to the foreign trade zone program. If we are unable to maintain the qualification of our foreign trade zones, or if foreign trade zones are limited or unavailable to us in the future, our duty and tariff costs would increase, which could have an adverse effect on our business and results of operations.

Risks Related to Government Incentive Programs

Our business currently depends on 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 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 twelve U.S. states, each of which may have its own enabling policy framework. We rely on these governmental rebates, tax credits, and other financial incentives to significantly lower the effective price of the Energy Servers to our customers in the U. S. and the Asia Pacific region. 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 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 RPS is scheduled to be replaced at the end of 2021 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 an input fuel for fuel cell projects. The Ministry of Trade, Industry, and Economy is running a stakeholder process in 2021 to determine the specifics of the HPS incentive mechanism. In the nine months ended September 30, 2020, our revenue in the Republic of Korea accounted for 29% of our total revenue. 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, the previous federal ITC, a federal tax incentive for fuel cell production, expired on December 31, 2016. Without the availability of the ITC benefit incentive, we lowered the price of our Energy Servers to ensure the economics to our customers would remain the same as it was prior to losing the ITC benefit, adversely affecting our gross profit. While the ITC was reinstated by the U.S Congress on February 9, 2018 and made retroactive to January 1, 2017, under current law it will phase out on December 31, 2022, as noted below:

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

The ITC program has operational criteria that extend for five years. If the energy property is disposed or otherwise ceases to be qualified investment credit property before the close of the five-year recapture period is fulfilled, it could result in a partial reduction of the incentives. In the case of Energy Servers purchased by PPA Entities, the PPA Entities bear the risk of repayment if the assets placed in service do not meet the ITC operational criteria in the future.

As another example, many of our installations in California interconnect with investor-owned utilities on Fuel Cell Net Energy Metering (“FC NEM”) tariffs. The FC NEM tariffs will not be available for new installations after December 31, 2021 and installations that are currently on FC NEM tariffs will have to meet more stringent standards regarding the emissions of

greenhouse gases that are under development in order to remain eligible for the FC NEM tariffs. Although we are working to ensure that that an acceptable substitute to FC NEM is put in place prior to December 31, 2021, it is not certain that our efforts will be successful. If our customers are unable to interconnect under the FC NEM tariffs the costs of interconnection may increase and such increase may negatively impact demand for our products. Additionally, the uncertainty regarding the requirements for continued service under the FC NEM tariffs may negatively impact the perceived value or risks of our products, which may negatively impact demand for our products.

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. Nevertheless, one set of political activists aggressively seeks to eliminate these programs while another set seeks to deny access to these programs and incentives for any technology that relies on natural gas, regardless of the technology's positive contribution to reducing air pollution, reducing carbon emissions or enabling electric service to be more reliable and resilient.

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

We expect that any Energy Server deployments through 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 only the party who can perform operations and maintenance on our Energy Servers have made it difficult to attract investors in the past. Our ability to obtain additional financing in the future depends on the continued confidence of banks and other financing sources in our business model, the market for our Energy Servers, and the continued availability of tax benefits applicable to our Energy Servers. In addition, conditions in the general economy and financial and credit markets may result in the contraction of available tax equity financing. If we are unable to enter into tax equity financing agreements with attractive pricing terms, or at all, we may not be able to obtain the capital needed to fund our financing programs or use the tax benefits provided by the ITC and MACRS depreciation, which could make it more difficult for customers to finance the purchase of our Energy Servers. Such circumstances could also require us to reduce the price at which we are able to sell our Energy Servers and therefore harm our business, our financial condition, and our results of operations.

Risks Related to Legal Matters and Regulations

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

We are subject to national, state, and local environmental laws and regulations as well as environmental laws in those foreign jurisdictions in which we operate. Environmental laws and regulations can be complex and may often change. These laws can give rise to liability for administrative oversight costs, cleanup costs, property damage, bodily injury, fines, and penalties. Capital and operating expenses needed to comply with environmental laws and regulations can be significant, and violations may result in substantial fines and penalties or third-party damages. In addition, ensuring we are in compliance with applicable environmental laws requires significant time and management resources and could cause delays in our ability to build out, equip and operate our facilities as well as service our fleet, which would adversely impact our business, our prospects, our financial condition, and our operating results. In addition, environmental laws and regulations such as the Comprehensive Environmental Response, Compensation and Liability Act in the United States impose liability on several grounds including for the investigation and cleanup of contaminated soil and ground water, for building contamination, for impacts to human health and for damages to natural resources. If contamination is discovered in the future at properties formerly owned or operated by us or currently owned or operated by us, or properties to which hazardous substances were sent by us, it could result in our liability under environmental laws and regulations. Many of our customers who purchase our Energy Servers have high sustainability standards, and any environmental noncompliance by us could harm our reputation and impact a current or potential customer's buying decision. Additionally, in many cases we contractually commit to performing all necessary installation work on a fixed-price basis, and unanticipated costs associated with environmental remediation and/or compliance expenses may cause the cost of performing such work to exceed our revenue. The costs of complying with

environmental laws, regulations, and customer requirements, and any claims concerning noncompliance or liability with respect to contamination in the future, could have a material adverse effect on our financial condition or our operating results.

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

Bloom is committed to compliance with applicable environmental laws and regulations including health and safety standards, and we continually review the operation of our Energy Servers for health, safety, and environmental compliance. Our Energy Servers, like other fuel cell technology-based products of which we are aware, produce small amounts of hazardous wastes and air pollutants, and we seek to ensure that these are handled in accordance with applicable regulatory standards.

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

For example, natural gas, which is the primary fuel used in our Energy Servers, contains benzene, which is classified as a hazardous waste if it exceeds 0.5 milligrams per liter. A small amount of benzene found in the public natural gas supply (equivalent to what is present in one gallon of gasoline in an automobile fuel tank, which are exempt from federal regulation) is collected by the gas cleaning units contained in our Energy Servers that are typically replaced once every 18 to 24 months by us from customers' sites. From 2010 to late 2016 and in the regular course of maintenance of the Energy Servers, we periodically replaced the units in our servers relying upon a federal environmental exemption that permitted the handling of such units without manifesting the contents as containing a hazardous waste. Although over the years and with the approval of two states, we believed that we operated under the exemption, the U.S. Environmental Protection Agency ("EPA") issued guidance for the first time in late 2016 that differed from our belief and conflicted with the state approvals we had obtained. We have complied with the new guidance and, given the comparatively small quantities of benzene produced, we do not anticipate significant additional costs or risks from our compliance with the revised 2016 guidance. However, EPA has asked us to show cause why it should not collect approximately $1.0 million in fines from us for the prior period. 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. Additionally, a nominal penalty was paid to a state agency under that state's environmental laws relating to the operation of our Energy Server under the exemption prior to the issuance of the revised EPA guidance.

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

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

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

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

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

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

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

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

Although the current generation of our Energy Servers running on natural gas produce nearly 50% less carbon emissions compared to the average of U.S. combustion power generation, the operation of our Energy Servers does produce carbon dioxide ("CO2"), which has been shown to be a contributing factor to global climate change. As such, we may be negatively impacted by CO2-related changes in applicable laws, regulations, ordinances, rules, or the requirements of the incentive programs on which we and our customers currently rely. Changes (or a lack of change to comprehensively recognize the risks of climate change and recognize the benefit of our technology as one means to maintain reliable and resilient electric service with a lower greenhouse gas emission profile) in any of the laws, regulations, ordinances, or rules that apply to our installations and new technology could make it illegal or more costly for us or our customers to install and operate our Energy Servers on particular sites, thereby negatively affecting our ability to deliver cost savings to customers, or we could be prohibited from completing new installations or continuing to operate existing projects. Certain municipalities in California have already banned the use of distributed generation products that utilize fossil fuel. Additionally, our customers' and potential customers' energy procurement policies may prohibit or limit their willingness to procure our Energy Servers. Our business prospects may be negatively impacted if we are prevented from completing new installations or our installations become more costly as a result of laws, regulations, ordinances, or rules applicable to our Energy Servers, or by our customers' and potential customers' energy procurement policies.

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

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

In addition, our project with Delmarva Power & Light Company (the "Delaware Project") is subject to laws and regulations relating to electricity generation, transmission, and sale in Delaware and at the federal level.

A law governing the sale of electricity from the Delaware Project was necessary to implement part of several incentives that Delaware offered to 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, the Federal Energy Regulatory Commission ("FERC") has authority to regulate under various federal energy regulatory laws, wholesale sales of electric energy, capacity, and ancillary services, and the delivery of natural gas in interstate commerce. Also, several of our PPA Entities are subject to regulation under FERC with respect to market-based sales of electricity, which requires us to file notices and make other periodic filings with FERC, which increases our costs and subjects us to additional regulatory oversight.

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

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

We may in the future become subject to product liability claims. Our Energy Servers are considered high energy systems because they use flammable fuels and may operate at 480 volts. Although our Energy Servers are certified to meet ANSI, IEEE, ASME, and NFPA design and safety standards, if an Energy Server is not properly handled in accordance with our servicing and handling standards and protocols, there could be a system failure and resulting liability. These claims could require us to incur significant costs to defend. Furthermore, any successful product liability claim could require us to pay a substantial monetary award. Moreover, a product liability claim could generate substantial negative publicity about us and our Energy Servers, which could harm our brand, our business prospects, and our operating results. While we maintain product liability insurance, our insurance may not be sufficient to cover all potential product liability claims. Any lawsuit seeking significant monetary damages either in excess of our coverage or outside of our coverage may have a material adverse effect on our business and our financial condition.

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

We have been and continue to be involved in legal proceedings, administrative proceedings, claims, and other litigation that arise in the ordinary course of business. Purchases of our products have also been the subject of litigation. For information regarding pending legal proceedings, please see Part II, Item 1, *Legal Proceedings* and Note 14, *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.

Although we have taken many protective measures to protect our trade secrets including agreements, limited access, segregation of knowledge, password protections, and other measures, policing unauthorized use of proprietary technology can be difficult and expensive. For example, many of our engineers reside in California where it is not legally permissible to prevent them from working for a competitor, if and when, one should exist. Also, litigation may be necessary to enforce our intellectual property rights, to protect our trade secrets, or to determine the validity and scope of the proprietary rights of others. Such litigation may result in our intellectual property rights being challenged, limited in scope, or declared invalid or unenforceable. We cannot be certain that the outcome of any litigation will be in our favor, and an adverse determination in any such litigation could impair our intellectual property rights, our business, our prospects, and our reputation.

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

In connection with our planned 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. Although we are not currently subject to any claims related to intellectual property, these companies holding patents or other intellectual property rights allegedly relating to our technologies could, in the future, make claims or bring suits alleging infringement, misappropriation, or other violations of such rights, or otherwise assert their rights and by seeking licenses or injunctions. Several of the proprietary components used in our Energy Servers have been subjected to infringement challenges in the past. We also generally indemnify our customers against claims that the products we supply 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, 2020, we had an accumulated deficit of $3.1 billion. We expect to continue to expand our operations, including by investing in manufacturing, sales and marketing, research and development, staffing systems, and infrastructure to support our growth. We anticipate that we will incur net losses for the foreseeable future. Our ability to achieve profitability in the future will depend on a number of factors, including:

- growing our sales volume;
- increasing sales to existing customers and attracting new customers;
- expanding into new geographical markets and industry market sectors;
- attracting and retaining financing partners who are willing to provide financing for sales on a timely basis and with attractive terms;
- continuing to improve the useful life of our fuel cell technology and reducing our warranty servicing costs;

- reducing the cost of producing our Energy Servers;
- improving the efficiency and predictability of our installation process;
- improving the effectiveness of our sales and marketing activities;
- attracting and retaining key talent in a competitive marketplace; and
- the amount of stock-based compensation recognized in the period.

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

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

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

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

- the timing of installations, which may depend on many factors such as availability of inventory, product quality or performance issues, or local permitting requirements, utility requirements, environmental, health, and safety requirements, weather, 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;
- whether we are able to structure our sales agreements in a manner that would allow for the product and installation revenue to be recognized upfront at acceptance;
- delays or cancellations of Energy Server installations;
- fluctuations in our service costs, particularly due to unexpected costs of servicing and maintaining Energy Servers;
- weaker than anticipated demand for our Energy Servers due to changes in government incentives and policies or due to other conditions;
- fluctuations in our research and development expense, including periodic increases associated with the pre-production qualification of additional tools as we expand our production capacity;
- interruptions in our supply chain;
- the length of the sales and installation cycle for a particular customer;
- the timing and level of additional purchases by existing customers;
- unanticipated expenses or installation delays associated with changes in governmental regulations, permitting requirements by local authorities at particular sites, utility requirements and environmental, health, and safety requirements;
- disruptions in our sales, production, service or other business activities resulting from disagreements with our labor force or our inability to attract and retain qualified personnel; and
- unanticipated changes in federal, state, local, or foreign government incentive programs available for us, our customers, and tax equity financing parties.

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

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

Our current growth and future growth plans may make it difficult for us to efficiently operate our business, challenging us to effectively manage our capital expenditures and control our costs while we expand our operations to increase our revenue. If we experience a significant growth in orders without improvements in automation and efficiency, we may need additional manufacturing capacity and we and some of our suppliers may need additional and capital intensive equipment. Any growth in manufacturing must include a scaling of quality control as the increase in production increases the possible impact of manufacturing defects. In addition, any growth in the volume of sales of our Energy Servers may outpace our ability to engage sufficient and experienced personnel to manage the higher number of installations and to engage contractors to complete installations on a timely basis and in accordance with our expectations and standards. Any failure to manage our growth effectively could materially and adversely affect our business, our prospects, our operating results, and our financial condition. Our future operating results depend to a large extent on our ability to manage this expansion and growth successfully.

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

Our revenue-generating transactions include the Traditional lease option, Managed Services Financings, sales to international channel partners, and PPA transactions, all of which are accounted for differently in our financial statements. Many of the accounting rules related to our financing transactions are complex and require experienced and highly skilled personnel to review and interpret the proper accounting treatment with respect thereto. Competition for senior finance and accounting personnel in the San Francisco Bay Area who have public company reporting experience is intense, and if we are unable to recruit and retain personnel with the required level of expertise to evaluate and accurately classify our revenue-producing transactions, our ability to accurately report our financial results may be harmed.

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

As discussed in Note 2, *Restatement of Previously Issued Financial Statements,* in Part I, Item 1*, Financial Statements*, we reached a determination to restate our consolidated financial statements for the periods disclosed in that note after misstatements in our accounting treatment of some of our complex or non-routine transactions were identified. The restatement also included corrections for previously identified immaterial uncorrected misstatements in the impacted periods. As a result, we have incurred unanticipated costs for accounting and legal fees in connection with or related to the restatement, and have become subject to a number of additional risks and uncertainties, which may affect investor confidence in the accuracy of our financial disclosures and may raise reputational risks for our business, both of which could harm our business and financial results.

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

The Sarbanes-Oxley Act of 2002 ("Sarbanes-Oxley Act") requires, among other things, that public companies evaluate the effectiveness of their internal control over financial reporting and disclosure controls and procedures. As a recently public company and as an emerging growth company, we elected to delay adopting the requirements of the Sarbanes-Oxley Act as is our option under the Sarbanes-Oxley Act. While we have not yet adopted the requirements under Section 404B of the Sarbanes-Oxley Act, we did identify a material weakness in internal control over financial reporting at December 31, 2019, as we did not design and maintain an effective control environment with a sufficient complement of resources with an appropriate level of accounting knowledge, expertise and training to evaluate the accounting for and disclosure of complex or non-routine transactions commensurate with our financial reporting requirements. Please see Part I, Item 4, *Controls and Procedures,* in this Quarterly Report on Form 10-Q for additional information regarding the identified material weakness and our actions to date to remediate the material weakness. Subsequent testing by us or our independent registered public accounting firm, which has not yet performed an audit of our internal control over financial reporting, may reveal additional deficiencies in our internal control over financial reporting that are deemed to be material weaknesses.

To comply with Section 404B, we may incur substantial costs, expend significant management time on compliance-related issues, and hire additional accounting, financial, and internal audit staff with appropriate public company experience and technical accounting knowledge. Moreover, if we are not able to comply with the requirements of Section 404B in a timely manner or if we or our independent registered public accounting firm identify deficiencies in our internal control over financial reporting that are deemed to be material weaknesses, we could be subject to sanctions or investigations by the Securities and Exchange Commission or other regulatory authorities, which would require additional financial and management resources. Any failure to maintain effective disclosure controls and procedures or internal control over financial reporting could have a material adverse effect on our business and operating results and cause a decline in the price of our Class A common stock. For further discussion on Section 404 compliance, see our Risk Factor below entitled: "*We will no longer be an emerging growth company beginning on December 31, 2020, after which we will not be able to take advantage of the reduced disclosure requirements applicable to emerging growth companies*."

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

We may be limited in the portion of net operating loss carryforwards ("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 customer confidence in our liquidity, including in our ability to timely service our debt obligations, and long-term business prospects in order to grow our business.

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

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

- our limited operating history at a large scale;
- the size of our debt obligations;
- our lack of profitability;
- unfamiliarity with or uncertainty about our Energy Servers and the overall perception of the distributed generation market;
- prices for electricity or natural gas in particular markets;
- competition from alternate sources of energy;
- warranty or unanticipated service issues we may experience;
- the environmental consciousness and perceived value of environmental programs to our customers;
- the size of our expansion plans in comparison to our existing capital base and the scope and history of operations;

- the availability and amount of tax incentives, credits, subsidies or other incentive programs; and
- the other factors set forth in this "Risk Factors" section.

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

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

As of September 30, 2020, we and our subsidiaries had approximately $570.3 million of total consolidated indebtedness, of which an aggregate of $343.1 million represented indebtedness that is recourse to us, of which $115.7 million is classified as current and $227.4 million is classified as non-current. Of this $343.1 million in debt, $76.7 million represented debt under our 10% Notes, and $99.5 million represented debt under our 10% Convertible Notes, $68.6 million represented debt under our 10.25% Senior Secured Notes, and $98.3 million represented debt under the Green Notes. In addition, our PPA Entities' outstanding indebtedness of $227.2 million represented indebtedness that is non-recourse to us. The agreements governing our and our PPA Entities' outstanding indebtedness contain, and other future debt agreements may contain, covenants imposing operating and financial restrictions on our business that limit our flexibility including, among other things:

- borrow money;
- pay dividends or make other distributions;
- incur liens;
- make asset dispositions;
- make loans or investments;
- issue or sell share capital of our subsidiaries;
- issue guaranties;
- enter into transactions with affiliates;
- merge, consolidate or sell, lease or transfer all or substantially all of our assets;
- require us to dedicate a substantial portion of cash flow from operations to the payment of principal and interest on indebtedness, thereby reducing the funds available for other purposes such as working capital and capital expenditures;
- make it more difficult for us to satisfy and comply with our obligations with respect to our indebtedness;
- subject us to increased sensitivity to interest rate increases;
- make us more vulnerable to economic downturns, adverse industry conditions, or catastrophic external events;
- limit our ability to withstand competitive pressures;
- limit our ability to invest in new business subsidiaries that are not PPA Entity-related;
- reduce our flexibility in planning for or responding to changing business, industry, and economic conditions; and/or
- place us at a competitive disadvantage to competitors that have relatively less debt than we have.

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

As of September 30, 2020, we and our subsidiaries have approximately $570.3 million of total consolidated indebtedness, including $129.7 million in short-term debt and $440.7 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.

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 Power Purchase Agreement Program Equity Investors.

Three of our PPA Entities are structured in a manner such that, other than the amount of any equity investment we have made, we do not have any further primary liability for the debts or other obligations of the PPA Entities. All of our PPA Entities that operate Energy Servers for end customers have significant restrictions on their ability to incur increased operating costs, or could face events of default under debt or other investment agreements if end customers are not able to meet their payment obligations under PPAs or if Energy Servers are not deployed in accordance with the project's schedule. In three cases, if our PPA Entities experience unexpected, increased costs such as insurance costs, interest expense or taxes or as a result of the acceleration of repayment of outstanding indebtedness, or if end customers are unable or unwilling to continue to purchase power under their PPAs, there could be insufficient cash generated from the project to meet the debt service obligations of the PPA Entity or to meet any targeted rates of return of Equity Investors. If a PPA Entity fails to make required debt service payments, this could constitute an event of default and entitle the lender to foreclose on the collateral securing the debt or could

trigger other payment obligations of the PPA Entity. To avoid this, we could choose to contribute additional capital to the applicable PPA Entity to enable such PPA Entity to make payments to avoid an event of default, which could adversely affect our business or our financial condition. Under PPA IV's note purchase agreement, PPA IV is obligated to offer to repay all outstanding debt in the event that at any time we fail to own (directly or indirectly) at least 50.1% of the equity interest of PPA IV not owned by the Equity Investor(s). Upon receipt of such offer, the lenders may waive that obligation or elect to require PPA IV to prepay all remaining amounts owed under PPA IV's project debt. The obligations under PPA IV have not been triggered as of September 30, 2020.

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 operations and maintenance agreement. Because we are both the administrator and the manager of our PPA Entities, as well as a major service provider, we face a potential conflict of interest in that we may be obligated to enforce contractual rights that a PPA Entity has against us in our capacity as a service provider. By way of example, 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, 2020, 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.

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

We believe that our success and our ability to reach our strategic objectives are highly dependent on the contributions of our key management, technical, engineering, and sales personnel. The loss of the services of any of our key employees could disrupt our operations, delay the development and introduction of our products and services and negatively impact our business, prospects, and operating results. In particular, we are highly dependent on the services of Dr. Sridhar, our Chairman and President and Chief Executive Officer, and other key employees. None of our key employees is bound by an employment agreement for any specific term. We cannot assure you that we will be able to successfully attract and retain senior leadership necessary to grow our business. Furthermore, there is increasing competition for talented individuals in our field, and competition for qualified personnel is especially intense in the San Francisco Bay Area where our principal offices are located. Our failure to attract and retain our executive officers and other key management, technical, engineering, and sales personnel could adversely impact our business, our prospects, our financial condition, and our operating results. In addition, we do not have "key person" life insurance policies covering any of our officers or other key employees.

We will no longer be an emerging growth company beginning on December 31, 2020 after which we will not be able to take advantage of the reduced disclosure requirements applicable to emerging growth companies.

We have been an "emerging growth company," as defined in the JOBS Act, and we have taken advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a non-binding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. We expect to cease to be an emerging growth company as of December 31, 2020.

As a result, we will need to comply with the independent auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act beginning with our Annual Report on Form 10-K for the year ending December 31, 2020, will be required to hold a say-on-pay vote and a say-on-frequency vote at our 2021 annual meeting of stockholders, and will no longer be entitled to provide the reduced executive compensation disclosures permitted by emerging growth companies in our Annual Report on the Form 10-K for the year ending December 31, 2020 and proxy statement for our 2021 annual meeting of stockholders. We expect that our transition from "emerging growth company" will require additional attention from management and will result in increased costs to us, which could include higher legal fees, accounting fees and fees associated with investor relations activities, among others.

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

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

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

We conduct a majority of our operations in the San Francisco Bay area in an active earthquake zone, and certain of our facilities are located within known flood plains. The occurrence of a natural disaster such as an earthquake, drought, flood, fire, localized extended outages of critical utilities (such as California's public safety power shut-offs) or transportation systems, or any critical resource shortages could cause a significant interruption in our business, damage or destroy our facilities, our manufacturing equipment, or our inventory, and cause us to incur significant costs, any of which could harm our business, our financial condition, and our results of operations. The insurance we maintain against fires, earthquakes and other natural disasters may not be adequate to cover our losses in any particular case.

Expanding operations internationally could expose us to additional risks.

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

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

- restrictions on repatriation of earnings;
- compliance with potentially conflicting and changing laws of taxing jurisdictions where we conduct business and compliance with applicable U.S. tax laws as they relate to international operations, the complexity and adverse consequences of such tax laws, and potentially adverse tax consequences due to changes in such tax laws; and
- regional economic and political conditions.

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

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;
- other events or factors including those resulting from war, incidents of terrorism or responses to these events; and
- sales or anticipated sales of shares of our Class A common stock by us or our stockholders.

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

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

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

125,729,561 shares of our Class A common stock and 28,067,011 shares of our Class B common stock outstanding as of September 30, 2020.

In addition, as of September 30, 2020, we had options and RSUs outstanding that, if fully exercised or settled, would result in the issuance of 7,593,715 shares of Class A common stock and 16,605,027 shares of Class B common stock. We have filed a registration statement on Form S-8 to register shares reserved for future issuance under our equity compensation plans. Subject to the satisfaction of applicable vesting requirements, the shares issued upon exercise of outstanding stock options or settlement of outstanding RSUs will be available for immediate resale in the United States in the open market.

The dual class structure of our common stock and the voting agreements among certain stockholders have the effect of concentrating voting control of our Company with KR Sridhar, our Chairman and Chief Executive Officer, and also with those stockholders who held our capital stock prior to the completion of our IPO including our directors, executive officers and significant stockholders, which limits or precludes your ability to influence corporate matters including the election of directors and the approval of any change of control transaction, and may adversely affect the trading price of our Class A common stock.

Our Class B common stock has ten votes per share, and our Class A common stock has one vote per share. As of September 30, 2020, and after giving effect to the voting agreements between KR Sridhar, our Chairman and Chief Executive Officer, and certain holders of Class B common stock, our directors, executive officers, significant stockholders of our common stock, and their respective affiliates collectively held a substantial majority of the voting power of our capital stock. Because of the ten-to-one voting ratio between our Class B and Class A common stock, the holders of our Class B common stock collectively will continue to control a majority of the combined voting power of our common stock and therefore are able to control all matters submitted to our stockholders for approval until the earliest to occur of (i) immediately prior to the close of business on July 27, 2023, (ii) immediately prior to the close of business on the date on which the outstanding shares of Class B common stock represent less than five percent (5%) of the aggregate number of shares of Class A common stock and Class B common stock then outstanding, (iii) the date and time or the occurrence of an event specified in a written conversion election delivered by KR Sridhar to our Secretary or Chairman of the Board to so convert all shares of Class B common stock, or (iv) immediately following the date of the death of KR Sridhar. This concentrated control limits or precludes Class A stockholders' ability to influence corporate matters while the dual class structure remains in effect, including the election of directors, amendments of our organizational documents, and any merger, consolidation, sale of all or substantially all of our assets, or other major corporate transaction requiring stockholder approval. In addition, this may prevent or discourage unsolicited acquisition proposals or offers for our capital stock that Class A stockholders may feel are in their best interest as one of our stockholders.

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

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, this 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 may adversely affect the trading market for our Class A common stock.

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

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

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

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

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

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

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

In addition, our restated certificate of incorporation and our amended and restated bylaws provide that the Court of Chancery of the State of Delaware will be the exclusive forum for: any derivative action or proceeding brought on our behalf; any action asserting a breach of fiduciary duty; any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our restated certificate of incorporation or our amended and restated bylaws; or any action asserting a claim against us that is governed by the internal affairs doctrine. Our restated certificate of incorporation and our amended and restated bylaws provide that unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act of 1933, as amended (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

During the three months ended September 30, 2020:

- We issued $230.0 million principal amount of the Green Notes. The Green Notes were issued to the initial purchaser in reliance upon Section 4(a)(2) of the Securities Act in transactions not involving any public offering. The Green Notes were initially resold by the initial purchaser to persons whom the initial purchaser reasonably believes are "qualified institutional buyers," as defined in, and in accordance with, Rule 144A under the Securities Act.

- We issued 19,136,313 shares of our Class B common stock to certain holders of our 10% Convertible Notes upon settlement of conversion of approximately $153 million of such notes. These shares were issued in reliance upon the exemption from registration provided by Section 3(a)(9) of the Securities Act. All of these Class B common stock shares were subsequently converted to Class A common stock.

For further information regarding the above transactions, see Note 7, *Outstanding Loans and Security Agreements*, of the Notes to Condensed Consolidated Financial Statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q.

ITEM 3 - DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4 - MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5 - OTHER INFORMATION

None.

ITEM 6 - EXHIBITS

Index to Exhibits

The exhibits listed below are filed or incorporated by reference as part of this Quarterly Report on Form 10-Q.

			Incorporated by Reference			
Exhibit Number		**Description**	**Form**	**File No.**	**Exhibit**	**Filing Date**
3.1		Restated Certificate of Incorporation.	10-Q	001-38598	3.1	9/7/2018
3.2		Amended and Restated Bylaws, effective August 8, 2019	10-Q	001-38598	3.2	8/14/2019
4.1		Indenture, dated as of August 11, 2020, between Bloom Energy Corporation and U.S. Bank National Association, as trustee	8-K	001-38598	4.1	8/11/2020
4.2		Form of certificate representing the 2.50% Green Convertible Senior Notes due 2025 (included as Exhibit A in Exhibit 4.1 incorporated by reference hereto)	8-K	001-38598	4.2	8/11/2020
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		XBRL Taxonomy Extension Schema Document				Filed herewith
101.CAL		XBRL Taxonomy Extension Calculation Linkbase Document				Filed herewith
101.DEF		XBRL Taxonomy Extension Definition Linkbase Document				Filed herewith
101.LAB		XBRL Taxonomy Extension Label Linkbase Document				Filed herewith
101.PRE		XBRL Taxonomy Extension Presentation Linkbase Document				Filed herewith
104		Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)				

** 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 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 6, 2020

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

Date: November 6, 2020

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

EXHIBIT 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER

PURSUANT TO RULE 13a-14(a) AND RULE 15d-14(a)

OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED,

AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, KR Sridhar, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the quarter ended September 30, 2020 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 6, 2020

By: /s/ KR Sridhar

KR Sridhar

Founder, President, Chief Executive Officer and Director

(Principal Executive Officer)

EXHIBIT 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO RULE 13A-14(a) AND RULE 15d-14(a)
OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Gregory Cameron, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the quarter ended September 30, 2020 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 6, 2020

By: /s/ Gregory Cameron
Gregory Cameron
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, 2020 of Bloom Energy Corporation (the "Company") as filed with the Securities and Exchange Commission on the date hereof (the "Report"):

I, KR Sridhar, Chief Executive Officer, 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 result of operations of the Company.

Date: November 6, 2020

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

I, Gregory Cameron, 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 result of operations of the Company.

Date: November 6, 2020

By: /s/ Gregory Cameron
Gregory Cameron
Chief Financial Officer
(Principal Financial Officer)