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 June 30, 2024

or

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

Commission File Number: 001-38598



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

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

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

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

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

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

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

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

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

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

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

The number of shares of the registrant's common stock outstanding as of August 5, 2024 was as follows:

Class A Common Stock, $0.0001 par value, 227,643,371 shares

Bloom Energy Corporation

Quarterly Report on Form 10-Q for the Three and Six Months Ended June 30, 2024

Table of Contents

	Page
PART I — FINANCIAL INFORMATION	
Item 1 — Financial Statements (unaudited)	3
Condensed Consolidated Balance Sheets	3
Condensed Consolidated Statements of Operations	4
Condensed Consolidated Statements of Comprehensive Loss	5
Condensed Consolidated Statements of Changes in Stockholders' Equity	6
Condensed Consolidated Statements of Cash Flows	8
Notes to Unaudited Condensed Consolidated Financial Statements	9
Item 2 — Management's Discussion and Analysis of Financial Condition and Results of Operations	32
Item 3 — Quantitative and Qualitative Disclosures About Market Risk	48
Item 4 — Controls and Procedures	49
PART II — OTHER INFORMATION	
Item 1 — Legal Proceedings	50
Item 1A — Risk Factors	50
Item 2 — Unregistered Sales of Equity Securities and Use of Proceeds	50
Item 3 — Defaults Upon Senior Securities	50
Item 4 — Mine Safety Disclosures	50
Item 5 — Other Information	50
Item 6 — Exhibits	51
Signatures	52

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

PART I — FINANCIAL INFORMATION

ITEM 1 — FINANCIAL STATEMENTS

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

	June 30, 2024	December 31, 2023
Assets		
Current assets:		
Cash and cash equivalents[1]	$ 581,684	$ 664,593
Restricted cash[1]	25,167	46,821
Accounts receivable, less allowance for doubtful accounts of $119 as of June 30, 2024 and December 31, 2023[1, 2]	524,000	340,740
Contract assets[3]	90,388	41,366
Inventories[1]	520,216	502,515
Deferred cost of revenue[4]	48,457	45,984
Prepaid expenses and other current assets[1, 5]	40,102	51,148
Total current assets	1,830,014	1,693,167
Property, plant and equipment, net[1]	494,377	493,352
Operating lease right-of-use assets[1, 6]	134,972	139,732
Restricted cash[1]	30,953	33,764
Deferred cost of revenue	3,565	3,454
Other long-term assets[1, 7]	54,163	50,208
Total assets	$ 2,548,044	$ 2,413,677
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable[1, 8]	$ 104,201	$ 132,078
Accrued warranty	12,388	19,326
Accrued expenses and other current liabilities[1, 9]	116,399	130,879
Deferred revenue and customer deposits[1, 10]	112,032	128,922
Operating lease liabilities[1, 11]	20,123	20,245
Financing obligations	28,332	38,972
Total current liabilities	393,475	470,422
Deferred revenue and customer deposits[1, 12]	28,589	19,140
Operating lease liabilities[1, 13]	137,209	141,939
Financing obligations	408,384	405,824
Recourse debt	1,121,011	842,006
Non-recourse debt[1, 14]	4,347	4,627
Other long-term liabilities	8,479	9,049
Total liabilities	2,101,494	1,893,007
Commitments and contingencies (Note 12)		
Stockholders' equity:		
Common stock: $0.0001 par value; Class A shares — 600,000,000 shares and 600,000,000 shares authorized, and 227,556,594 shares and 224,717,533 shares issued and outstanding, and Class B shares — 470,092,742 shares and 600,000,000 shares authorized, and no shares issued and outstanding at June 30, 2024 and December 31, 2023, respectively	23	21
Additional paid-in capital	4,413,233	4,370,343
Accumulated other comprehensive loss	(2,301)	(1,687)
Accumulated deficit	(3,987,702)	(3,866,599)
Total equity attributable to common stockholders	423,253	502,078
Noncontrolling interest	23,297	18,592
Total stockholders' equity	$ 446,550	$ 520,670
Total liabilities and stockholders' equity	$ 2,548,044	$ 2,413,677

[1] We have a variable interest entity related to a joint venture in the Republic of Korea (see Note 15 — *SK ecoplant Strategic Investment*), which represents a portion of the consolidated balances recorded within these financial statement line items.

[2] Including amounts from related parties of $348.2 million and $262.0 million as of June 30, 2024, and December 31, 2023, respectively.
[3] Including amounts from related parties of $0.9 million and $6.9 million as of June 30, 2024, and December 31, 2023, respectively.
[4] Including amounts from related parties of $0.9 million as of December 31, 2023. There were no amounts from related parties as of June 30, 2024.
[5] Including amounts from related parties of $1.3 million and $2.3 million as of June 30, 2024, and December 31, 2023, respectively.
[6] Including amounts from related parties of $1.7 million and $2.0 million as of June 30, 2024, and December 31, 2023, respectively.
[7] Including amounts from related parties of $9.5 million and $9.1 million as of June 30, 2024, and December 31, 2023, respectively.
[8] Including amounts from related parties of $0.1 million as of December 31, 2023. There were no amounts from related parties as of June 30, 2024.
[9] Including amounts from related parties of $5.8 million and $3.4 million as of June 30, 2024, and December 31, 2023, respectively.
[10] Including amounts from related parties of $8.6 million and $1.7 million as of June 30, 2024, and December 31, 2023, respectively.
[11] Including amounts from related parties of $0.4 million and $0.4 million as of June 30, 2024, and December 31, 2023, respectively.
[12] Including amounts from related parties of $4.3 million and $6.7 million as of June 30, 2024, and December 31, 2023, respectively.
[13] Including amounts from related parties of $1.3 million and $1.6 million as of June 30, 2024, and December 31, 2023, respectively.
[14] Including amounts from related parties of $4.3 million and $4.6 million as of June 30, 2024, and December 31, 2023, respectively.

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

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2024	2023	2024	2023
Revenue:				
Product	$ 226,308	$ 214,706	$ 379,672	$ 408,451
Installation	42,733	24,321	54,177	44,846
Service	52,531	42,298	108,991	82,961
Electricity	14,195	19,770	28,225	40,028
Total revenue[1]	335,767	301,095	571,065	576,286
Cost of revenue:				
Product	161,332	145,146	277,089	274,759
Installation	44,298	26,879	59,651	51,979
Service	52,401	57,263	108,907	108,507
Electricity	9,214	15,457	18,820	30,424
Total cost of revenue	267,245	244,745	464,467	465,669
Gross profit	68,522	56,350	106,598	110,617
Operating expenses:				
Research and development	37,364	41,493	72,849	87,183
Sales and marketing	17,901	26,822	31,500	53,933
General and administrative[2]	36,385	42,491	74,394	87,638
Total operating expenses	91,650	110,806	178,743	228,754
Loss from operations	(23,128)	(54,456)	(72,145)	(118,137)
Interest income	6,430	4,357	13,961	6,352
Interest expense[3]	(15,376)	(13,953)	(29,922)	(25,699)
Other expense, net[4]	(985)	(740)	(2,155)	(2,083)
Loss on extinguishment of debt	(27,182)	(2,873)	(27,182)	(2,873)
(Loss) gain on revaluation of embedded derivatives	(88)	(1,216)	70	(1,099)
Loss before income taxes	(60,329)	(68,881)	(117,373)	(143,539)
Income tax provision	856	178	355	437
Net loss	(61,185)	(69,059)	(117,728)	(143,976)
Less: Net income (loss) attributable to noncontrolling interest	602	(2,998)	1,583	(6,348)
Net loss attributable to common stockholders	$ (61,787)	$ (66,061)	$ (119,311)	$ (137,628)
Net loss per share available to common stockholders, basic and diluted	$ (0.27)	$ (0.32)	$ (0.53)	$ (0.66)
Weighted average shares used to compute net loss per share available to common stockholders, basic and diluted	227,167	208,692	226,377	207,714

[1] Including related party revenue of $86.8 million and $209.0 million for the three and six months ended June 30, 2024, respectively, and $4.6 million and $5.4 million for the three and six months ended June 30, 2023, respectively.

[2] Including related party general and administrative expenses of $0.2 million and $0.4 million for the three and six months ended June 30, 2024. There were no related party general and administrative expenses for the three and six months ended June 30, 2023.

[3] Including related party interest expense of $0.1 million and $0.1 million for the three and six months ended June 30, 2024. There was no related party interest expense for the three and six months ended June 30, 2023.

[4] Including related party other expense, net of $0.4 million and $0.9 million for the three and six months ended June 30, 2024. There was no related party other expense, net for the three and six months ended June 30, 2023.

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

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2024	2023	2024	2023
Net loss	$ (61,185)	$ (69,059)	$ (117,728)	$ (143,976)
Other comprehensive loss, net of taxes:				
Foreign currency translation adjustment	(502)	(722)	(1,450)	(993)
Other comprehensive loss, net of taxes	(502)	(722)	(1,450)	(993)
Comprehensive loss	(61,687)	(69,781)	(119,178)	(144,969)
Less: Comprehensive income (loss) attributable to noncontrolling interest	262	(3,019)	747	(6,539)
Comprehensive loss attributable to common stockholders	$ (61,949)	$ (66,762)	$ (119,925)	$ (138,430)

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

Bloom Energy Corporation
Condensed Consolidated Statements of Changes in Stockholders' Equity
(in thousands, except share data)
(unaudited)

	Three Months Ended June 30, 2024							
	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Equity Attributable to Common Stockholders	Noncontrolling Interest	Total Stockholders' Equity
	Shares	Amount						
Balances at March 31, 2024	226,933,763	$ 21	$ 4,394,148	$ (2,139)	$ (3,925,915)	$ 466,115	$ 23,035	$ 489,150
Issuance of restricted stock awards	604,077	2	—	—	—	2	—	2
Exercise of stock options	18,754	—	157	—	—	157	—	157
Stock-based compensation	—	—	18,928	—	—	18,928	—	18,928
Foreign currency translation adjustment	—	—	—	(162)	—	(162)	(340)	(502)
Net (loss) income	—	—	—	—	(61,787)	(61,787)	602	(61,185)
Balances at June 30, 2024	227,556,594	$ 23	$ 4,413,233	$ (2,301)	$ (3,987,702)	$ 423,253	$ 23,297	$ 446,550

	Three Months Ended June 30, 2023							
	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Equity Attributable to Common Stockholders	Noncontrolling Interest	Total Stockholders' Equity
	Shares	Amount						
Balances at March 31, 2023	208,333,645	$ 20	$ 4,036,697	$ (1,352)	$ (3,636,050)	$ 399,315	$ 34,519	$ 433,834
Issuance of restricted stock awards	753,859	—	—	—	—	—	—	—
Exercise of stock options	93,878	—	733	—	—	733	—	733
Stock-based compensation expense	—	—	28,992	—	—	28,992	—	28,992
Contributions from noncontrolling interest	—	—	—	—	—	—	6,979	6,979
Capped calls	—	—	(54,522)	—	—	(54,522)	—	(54,522)
Foreign currency translation adjustment	—	—	—	(701)	—	(701)	(21)	(722)
Net loss	—	—	—	—	(66,061)	(66,061)	(2,998)	(69,059)
Balances at June 30, 2023	209,181,382	$ 20	$ 4,011,900	$ (2,053)	$ (3,702,111)	$ 307,756	$ 38,479	$ 346,235

	Six Months Ended June 30, 2024							
	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Equity Attributable to Common Stockholders	Noncontrolling Interest	Total Stockholders' Equity
	Shares	Amount						
Balances at December 31, 2023	224,717,533	$ 21	$ 4,370,343	$ (1,687)	$ (3,866,599)	$ 502,078	$ 18,592	$ 520,670
Issuance of restricted stock awards	2,087,979	2	—	—	—	2	—	2
ESPP purchase	632,688	—	6,297	—	—	6,297	—	6,297
Exercise of stock options	118,394	—	676	—	—	676	—	676
Stock-based compensation	—	—	35,917	—	—	35,917	—	35,917
Contributions from noncontrolling interest	—	—	—	—	—	—	3,958	3,958
Accrued dividend	—	—	—	—	(1,620)	(1,620)	—	(1,620)
Legal reserve	—	—	—	—	147	147	—	147
Subsidiary liquidation	—	—	—	—	(319)	(319)	—	(319)
Foreign currency translation adjustment	—	—	—	(614)	—	(614)	(836)	(1,450)
Net (loss) income	—	—	—	—	(119,311)	(119,311)	1,583	(117,728)
Balances at June 30, 2024	227,556,594	$ 23	$ 4,413,233	$ (2,301)	$ (3,987,702)	$ 423,253	$ 23,297	$ 446,550

	Six Months Ended June 30, 2023							
	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Equity Attributable to Common Stockholders	Noncontrolling Interest	Total Stockholders' Equity
	Shares	Amount						
Balances at December 31, 2022	205,664,690	$ 20	$ 3,906,491	$ (1,251)	$ (3,564,483)	$ 340,777	$ 38,039	$ 378,816
Issuance of restricted stock awards	2,858,763	—	—	—	—	—	—	—
ESPP purchase	449,525	—	7,756	—	—	7,756	—	7,756
Exercise of stock options	208,404	—	1,502	—	—	1,502	—	1,502
Stock-based compensation	—	—	58,286	—	—	58,286	—	58,286
Derecognition of the pre-modification forward contract fair value	—	—	76,242	—	—	76,242	—	76,242
Equity component of Series B redeemable convertible preferred stock	—	—	16,145	—	—	16,145	—	16,145
Contributions from noncontrolling interest	—	—	—	—	—	—	6,979	6,979
Purchase of capped call related to convertible notes	—	—	(54,522)	—	—	(54,522)	—	(54,522)
Foreign currency translation adjustment	—	—	—	(802)	—	(802)	(191)	(993)
Net loss	—	—	—	—	(137,628)	(137,628)	(6,348)	(143,976)
Balances at June 30, 2023	209,181,382	$ 20	$ 4,011,900	$ (2,053)	$ (3,702,111)	$ 307,756	$ 38,479	$ 346,235

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

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

	Six Months Ended June 30,	
	2024	**2023**
Cash flows from operating activities:		
Net loss	$ (117,728)	$ (143,976)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	25,925	35,668
Non-cash lease expense	17,931	16,184
(Gain) loss on disposal of property, plant and equipment	(15)	196
Revaluation of derivative contracts	(70)	1,099
Stock-based compensation	37,327	55,845
Amortization of debt issuance costs	3,074	1,786
Loss on extinguishment of debt	27,182	2,873
Unrealized foreign currency exchange loss	1,554	1,512
Other	(100)	—
Changes in operating assets and liabilities:		
Accounts receivable[1]	(183,272)	(99,951)
Contract assets[2]	(49,021)	11,544
Inventories	(19,103)	(197,346)
Deferred cost of revenue[3]	(2,591)	(7,544)
Prepaid expenses and other current assets[4]	11,046	1,958
Other long-term assets[5]	(3,955)	3,415
Operating lease right-of-use assets and operating lease liabilities	(18,023)	(15,447)
Finance lease liabilities	320	736
Accounts payable[6]	(25,249)	35,894
Accrued warranty	(6,938)	(2,426)
Accrued expenses and other current liabilities[7]	(13,207)	(35,719)
Deferred revenue and customer deposits[8]	(7,441)	(26,766)
Other long-term liabilities	(407)	(730)
Net cash used in operating activities	(322,761)	(361,195)
Cash flows from investing activities:		
Purchase of property, plant and equipment	(33,454)	(46,150)
Proceeds from sale of property, plant and equipment	22	25
Net cash used in investing activities	(33,432)	(46,125)
Cash flows from financing activities:		
Proceeds from issuance of debt[9]	402,500	634,018
Payment of debt issuance costs	(12,323)	(15,828)
Repayment of debt	(140,990)	(72,852)
Proceeds from financing obligations	1,334	2,702
Repayment of financing obligations	(9,999)	(8,728)
Proceeds from issuance of common stock	6,975	9,258
Proceeds from issuance of redeemable convertible preferred stock	—	310,957
Contributions from noncontrolling interest	3,958	6,979
Dividend paid	(1,468)	—
Purchase of capped call related to convertible notes	—	(54,522)
Other	—	(158)
Net cash provided by financing activities	249,987	811,826
Effect of exchange rate changes on cash, cash equivalent, and restricted cash	(1,168)	(328)
Net (decrease) increase in cash, cash equivalents, and restricted cash	(107,374)	404,178
Cash, cash equivalents, and restricted cash:		
Beginning of period	745,178	518,366
End of period	$ 637,804	$ 922,544
Supplemental disclosure of cash flow information:		
Cash paid during the period for interest	$ 26,744	$ 22,345
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	17,896	15,318
Operating cash flows from finance leases	127	509
Cash paid during the period for income taxes	830	950

Non-cash investing and financing activities:		
Liabilities recorded for property, plant and equipment, net	$ 3,032	$ 4,790
Recognition of operating lease right-of-use asset during the year-to-date period	4,984	14,037
Recognition of finance lease right-of-use asset during the year-to-date period	320	736
Derecognition of the pre-modified forward contract fair value	—	76,242
Equity component of redeemable convertible preferred stock	—	16,145

[1] Including changes in related party balances of $86.1 million and $1.7 million for the six months ended June 30, 2024, and 2023, respectively.

[2] Including changes in related party balances of $6.0 million for the six months ended June 30, 2024. There were no associated related party balances as of June 30, 2023.

[3] Including changes in related party balances of $0.9 million for the six months ended June 30, 2024. There were no associated related party balances as of June 30, 2023.

[4] Including changes in related party balances of $1.0 million for the six months ended June 30, 2024. There were no associated related party balances as of June 30, 2023.

[5] Including changes in related party balances of $0.4 million for the six months ended June 30, 2024. There were no associated related party balances as of June 30, 2023.

[6] Including changes in related party balances of $0.1 million for the six months ended June 30, 2024. There were no associated related party balances as of June 30, 2023.

[7] Including changes in related party balances of $2.4 million for the six months ended June 30, 2024. There were no associated related party balances as of June 30, 2023.

[8] Including changes in related party balances of $4.4 million for the six months ended June 30, 2024. There were no associated related party balances as of June 30, 2023.

[9] Including changes in related party balances of $0.3 million for the six months ended June 30, 2024. There were no associated related party balances as of June 30, 2023.

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

Bloom Energy Corporation
Notes to Unaudited Condensed Consolidated Financial Statements

The unaudited condensed consolidated financial statements reflect all normal and recurring adjustments that are, in the opinion of management, necessary for a fair presentation of the results for the interim periods presented.

The unaudited condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements, including the notes thereto, included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023.

Website references throughout this document are provided for convenience only, and the content on the referenced websites is not incorporated by reference into this report.

1. Nature of Business, Liquidity and Basis of Presentation

Nature of Business

For information on the nature of our business, see Part II, Item 8, Note 1 — *Nature of Business, Liquidity and Basis of Presentation, Nature of Business* section in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023.

Liquidity

We have generally incurred operating losses and negative cash flows from operations since our inception. With the series of new debt offerings, debt extinguishments, and conversions to equity that we completed since 2021, we had $1,121.0 million and $4.3 million of total outstanding recourse and non-recourse debt, respectively, as of June 30, 2024, which was classified as long-term debt.

On May 29, 2024, we issued 3% Green Convertible Senior Notes (the "3% Green Notes due June 2029") in an aggregate principal amount of $402.5 million due June 2029, unless earlier repurchased, redeemed or converted, less the initial purchasers' discount of $12.1 million and other issuance costs of $0.7 million, resulting in net proceeds of $389.7 million. On May 29, 2024, we used approximately $141.8 million of the net proceeds from this issuance to repurchase $115.0 million, or 50%, of the outstanding principal amount of our 2.5% Green Convertible Senior Notes due August 2025 (the "2.5% Green Notes") in privately negotiated transactions. The repurchase amount equaled 122.6% of the principal amount repurchased, plus related accrued and unpaid interest. For additional information, please see Part I, Item 1, Note 7 — *Outstanding Loans and Security Agreements*.

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

In the opinion of management, the combination of our existing cash and cash equivalents and expected timing of 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.

Inflation Reduction Act of 2022

For information on the Inflation Reduction Act of 2022 (the "IRA") signed into law on August 16, 2022, and its impact on our business, see Part II, Item 8, Note 1 — *Nature of Business, Liquidity and Basis of Presentation, Inflation Reduction Act of 2022* section in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023.

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"), including all disclosures required by generally accepted accounting principles as applied in the United States ("U.S. GAAP").

Principles of Consolidation

For information on the principles of consolidation, see Part II, Item 8, Note 1 — *Nature of Business, Liquidity and Basis of Presentation, Principles of Consolidation* section in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023.

Use of Estimates

For information on the use of accounting estimates, see Part II, Item 8, Note 1 — *Nature of Business, Liquidity and Basis of Presentation, Use of Estimates* section in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023.

Concentration of Risk

Geographic Risk — The majority of our revenue and long-lived assets are attributable to operations in the U.S. for all periods presented. In addition to shipments in the U.S., we also ship our Energy Servers to other countries, primarily, the Republic of Korea, Japan, India and Taiwan (collectively referred to as the "Asia Pacific region"). For the three and six months ended June 30, 2024, total revenue in the U.S. was 83% and 65%, respectively, of our total revenue. For the three and six months ended June 30, 2023, total revenue in the U.S. was 73% and 83%, respectively, of our total revenue.

Credit Risk — At June 30, 2024, two customers, the first of which is our related party (see Note 10 — *Related Party Transactions*), accounted for approximately 66% and 20% of accounts receivable, respectively. At December 31, 2023, one customer that is our related party accounted for approximately 74% of accounts receivable.

Customer Risk — During the three months ended June 30, 2024, revenue from two customers, the second of which is our related party (see Note 10 — *Related Party Transactions*), accounted for approximately 36.0% and 26.0% of our total revenue, respectively. During the six months ended June 30, 2024, two customers, the first of which is our related party (see Note 10 — *Related Party Transactions*), represented approximately 37.0% and 27.0% of our total revenue, respectively.

During the three months ended June 30, 2023, revenue from three customers accounted for approximately 39%, 22%, and 12% of our total revenue. During the six months ended June 30, 2023, three customers represented approximately 40%, 13%, and 12% of our total revenue.

2. Summary of Significant Accounting Policies

Refer to the accounting policies described in Part II, Item 8, Note 2 — *Summary of Significant Accounting Policies* in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023.

Accounting Guidance Not Yet Adopted

Refer to the accounting guidance not yet adopted described in Part II, Item 8, Note 2 — *Summary of Significant Accounting Policies — Accounting Guidance Not Yet Adopted* section in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023. Based on the Company's continued evaluation, we do not expect a material impact from new accounting guidance not yet adopted to our unaudited condensed consolidated financial statements.

Recent Accounting Pronouncements

There have been no significant changes in our reported financial position or results of operations and cash flows resulting from the adoption of new accounting pronouncements.

3. Revenue Recognition

Contract Balances

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

	June 30, 2024	December 31, 2023
Accounts receivable	$ 524,000	$ 340,740
Contract assets	90,388	41,366
Customer deposits	84,656	75,734
Deferred revenue	55,965	72,328

Contract assets relate to contracts for which revenue is recognized upon transfer of control of performance obligations, but where billing milestones have not been reached. Customer deposits and deferred revenue include payments received from customers or invoiced amounts prior to transfer of control of performance obligations.

Contract assets and contract liabilities are reported in a net position on an individual contract basis at the end of each reporting period. Contract assets are classified as current in the condensed consolidated balance sheets when both the milestones other than the passage of time, are expected to be complete and the customer is invoiced within one year of the balance sheet date, and as long-term when both the above-mentioned milestones are expected to be complete, and the customer is invoiced more than one year out from the balance sheet date. Contract liabilities are classified as current in the condensed consolidated balance sheets when the revenue recognition associated with the related customer payments and invoicing is expected to occur within one year of the balance sheet date and as long-term when the revenue recognition associated with the related customer payments and invoicing is expected to occur in more than one year from the balance sheet date.

Contract Assets

	Three Months Ended June 30,		Six Months Ended June 30,	
	2024	2023	2024	2023
Beginning balance	$ 33,788	$ 47,778	$ 41,366	$ 46,727
Transferred to accounts receivable from contract assets recognized at the beginning of the period	(3,148)	(23,228)	(21,295)	(27,404)
Revenue recognized and not billed as of the end of the period	59,748	10,632	70,317	15,859
Ending balance	$ 90,388	$ 35,182	$ 90,388	$ 35,182

Deferred Revenue

Deferred revenue activity during the three and six months ended June 30, 2024, and 2023, consisted of the following (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2024	2023	2024	2023
Beginning balance	$ 59,468	$ 87,848	$ 72,328	$ 94,355
Additions	229,429	265,408	405,914	490,346
Revenue recognized	(232,932)	(268,146)	(422,277)	(499,591)
Ending balance	$ 55,965	$ 85,110	$ 55,965	$ 85,110

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 primary component of deferred revenue at the end of the period consists

of performance obligations relating to the provision of maintenance services under current contracts and future renewal periods. Some of these obligations provide customers with material rights over a period that we estimate to be largely commensurate with the period of their expected use of the associated Energy Servers. As a result, we expect to recognize these amounts as revenue over a period of up to 21 years, predominantly on a relative standalone selling price basis that reflects the cost of providing these services. Deferred revenue also includes performance obligations relating to product acceptance and installation. A significant amount of this deferred revenue is reflected as additions and revenue recognized in the same 12-month period, and a portion of this deferred revenue is expected to be recognized beyond this 12-month period mainly due to deployment schedules.

We do not disclose the value of the unsatisfied performance obligations for (i) contracts with an original expected length of one year or less and (ii) contracts for which we recognize revenue at the amount to which we have the right to invoice for services performed.

Disaggregated Revenue

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2024	**2023**	**2024**	**2023**
Revenue from contracts with customers:				
Product revenue	$ 226,308	$ 214,706	$ 379,672	$ 408,451
Installation revenue	42,733	24,321	54,177	44,846
Services revenue	52,531	42,298	108,991	82,961
Electricity revenue	4,893	3,966	9,641	7,804
Total revenue from contract with customers	326,465	285,291	552,481	544,062
Revenue from contracts that contain leases:				
Electricity revenue	9,302	15,804	18,584	32,224
Total revenue	$ 335,767	$ 301,095	$ 571,065	$ 576,286

4. Financial Instruments

Cash, Cash Equivalents, and Restricted Cash

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

	June 30, 2024	December 31, 2023
As Held:		
Cash	$ 89,083	$ 144,102
Money market funds	548,721	601,076
	$ 637,804	$ 745,178
As Reported:		
Cash and cash equivalents	$ 581,684	$ 664,593
Restricted cash	56,120	80,585
	$ 637,804	$ 745,178

Restricted cash consisted of the following (in thousands):

	June 30, 2024	December 31, 2023
Restricted cash, current	$ 25,167	$ 46,821
Restricted cash, non-current	30,953	33,764
	$ 56,120	$ 80,585

Factoring Arrangements

We sell certain customer trade receivables on a non-recourse basis under factoring arrangements with a financial institution. These transactions are accounted for as sales, and cash proceeds are included in cash used in operating activities. We derecognized $21.6 million and $102.3 million of accounts receivable during the three and six months ended June 30, 2024, respectively. We derecognized $59.6 million of accounts receivable during the six months ended June 30, 2023, and no accounts receivable were derecognized during the three months ended June 30, 2023.

The cost of factoring such accounts receivable on our condensed consolidated statements of operations for the three and six months ended June 30, 2024, was $0.5 million and $2.4 million, respectively. The costs of factoring for the six months ended June 30, 2023, were $0.7 million. There were no costs of factoring for the three months ended June 30, 2023. The cost of factoring is recorded in general and administrative expenses.

5. Fair Value

Our accounting policy for the fair value measurement of cash equivalents and embedded Escalation Protection Plan ("EPP") derivatives is described in Part II, Item 8 Note 2 — *Summary of Significant Accounting Policies* in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023.

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

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

	Fair Value Measured at Reporting Date Using			
June 30, 2024	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Cash equivalents:				
Money market funds	$ 548,721	$ —	$ —	$ 548,721
	$ 548,721	$ —	$ —	$ 548,721
Liabilities				
Derivatives:				
Embedded EPP derivatives	$ —	$ —	$ 4,306	$ 4,306
	$ —	$ —	$ 4,306	$ 4,306

	Fair Value Measured at Reporting Date Using			
December 31, 2023	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Cash equivalents:				
Money market funds	$ 601,076	$ —	$ —	$ 601,076
	$ 601,076	$ —	$ —	$ 601,076
Liabilities				
Derivatives:				
Embedded EPP derivatives	$ —	$ —	$ 4,376	$ 4,376
	$ —	$ —	$ 4,376	$ 4,376

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

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

The changes in the Level 3 financial liabilities during the six months ended June 30, 2024, were as follows (in thousands):

	Embedded EPP Derivative Liability
Liabilities at December 31, 2023	$ 4,376
Changes in fair value	(70)
Liabilities at June 30, 2024	$ 4,306

For more details on EPP derivatives, refer to Part II, Item 8 Note 5 — *Fair Value* in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023.

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

Debt Instruments — The term loans and convertible senior notes are based on rates currently offered for instruments with similar maturities and terms (Level 2). The following table presents the estimated fair values and carrying values of debt instruments (in thousands):

	June 30, 2024		December 31, 2023	
	Net Carrying Value	Fair Value	Net Carrying Value	Fair Value
Debt instruments				
Recourse:				
3% Green Convertible Senior Notes due June 2029	$ 389,965	$ 341,924	$ —	$ —
3% Green Convertible Senior Notes due June 2028	617,153	583,861	615,205	673,613
2.5% Green Convertible Senior Notes due August 2025	113,893	119,807	226,801	260,820
Non-recourse:				
4.6% Term Loan due October 2026	$ 2,898	$ 2,785	$ 3,085	$ 2,866
4.6% Term Loan due April 2026	1,449	1,438	1,542	1,479

6. Balance Sheet Components

Accounts Receivable

The increase in accounts receivable of $183.3 million for the six months ended June 30, 2024 was driven by the timing of transactions and a change in customer mix. Refer to Note 1 — *Nature of Business, Liquidity and Basis of Presentation* for discussion of credit risk associated with our accounts receivable.

Inventories

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

	June 30, 2024	December 31, 2023
Raw materials	$ 298,708	$ 270,414
Work-in-progress	85,913	50,632
Finished goods	135,595	181,469
	$ 520,216	$ 502,515

The inventory reserves were $17.4 million and $18.7 million as of June 30, 2024, and December 31, 2023, respectively.

Prepaid Expenses and Other Current Assets

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

	June 30, 2024	December 31, 2023
Tax receivables	$ 5,488	$ 3,231
Receivables from employees	4,413	6,538
Prepaid hardware and software maintenance	3,788	5,202
Prepaid managed services	3,355	5,636
Advance income tax provision	2,381	2,557
Interest receivable	2,375	1,697
Deposits made	1,644	1,702
Prepaid workers compensation	1,612	6,851
Deferred expenses	1,302	2,257
Prepaid deferred commissions	1,258	1,178
Prepaid rent	14	1,232
Other prepaid expenses and other current assets	12,472	13,067
	$ 40,102	$ 51,148

Property, Plant and Equipment, Net

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

	June 30, 2024	December 31, 2023
Energy Servers	$ 309,725	$ 309,770
Machinery and equipment	195,511	174,549
Leasehold improvements	119,130	94,646
Construction-in-progress	81,076	104,650
Buildings	50,298	49,477
Computers, software and hardware	33,186	28,901
Furniture and fixtures	10,728	12,541
	799,654	774,534
Less: accumulated depreciation	(305,277)	(281,182)
	$ 494,377	$ 493,352

Depreciation expense related to property, plant and equipment was $13.4 million and $25.9 million for the three and six months ended June 30, 2024, respectively.

Depreciation expense related to property, plant and equipment for the three and six months ended June 30, 2023, was $17.5 million and $35.7 million, respectively.

Depreciation expense for property, plant and equipment under operating leases by Power Purchase Agreement (“PPA”) entities was $3.6 million and $7.2 million for the three and six months ended June 30, 2023, respectively. There was no depreciation expense for such assets for the three and six months ended June 30, 2024.

Other Long-Term Assets

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

	June 30, 2024	December 31, 2023
Deferred commissions	$ 12,237	$ 9,373
Deferred expenses	9,474	9,069
Long-term lease receivable	6,621	7,335
Deposits made	3,150	3,157
Prepaid managed services	1,916	1,646
Deferred tax asset	1,380	1,385
Prepaid and other long-term assets	19,385	18,243
	$ 54,163	$ 50,208

Accrued Warranty and Product Performance Liabilities

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

	June 30, 2024	December 31, 2023
Product performance	$ 9,769	$ 18,066
Product warranty	2,619	1,260
	$ 12,388	$ 19,326

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

Balances at December 31, 2023	$ 19,326
Accrued warranty and product performance liabilities, net	9,957
Warranty and product performance expenditures during the period	(16,895)
Balances at June 30, 2024	$ 12,388

Accrued Expenses and Other Current Liabilities

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

	June 30, 2024	December 31, 2023
Compensation and benefits	$ 44,060	$ 47,901
General invoice and purchase order accruals	30,703	36,266
Sales tax liabilities	14,246	17,412
Sales-related liabilities	8,439	5,121
Accrued installation	5,779	4,939
Interest payable	3,913	3,823
Provision for income tax	2,614	3,374
Accrued legal expenses	1,432	1,359
Accrued consulting expenses	1,391	3,244
Finance lease liability	887	1,072
Accrued restructuring costs (Note 11)	405	3,793
Other	2,530	2,575
	$ 116,399	$ 130,879

7. Outstanding Loans and Security Agreements

The following is a summary of our debt as of June 30, 2024 (in thousands, except percentage data):

	Unpaid Principal Balance	Net Carrying Value			Interest Rate	Maturity Dates	Entity
		Current	Long-Term	Total			
3% Green Convertible Senior Notes due June 2029	$ 402,500	$ —	$ 389,965	$ 389,965	3.0%	June 2029	Company
3% Green Convertible Senior Notes due June 2028	632,500	—	617,153	617,153	3.0%	June 2028	Company
2.5% Green Convertible Senior Notes due August 2025	115,000	—	113,893	113,893	2.5%	August 2025	Company
Total recourse debt	1,150,000	—	1,121,011	1,121,011			
4.6% Term Loan due October 2026	2,898	—	2,898	2,898	4.6%	October 2026	Korean JV
4.6% Term Loan due April 2026	1,449	—	1,449	1,449	4.6%	April 2026	Korean JV
Total non-recourse debt	4,347	—	4,347	4,347			
Total debt	$ 1,154,347	$ —	$ 1,125,358	$ 1,125,358			

The following is a summary of our debt as of December 31, 2023 (in thousands, except percentage data):

	Unpaid Principal Balance	Net Carrying Value			Interest Rate	Maturity Dates	Entity
		Current	Long-Term	Total			
3% Green Convertible Senior Notes due June 2028	$ 632,500	$ —	$ 615,205	$ 615,205	3.0%	June 2028	Company
2.5% Green Convertible Senior Notes due August 2025	230,000	—	226,801	226,801	2.5%	August 2025	Company
Total recourse debt	862,500	—	842,006	842,006			
4.6% Term Loan due October 2026	3,085	—	3,085	3,085	4.6%	October 2026	Korean JV
4.6% Term Loan due April 2026	1,542	—	1,542	1,542	4.6%	April 2026	Korean JV
Total non-recourse debt	4,627	—	4,627	4,627			
Total debt	$ 867,127	$ —	$ 846,633	$ 846,633			

Recourse debt refers to debt that we have an obligation to pay. Non-recourse debt refers to debt that is recourse to only our subsidiary, Bloom SK Fuel Cell, LLC, a joint venture in the Republic of Korea with SK ecoplant (the "Korean JV"). The differences between the unpaid principal balances and the net carrying values apply to deferred financing costs. We and our subsidiary were in compliance with all covenants as of June 30, 2024, and December 31, 2023.

Recourse Debt Facilities

3% Green Convertible Senior Notes due June 2029

On May 29, 2024, we issued the 3% Green Notes due June 2029 in an aggregate principal amount of $402.5 million due on June 1, 2029, unless earlier repurchased, redeemed or converted, less an initial purchasers' discount of $12.1 million and other issuance costs of $0.7 million (together, the "Transaction Costs"), resulting in net proceeds of $389.7 million. The 3% Green Notes due June 2029 were issued pursuant to, and are governed by, an indenture (the "Indenture"), dated as of May 29, 2024, between us and U.S. Bank Trust Company, National Association, as Trustee, in private placements to qualified institutional buyers pursuant to Rule 144A of the Securities Act of 1933, as amended (the "Securities Act"). Pursuant to the purchase agreement among the Company and the representatives of the initial purchasers of the 3% Green Notes due June 2029, the Company granted the initial purchasers an option to purchase up to an additional $52.5 million aggregate principal amount of the 3% Green Notes due June 2029 (the "Greenshoe Option"). The 3% Green Notes due June 2029 issued on May 29, 2024, included $52.5 million aggregate principal amount pursuant to the full exercise by the initial purchasers of the Greenshoe Option.

The 3% Green Notes due June 2029 are senior, unsecured obligations accruing interest at a rate of 3% per annum, payable semi-annually in arrears on June 1 and December 1 of each year, beginning on December 1, 2024. We may not redeem the 3% Green Notes due June 2029 prior to June 7, 2027, subject to a partial redemption limitation. We may elect to redeem, at face value, all or any portion of the 3% Green Notes due June 2029 at any time, and from time to time, on or after June 7, 2027 and on or before the twenty-first scheduled trading day immediately before the maturity date, provided the share price for our Class A common stock exceeds 130% of the conversion price at redemption.

Before March 1, 2029, the noteholders have the right to convert their 3% Green Notes due June 2029 only upon the occurrence of certain events, including satisfaction of a condition relating to the closing price of our common stock (the "Closing Price Condition") or the trading price of the 3% Green Notes due June 2029 (the "Trading Price Condition"), a redemption event, or other specified corporate events. If the Closing Price Condition is met on at least 20 (whether or not consecutive) of the last 30 consecutive trading days in any calendar quarter, and only during such calendar quarter, the noteholders may convert their 3% Green Notes due June 2029 at any time during the immediately following quarter, commencing after the calendar quarter ending on September 30, 2024, subject to the partial redemption limitation. Subject to the Trading Price Condition, the noteholders may convert their 3% Green Notes due June 2029 during the five business days immediately after any five consecutive trading day period in which the trading price per $1,000 principal amount of the 3% Green Notes due June 2029, as determined following a request by a holder of the 3% Green Notes due June 2029, for each day of that period is less than 98% of the product of the closing price of our common stock and the then applicable conversion rate. From and after March 1, 2029, the noteholders may convert their 3% Green Notes due June 2029 at any time at their election until the close of business on the second scheduled trading day immediately before the maturity date. Should the noteholders elect to convert their 3% Green Notes due June 2029, we may elect to settle the conversion by paying or delivering, as applicable, cash, shares of our Class A common stock, $0.0001 par value per share, or a combination thereof, at our election.

The initial conversion rate is 47.9795 shares of Class A common stock per $1,000 principal amount of notes, which represents an initial conversion price of approximately $20.84 per share of Class A common stock. The conversion rate and conversion price are subject to customary adjustments upon the occurrence of certain events. Also, we may increase the conversion rate at any time if our Board of Directors determines it is in the best interests of the Company or to avoid or diminish income tax to holders of common stock. In addition, if certain corporate events that constitute a Make-Whole Fundamental Change, as defined below, occur, then the conversion rate applicable to the conversion of the 3% Green Notes due June 2029 will, in certain circumstances, increase by up to 15.5932 shares of Class A common stock per $1,000 principal amount of notes for a specified period of time. At June 30, 2024, the maximum number of shares into which the 3% Green Notes due June 2029 could have been potentially converted if the conversion features were triggered was 25,588,011 shares of Class A common stock.

According to the Indenture, a Make-Whole Fundamental Change means (i) a Fundamental Change, that includes certain change-of-control events relating to us, certain business combination transactions involving us and certain delisting events with respect to our Class A common stock, or (ii) the sending of a redemption notice with respect to the 3% Green Notes due June 2029.

The 3% Green Notes due June 2029 contain certain customary provisions relating to the occurrence of Events of Default, as defined in the Indenture. If an Event of Default involving bankruptcy, insolvency or reorganization events with respect to us occurs, then the principal amount of, and all accrued and unpaid interest on, all of the 3% Green Notes due June 2029 then outstanding will immediately become due and payable without any further action or notice by any person. However, notwithstanding the foregoing, we may elect, at our option, that the sole remedy for an Event of Default relating to certain failures by us to comply with certain reporting covenants in the Indenture consists exclusively of the right of the noteholders to receive special interest on the 3% Green Notes due June 2029 for up to 180 days at a specified rate per annum not exceeding 0.50% on the principal amount of the 3% Green Notes due June 2029.

The Transaction Costs were recorded as debt issuance costs and represented a reduction to the 3% Green Notes due June 2029 on our condensed consolidated balance sheets and are amortized to interest expense at an effective interest rate of 3.8%.

Total interest expense recognized related to the 3% Green Notes due June 2029 for the three months ended June 30, 2024, was $1.3 million and was comprised of contractual interest expense of $1.1 million and amortization of the initial purchasers' discount and other issuance costs of $0.2 million. We have not recognized any special interest expense related to the 3% Green Notes due June 2029 to date. The amount of unamortized debt issuance costs as of June 30, 2024, was $12.6 million.

Although the 3% Green Notes due June 2029 contain embedded conversion features, we account for the 3% Green Notes due June 2029 in its entirety as a liability. As of June 30, 2024, the net carrying value of the 3% Green Notes due June 2029 was classified as a long-term liability in our condensed consolidated balance sheets.

3% Green Convertible Senior Notes due June 2028 and Capped Call Transactions

Please refer to Part II, Item 8, Note 7 — *Outstanding Loans and Security Agreements* in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, for discussion of our 3% Green Convertible Senior Notes due June 2028 (the "3% Green Notes due June 2028") and privately negotiated capped call transactions in connection with the pricing of the 3% Green Notes due June 2028.

The noteholders could not convert their 3% Green Notes due June 2028 during the quarter ended June 30, 2024, as the Closing Price Condition, as defined in the indenture, dated as of May 16, 2023, between us and U.S. Bank Trust Company, National Association, as trustee, was not met during the three months ended March 31, 2024, as per the indenture, dated as of May 16, 2023.

Total interest expense recognized related to the 3% Green Notes due June 2028 for the three and six months ended June 30, 2024, was $5.7 million and $11.4 million, respectively and was comprised of contractual interest expense of $4.7 million and $9.4 million and amortization of the initial purchasers' discount and other issuance costs of $1.0 million and $2.0 million, respectively.

Total interest expense recognized related to the 3% Green Notes due June 2028 for the three and six months ended June 30, 2023, was $2.9 million and $2.9 million, respectively, and was comprised of contractual interest expense of $2.4 million and $2.4 million and amortization of the initial purchasers' discount and other issuance costs of $0.5 million and $0.5 million, respectively.

We have not recognized any special interest expense related to the 3% Green Notes due June 2028 to date.

The amount of unamortized debt issuance costs as of June 30, 2024, and December 31, 2023, was $15.3 million and $17.3 million, respectively.

2.5% Green Convertible Senior Notes due August 2025

Please refer to Part II, Item 8, Note 7 — *Outstanding Loans and Security Agreements* in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, for discussion of our 2.5% Green Notes.

The noteholders could not convert their 2.5% Green Notes during the quarter ended June 30, 2024, as the Closing Price Condition, as defined in the indenture, dated as of August 11, 2020, between us and U.S. Bank National Association, as trustee, was not met during the three months ended March 31, 2024, as per the indenture, dated as of August 11, 2020.

On May 29, 2024, we used approximately $141.8 million of the net proceeds from the 3% Green Notes due June 2029 offering to repurchase $115.0 million of the outstanding principal amount of our 2.5% Green Notes in privately negotiated transactions. Half of the original principal balance, $115.0 million of the 2.5% Green Notes, was called and repurchased at 122.6% during the three months ended June 30, 2024. The 22.6% premium of $26.0 million and unpaid accrued interest of $0.8 million related to the repurchased amount were included in the final payment to the noteholders. As a result of partial repurchase of the 2.5% Green Notes, we recognized a loss on extinguishment of debt of $27.2 million.

Total interest expense recognized related to the 2.5% Green Notes for the three and six months ended June 30, 2024, was $1.6 million and $3.5 million, respectively, and was comprised of contractual interest expense of $1.2 million and $2.6 million and amortization of issuance costs of $0.4 million and $0.9 million, respectively. The effective interest rate of the 2.5% Green Notes after partial repurchase was 3.3%.

We have not recognized any special interest expense related to the 2.5% Green Notes to date.

The amount of unamortized debt issuance costs as of June 30, 2024, and December 31, 2023, was $1.1 million and $3.2 million, respectively.

Non-recourse Debt Facilities

Please refer to Part II, Item 8, Note 7 — *Outstanding Loans and Security Agreements* in our Annual Form 10-K for the fiscal year ended December 31, 2023, for discussion of our non-recourse debt.

Repayment Schedule and Interest Expense

The following table presents details of our outstanding loan principal repayment schedule as of June 30, 2024 (in thousands):

Remainder of 2024	$ —
2025	115,000
2026	4,347
2027	—
2028	632,500
Thereafter	402,500
	$ 1,154,347

8. Leases

Facilities, Energy Servers, and Vehicles

For the three and six months ended June 30, 2024, rent expense for all occupied facilities was $5.6 million and $11.2 million, respectively. For the three and six months ended June 30, 2023, rent expense for all occupied facilities was $5.7 million and $11.3 million, respectively.

Operating and financing lease right-of-use assets and lease liabilities as of June 30, 2024, and December 31, 2023, were as follows (in thousands):

	June 30, 2024	December 31, 2023
Operating Leases:		
Operating lease right-of-use assets, net [1, 2]	$ 134,972	$ 139,732
Current operating lease liabilities	(20,123)	(20,245)
Non-current operating lease liabilities	(137,209)	(141,939)
Total operating lease liabilities	$ (157,332)	$ (162,184)
Finance Leases:		
Finance lease right-of-use assets, net [2, 3, 4]	$ 2,433	$ 2,708
Current finance lease liabilities[5]	(887)	(1,072)
Non-current finance lease liabilities[6]	(1,744)	(1,837)
Total finance lease liabilities	$ (2,631)	$ (2,909)
Total lease liabilities	$ (159,963)	$ (165,093)

[1] These assets primarily include leases for facilities, Energy Servers, and vehicles.

[2] Net of accumulated amortization.

[3] These assets primarily include leases for vehicles.

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

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

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

The components of our lease costs for the three and six months ended June 30, 2024, and 2023, were as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2024	2023	2024	2023
Operating lease costs	$ 9,037	$ 8,166	$ 17,942	$ 15,965
Financing lease costs:				
Amortization of right-of-use assets	194	194	491	395
Interest on lease liabilities	63	69	129	131
Total financing lease costs	257	263	620	526
Short-term lease costs	23	733	32	1,177
Total lease costs	$ 9,317	$ 9,162	$ 18,594	$ 17,668

Weighted average remaining lease terms and discount rates for our leases as of June 30, 2024, and December 31, 2023, were as follows:

	June 30, 2024	December 31, 2023
Weighted average remaining lease term:		
Operating leases	7.1 years	7.4 years
Finance leases	3.2 years	3.2 years
Weighted average discount rate:		
Operating leases	10.6 %	10.6 %
Finance leases	9.6 %	9.5 %

Future lease payments under lease agreements as of June 30, 2024, were as follows (in thousands):

	Operating Leases	Finance Leases
Remainder of 2024	$ 18,266	$ 620
2025	33,877	938
2026	33,879	712
2027	33,257	547
2028	27,155	217
2029	20,412	28
Thereafter	61,212	—
Total minimum lease payments	228,058	3,062
Less: amounts representing interest or imputed interest	(70,726)	(431)
Present value of lease liabilities	$ 157,332	$ 2,631

Managed Services Financing

For details on Managed Services Financing refer to Part I, Item 7, Section *Purchase and Financing Options,* sub-section *Managed Services Financing* and Part II, Item 8, Note 8 — *Leases* in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023.

We recognized $7.1 million of product revenue, $2.3 million of installation revenue, $1.3 million of financing obligations, and $4.1 million of operating lease right-of-use assets and operating lease liabilities from successful sale and leaseback transactions for the six months ended June 30, 2024. There were no new successful sale and leaseback transactions during the three months ended June 30, 2024.

The recognized operating lease expense from successful sale and leaseback transactions for the three and six months ended June 30, 2024, was $3.2 million and $6.3 million, respectively.

We recognized $8.5 million and $15.8 million of product revenue, $1.8 million and $4.8 million of installation revenue, $1.5 million and $2.7 million of financing obligations, and $3.8 million and $9.3 million of operating lease right-of-use assets and operating lease liabilities from successful sale and leaseback transactions for the three and six months ended June 30, 2023, respectively.

The recognized operating lease expense from successful sale and leaseback transactions for the three and six months ended June 30, 2023, was $2.3 million and $4.4 million, respectively.

At June 30, 2024, future lease payments under the Managed Services Agreements financing obligations were as follows (in thousands):

	Financing Obligations
Remainder of 2024	$ 21,342
2025	43,157
2026	38,595
2027	22,271
2028	12,369
Thereafter	26,773
Total minimum lease payments	164,507
Less: imputed interest	(83,876)
Present value of net minimum lease payments	80,631
Less: current financing obligations	(28,334)
Long-term financing obligations	$ 52,297

The total financing obligations, as reflected in our condensed consolidated balance sheets, were $436.7 million and $444.8 million as of June 30, 2024, and December 31, 2023, respectively. We expect the difference between these obligations and the principal obligations in the table above to be offset against the carrying value of the related Energy Servers at the end of the lease and the remainder recognized as either a gain or loss at that point.

9. Stock-Based Compensation and Employee Benefit Plans

Stock-Based Compensation Expense

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2024	2023	2024	2023
Cost of revenue	$ 4,110	$ 5,067	$ 7,924	$ 9,228
Research and development	6,008	7,678	11,092	16,088
Sales and marketing	3,270	6,257	5,360	12,074
General and administrative	6,035	9,477	13,907	20,642
	$ 19,423	$ 28,479	$ 38,283	$ 58,032

As of June 30, 2024, and December 31, 2023, we capitalized $10.3 million and $8.9 million of stock-based compensation cost, respectively, into inventory and deferred cost of goods sold.

Stock Option and Stock Award Activity

Stock Options

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

	Outstanding Options			
	Number of Shares	Weighted Average Exercise Price	Remaining Contractual Life (Years)	Aggregate Intrinsic Value
	(in thousands)			
Balances at December 31, 2023	7,247,624	$ 20.93	3.8	$ 19,446
Granted	1,175,348	9.66		
Exercised	(118,394)	5.94		
Expired	(579,293)	26.55		
Balances at June 30, 2024	7,725,285	19.01	4.4	16,183
Vested and expected to vest at June 30, 2024	7,384,089	19.46	4.1	15,184
Exercisable at June 30, 2024	6,569,937	$ 20.66	3.4	$ 13,023

During the three and six months ended June 30, 2024, we recognized $1.0 million and $1.2 million of stock-based compensation costs for stock options, respectively. During the three and six months ended June 30, 2023, we recognized $0.1 million and $0.2 million of stock-based compensation costs for stock options, respectively.

During the three and six months ended June 30, 2024, we granted 175,348 and 1,175,348 stock options, respectively, including 955,000 stock options granted in the first quarter of fiscal year 2024 to certain executives to purchase shares of common stock that contain certain performance-based vesting criteria related to corporate milestones (the “performance-based stock options”). The performance-based stock options were granted “at-the-money” and have a term of 10 years. The performance-based stock options vest based over a four-year or a three-year requisite service period. We did not grant stock options in the three and six months ended June 30, 2023.

The fair value of each performance-based stock option is estimated on the date of grant using the Black-Scholes valuation model. Recognition of stock-based compensation expense associated with these performance-based stock options commences when the performance condition is considered probable of achievement, using management’s best estimates, which consider the inherent risk and uncertainty regarding the future outcomes of the milestones. Forfeitures of the performance-based stock options are recognized as they occur.

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

Risk-free interest rate	4.1% - 4.4%
Expected term (years)	6
Expected dividend yield	—
Expected volatility	96.0% - 97.1%

During the three and six months ended June 30, 2024, the intrinsic value of stock options exercised was $0.2 million and $0.7 million, respectively. During the three and six months ended June 30, 2023, the intrinsic value of stock options exercised was $0.7 million and $1.5 million, respectively.

As of June 30, 2024, and December 31, 2023, we had unrecognized compensation costs related to unvested stock options of $7.9 million and $0.1 million, respectively. This cost is expected to be recognized over the remaining weighted-average period of 2.8 years and 0.3 years, respectively. Cash received from stock options exercised totaled $0.2 million and $0.7 million for the three and six months ended June 30, 2024, respectively. Cash received from stock options exercised totaled $0.7 million and $1.5 million for the three and six months ended June 30, 2023, respectively.

Stock Awards

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

	Number of Awards Outstanding	Weighted Average Grant Date Fair Value
Unvested Balance at December 31, 2023	9,889,341	$ 18.25
Granted	4,497,816	9.84
Vested	(2,087,979)	19.53
Forfeited	(1,149,231)	19.63
Unvested Balance at June 30, 2024	11,149,947	$ 14.48

Stock Awards — The estimated fair value of restricted stock units ("RSUs") and performance stock units ("PSUs") is based on the fair value of our Class A common stock on the date of grant. For the three and six months ended June 30, 2024, we recognized $15.5 million and $33.4 million of stock-based compensation costs for stock awards, respectively. For the three and six months ended June 30, 2023, we recognized $23.0 million and $45.7 million of stock-based compensation costs for stock awards, respectively.

As of June 30, 2024, and December 31, 2023, we had $115.1 million and $113.5 million of unrecognized stock-based compensation expense related to unvested stock awards, expected to be recognized over a weighted average period of 2.2 years and 2.0 years, respectively.

Executive Awards

On March 1, 2024, the Company granted RSUs, PSUs, the time-based and performance-based stock option awards to certain executive staff and on May 6, 2024, the Company granted RSUs and PSUs (collectively, the "2024 Executive Awards") to new executive hires, including our new Chief Financial Officer, pursuant to the 2018 Equity Incentive Plan. The RSUs have time-based vesting schedules that range from two to four years, and started vesting on February 15, 2024 (May 15, 2024, for new hires).

The time-based stock options started vesting on February 15, 2024, and shall vest over three years. The PSUs have vesting schedules that range from one to three years. The performance-based stock options have vesting schedules that range from three to four years. Both the PSUs and the performance-based stock options have a threshold target for a vesting of 50% of the number of awards, a target for 100% of earned awards and a potential of 150% of granted awards earned, for each of the performance periods.

The PSUs and performance-based stock options will vest based on a combination of time and achievement against performance metrics targets assuming continued employment and service through each vesting date. Stock-based compensation costs associated with the 2024 Executive Awards are recognized over the service period as we evaluate the probability of the achievement of the performance conditions. As of June 30, 2024, the unamortized compensation expense for the RSUs, the PSUs, the time-based and the performance-based stock options per the 2024 Executive Awards was $16.1 million.

For details on the 2023, 2022, and 2021 Executive Awards refer to Part II, Item 8, Note 9 — *Stock-Based Compensation and Employee Benefit Plans* in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023.

As of June 30, 2024, and December 31, 2023, the unamortized compensation expense for the RSUs and PSUs per the 2023 Executive Awards was $3.6 million and $7.0 million, respectively.

As of June 30, 2024, and December 31, 2023, the unamortized compensation expense for the RSUs and PSUs per the 2022 Executive Awards was $2.0 million and $6.2 million, respectively.

As of June 30, 2024, and December 31, 2023, the unamortized compensation expense for the RSUs and PSUs per the 2021 Executive Awards was $7.6 million and $8.2 million.

The following table presents the stock activity and the total number of shares available for grant under our stock plans:

	Plan Shares Available for Grant
Balances at December 31, 2023	32,877,906
Added to plan	9,674,114
Granted	(5,470,998)
Cancelled/Forfeited	1,526,358
Expired	(463,986)
Balances at June 30, 2024	38,143,394

2018 Employee Stock Purchase Plan

For details on the 2018 Employee Stock Purchase Plan (the "2018 ESPP"), refer to Part II, Item 8, Note 9 — *Stock-Based Compensation and Employee Benefit Plans* in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023.

During the three and six months ended June 30, 2024, we recognized $2.4 million and $1.3 million of stock-based compensation costs for the 2018 ESPP, respectively. During the three and six months ended June 30, 2023, we recognized $5.9 million and $12.4 million of stock-based compensation costs for the 2018 ESPP, respectively.

We issued 632,688 and 449,525 shares in the six months ended June 30, 2024, and 2023, respectively. During the six months ended June 30, 2024, and 2023, we added an additional 2,418,528 and 2,239,563 shares and there were 16,990,424 and 15,204,584 shares available for issuance as of June 30, 2024, and December 31, 2023, respectively.

As of June 30, 2024, and December 31, 2023, we had $8.1 million and $8.8 million of unrecognized stock-based compensation costs, expected to be recognized over a weighted average period of 1.0 year and 0.8 years, respectively.

10. Related Party Transactions

There have been no changes in related party relationships during the six months ended June 30, 2024. For information on our related party transactions, see Part II, Item 8, Note 12 — *Related Party Transactions* in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023.

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2024	2023	2024	2023
Total revenue from related parties[1]	$ 86,846	$ 4,585	$ 209,014	$ 5,418
Cost of product revenue[2]	54	—	74	—
General and administrative expenses[3]	158	—	361	—
Interest expense[4]	50	—	102	—
Other expense, net[5]	(376)	—	(867)	—

[1] Includes revenue from SK ecoplant for the three and six months ended June 30, 2024, which became a related party on September 23, 2023, however we had transactions with SK ecoplant in prior period (see Note 15 — *SK ecoplant Strategic Investment*). Revenue from related parties for the three and six months ended June 30, 2023, relates to Korean JV in its entirety.

[2] Includes expenses billed by SK ecoplant to Korean JV for headcount support services.

[3] Includes rent expenses per operating lease agreements entered between Korean JV and SK ecoplant and miscellaneous expenses billed by SK ecoplant to Korean JV.

[4] Interest expense per two term loans entered between Korean JV and SK ecoplant in fiscal year 2023.

[5] Other expense, net is represented by realized foreign gain for the three and six months ended June 30, 2024.

Below is the summary of outstanding related party balances as of June 30, 2024, and December 31, 2023 (in thousands):

	June 30, 2024	December 31, 2023
Accounts receivable	$ 348,178	$ 262,031
Contract assets	898	6,872
Deferred cost of revenue, current	—	875
Prepaid expenses and other current assets	1,302	2,257
Operating lease right-of-use assets[1]	1,702	2,031
Other long-term assets	9,474	9,069
Accounts payable	—	77
Accrued expenses and other current liabilities	5,808	3,427
Deferred revenue and customer deposits, current	8,573	1,707
Operating lease liabilities, current[1]	443	440
Deferred revenue and customer deposits, non-current	4,254	6,709
Operating lease liabilities, non-current[1]	1,290	1,617
Non-recourse debt[2]	4,347	4,627

[1] Balances relate to operating leases entered between Korean JV and SK ecoplant.

[2] Represent the total balance of two term loans entered between Korean JV and SK ecoplant in fiscal year 2023.

11. Restructuring

In September 2023, as a result of a review of current strategic priorities and resource allocation, we approved the restructuring plan (the "Restructuring Plan") intended to realign our operational focus to support our multi-year growth, scale the business, and improve our cost structure and operating margins. Please refer to Part II, Item 8, Note 12 — *Restructuring* in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, for details.

For the six months ended June 30, 2024, impact from restructuring on our condensed consolidated statements of operations was not material. We expect to incur $4.2 million in restructuring costs in subsequent quarters, out of which we expect $3.5 million will relate to relocation costs and $0.7 million will relate to other restructuring costs. However, the actual timing and amount of costs associated with these restructuring actions may differ from our current expectations and estimates and such differences may be material.

The following table presents our current liability as accrued for restructuring charges on our condensed consolidated balance sheets. The table sets forth an analysis of the components of the restructuring charges and payments made against the accrual for the six months ended June 30, 2024 (in thousands):

	Six Months Ended June 30, 2024			
	Facility Closure	Severance	Other	Total
Balance at December 31, 2023	$ 2,577	$ 464	$ 752	$ 3,793
Restructuring accrual (release)	(69)	(385)	189	(265)
Payments	(2,466)	(79)	(578)	(3,123)
Balance at June 30, 2024	$ 42	$ —	$ 363	$ 405

At June 30, 2024 and December 31, 2023, facility closure costs, severance, and other restructuring costs were included in accrued expenses and other current liabilities in our condensed consolidated balance sheets.

12. Commitments and Contingencies

Commitments

Purchase Commitments with Suppliers and Contract Manufacturers — In order to reduce manufacturing lead-times for an adequate supply of inventories, we have agreements with our component suppliers and contract manufacturers to allow long lead-time component inventory procurement based on a rolling production forecast. We are contractually obligated to purchase long lead-time component inventory procured by certain manufacturers in accordance with our forecasts. We can generally give notice of order cancellation at least 90 days prior to the delivery date. However, we occasionally issue purchase orders to our component suppliers and third-party manufacturers that are not cancellable. As of December 31, 2023, we had no material open purchase orders with our component suppliers and third-party manufacturers that are expected to be realized within more than a 12-month period and are not cancellable.

Performance Guarantees — We guarantee the performance of the Energy Servers at certain levels of output and efficiency to our customers over the contractual term. We 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 as service revenue in the condensed consolidated statements of operations. We paid $1.8 million and $16.9 million for the three and six months ended June 30, 2024, respectively, for such performance guarantees. For the three and six months ended June 30, 2023, we paid $4.1 million and $19.9 million, respectively, for such performance guarantees.

Letters of Credit — In 2019, pursuant to the PPA II upgrade of the Energy Servers, we agreed to indemnify our financing partner for losses that may be incurred in the event of certain regulatory, legal or legislative developments and established a cash-collateralized letter of credit facility for this purpose. As of June 30, 2024, and December 31, 2023, the balance of this cash-collateralized letter of credit was $20.5 million and $40.4 million, respectively.

In addition, we have other outstanding letters of credit issued to our customers and other counterparties in the U.S. and international locations under different performance and financial obligations. These letters of credit are collateralized through cash deposited in the controlled bank accounts with the issuing banks and are classified as restricted cash in our condensed consolidated balance sheets. As of June 30, 2024, and December 31, 2023, the balances of the cash-collateralized letters of credit issued to our customers and other counterparties in the U.S. and international locations were $27.9 million and $32.6 million, respectively.

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

Servers continue to perform in compliance with our warranty obligations. As of June 30, 2024, and December 31, 2023, the balance of the restricted cash fund was $7.7 million and $7.6 million, respectively.

Contingencies

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

Investment Tax Credits — Our Energy Servers are eligible for federal Income Tax Credits (the “ITC”) that accrued to qualified property under Internal Revenue Code Section 48 when placed into service. However, the ITC program has operational criteria that extend for five years. If the energy property is disposed of or otherwise ceases to be qualified investment credit property before the close of the five-year recapture period is fulfilled, it could result in a

partial reduction of the incentives.

Legal Matters — We are involved in various legal proceedings that arise in the ordinary course of business. We review all legal matters at least quarterly and assess whether an accrual for loss contingencies needs to be recorded. We record an accrual for loss contingencies when management believes that it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. Legal matters are subject to uncertainties and are inherently unpredictable, so the actual liability in any such matter may be materially different from our estimates. If an unfavorable resolution were to occur, there exists the possibility of a material adverse impact on our consolidated financial condition, results of operations or cash flows for the period in which the resolution occurs or in future periods.

In March 2019, the Lincolnshire Police Pension Fund filed a class action complaint in the Superior Court of the State of California, County of Santa Clara, against us, certain members of our senior management, certain of our directors and the underwriters in our July 25, 2018 IPO alleging violations under Sections 11 and 15 of the Securities Act for alleged misleading statements or omissions in our Registration Statement on Form S-1 filed with the SEC in connection with the IPO. Two related class action cases were subsequently filed in the Santa Clara County Superior Court against the same defendants containing the same allegations; Rodriquez vs Bloom Energy et al. was filed on April 22, 2019, and Evans vs Bloom Energy et al. was filed on May 7, 2019. These cases have been consolidated. Plaintiffs' consolidated amended complaint was filed with the court on September 12, 2019. On October 4, 2019, defendants moved to stay the lawsuit pending the federal district court action discussed below. On December 7, 2019, the Superior Court issued an order staying the action through resolution of the parallel federal litigation mentioned below. On June 4, 2024, the Superior Court issued an order granting the Plaintiffs' request for the dismissal of the lawsuit with prejudice.

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 Sections 11 and 15 of the Securities Act for alleged misleading statements or omissions in our Registration Statement on Form S-1 filed with the SEC in connection with the IPO. On September 3, 2019, the court appointed a lead plaintiff and lead plaintiffs' counsel. On November 4, 2019, plaintiffs filed an amended complaint adding the underwriters in the IPO and our auditor as defendants for the Section 11 claim, as well as adding claims under Sections 10(b) and 20(a) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), against us, and certain members of our senior management team. The amended complaint alleged a class period for all claims from the time of our IPO until September 16, 2019. On April 21, 2020, plaintiffs filed a second amended complaint, which continued to make the same claims and added allegations pertaining to the restatement and, as to claims under the Exchange Act, extended the putative class period through February 12, 2020. On July 1, 2020, we and the other defendants filed motions to dismiss the second amended complaint. On September 29, 2021, the court entered an order dismissing with leave to amend (1) five of seven statements or groups of statements alleged to violate Sections 11 and 15 of the Securities Act and (2) all allegations under the Exchange Act. All allegations against our auditors were also dismissed. Plaintiffs elected not to amend the complaint and instead on October 22, 2021 filed a motion for entry of final judgment in favor of our auditors so that plaintiffs could appeal the dismissal of those claims. The court denied that motion on December 1, 2021, and in response plaintiffs filed a motion asking the court to certify an interlocutory appeal as to the accounting claims. The court denied plaintiffs' motion on April 14, 2022. The claims for violation of Sections 11 and 15 of the Securities Act that were not dismissed by the court entered the discovery phase.

On January 6, 2023, Bloom and the plaintiffs' entered into an agreement in principle to settle the claims against Bloom, its executives and directors, and the IPO underwriters for a payment of $3.0 million, which we expect to be funded entirely by

our insurers. If the settlement becomes effective, we expect it to result in a dismissal with prejudice of all claims against us, our executives and directors, and the underwriters. The settlement does not constitute an acknowledgement of liability or wrongdoing. On June 30, 2023, Bloom and the plaintiff's executed a definitive settlement agreement containing the foregoing terms and customary terms for class action settlements, and on the same date, filed the settlement agreement with the court to seek its approval. The court issued a preliminary approval of the settlement on October 31, 2023. Notice of the settlement together with requested Plaintiff attorney fees was sent to the defined class of Bloom stockholders and on May 2, 2024, the final settlement was approved by the court. On May 9, 2024, in light of the stipulated settlement, the court issued an order dismissing the lawsuit with prejudice.

In June 2021, we filed a petition for writ of mandate and a complaint for declaratory and injunctive relief in the Santa Clara Superior Court against the City of Santa Clara for failure to issue building permits for two of our customer installations and asking the court to require the City of Santa Clara to process and issue the building permits. In October 2021, we filed an amended petition and complaint that asserts additional constitutional and tort claims based on the City's failure to timely issue the Energy Server permits. On April 21, 2023, the parties executed a settlement agreement which allows our two pending customer installations to proceed under building permits and requires the City of Santa Clara to amend its zoning code so that future installations of Bloom Energy Servers in Santa Clara require only building permits.

In February 2022, Plansee SE/Global Tungsten & Powders Corp. ("Plansee/GTP"), a former supplier, filed a request for expedited arbitration with the World Intellectual Property Organization Arbitration and Mediation Center in Geneva Switzerland ("WIPO"), for various claims allegedly in relation to an Intellectual Property and Confidential Disclosure Agreement between Plansee/GTP and Bloom Energy Corporation. Plansee/GTP's statement of claims includes allegations of infringement of U.S. Patent Nos. 8,802,328, 8,753,785 and 9,434,003. On April 3, 2022, we filed a complaint against Plansee/GTP in the Eastern District of Texas to address the dispute between Plansee/GTP and Bloom Energy Corporation in a proper forum before a U.S. Federal District Court. Our complaint seeks the correction of inventorship of U.S. Patent Nos. 8,802,328, 8,753,785 and 9,434,003 (the "Patents-in-Suit"); declaratory judgment of invalidity, unenforceability, and non-infringement of the Patents-in-Suit; and declaratory judgment of no misappropriation. Further, our complaint seeks to recover damages we have suffered in relation to Plansee/GTP's business dealings that, as alleged, constitute acts of unfair competition, tortious interference contract, breach of contract, violations of the Racketeer Influenced and Corrupt Organizations (RICO) Act and violations of the Clayton Antitrust Act. On June 9, 2022, Plansee/GTP filed a motion to dismiss the complaint filed in the Eastern District of Texas and compel arbitration (or alternatively to stay). We filed our opposition on June 30, 2022, Plansee/GTP filed its reply on July 14, 2022, and we filed our sur-reply on July 22, 2022. On February 9, 2023, Magistrate Judge Payne issued a report and recommendation to stay the district court action pending an arbitrability determination by the arbitrator for each claim.

On February 23, 2023, we filed an amended complaint adding additional causes of action and filed objections to the Magistrate's report and recommendation. On April 26, 2023, Judge Gilstrap overruled our objections to the Magistrate's report and recommendation and stayed the district court action pending arbitrability determinations by the arbitrator in the WIPO proceeding. The arbitration had been held in abeyance awaiting the decision of the Eastern District of Texas. A hearing by the arbitrator in WIPO on arbitrability took place on June 27, 2023. On October 2, 2023, the arbitrator in the WIPO proceeding issued a ruling concluding that all the parties' claims were arbitrable. On November 18, 2023, the arbitrator bifurcated the arbitration into a first phase that will focus on Bloom's claims directed to improper inventorship of the Patents-in-Suit and Bloom's defective product claims. Briefing on the first phase will take

place throughout 2024 with a potential evidentiary hearing to be scheduled in 2025. We are unable to predict the ultimate outcome of the arbitration at this time.

13. Income Taxes

For the three and six months ended June 30, 2024, we recorded an income tax provisions of $0.9 million and $0.4 million on pre-tax losses of $60.3 million and $117.4 million for effective tax rates of (1.4)% and (0.3)%, respectively. For the three and six months ended June 30, 2023, we recorded an income tax provisions of $0.2 million and $0.4 million, respectively, on pre-tax losses of $68.9 million and $143.5 million for effective tax rates of (0.3)% and (0.3)%, respectively.

The effective tax rate for the three and six months ended June 30, 2024, and 2023, is lower than the statutory federal tax rate primarily due to a full valuation allowance against U.S. deferred tax assets.

14. Net Loss per Share Available to Common Stockholders

Please refer to the condensed consolidated statements of operations for computation of our net loss per share available to common stockholders, basic and diluted.

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2024	2023	2024	2023
Convertible notes	52,245	31,146	50,003	22,713
Redeemable convertible preferred stock	—	13,492	—	7,454
Stock options and awards	2,661	3,611	3,187	5,345
	54,906	48,249	53,190	35,512

15. SK ecoplant Strategic Investment

In September 2023, we entered into the Amended and Restated Joint Venture Agreement (the "JVA") and the Share Purchase Agreement (together, the "Amended JV Agreements") with SK ecoplant which allowed SK ecoplant to increase its share of the voting rights in the Korean JV to 60% and increased the scope of assembly done by the joint venture facility in the Republic of Korea to full assembly.

In January 2024, SK ecoplant increased its capital contribution to Korean JV by $3.9 million, which increased its voting rights in the Korean JV to 60%. However, as of June 30, 2024, we continue to consolidate the Korean JV in our financial statements as we remain a primary beneficiary of this joint venture.

The following are the aggregate carrying values of the Korean JV's assets and liabilities in our condensed consolidated balance sheets, after eliminations of intercompany transactions and balances, as of June 30, 2024, and December 31, 2023 (in thousands):

	June 30, 2024	December 31, 2023
Assets		
Current assets:		
Cash and cash equivalents	$ 6,918	$ 3,003
Accounts receivable	12,205	19,567
Inventories	13,484	8,156
Prepaid expenses and other current assets	484	644
Total current assets	33,091	31,370
Property and equipment, net	2,148	2,519
Operating lease right-of-use assets	1,873	2,138
Other long-term assets	43	46
Total assets	$ 37,155	$ 36,073
Liabilities		
Current liabilities:		
Accounts payable	$ 1,744	$ 3,480
Accrued expenses and other current liabilities	3,665	2,347
Operating lease liabilities	443	440
Total current liabilities	5,852	6,267
Operating lease liabilities	1,290	1,617
Non-recourse debt	4,347	4,627
Total liabilities	$ 11,489	$ 12,511

For a description of the strategic investment with SK ecoplant Co., Ltd. ("SK ecoplant", formerly known as SK Engineering & Construction Co., Ltd.), a subsidiary of the SK Group, please refer to Part II, Item 8, Note 17 — *SK ecoplant Strategic Investment* in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023.

16. Subsequent Events

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

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

This Quarterly Report on Form 10-Q contains "forward-looking statements" within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are based on current expectations, estimates, and projections about our industry, management's beliefs, and certain assumptions made by management. For example, forward-looking statements include, but are not limited to, our expectations regarding our products and services, including our aim to provide resilient products, business strategies, including capital expenditures to expand production capacity and sources of funding for capital expenditures, our expanded strategic partnership with SK ecoplant, operations, supply chain (including any direct or indirect effects from the Russia-Ukraine war or geopolitical developments in China), new markets, government incentive programs including the scheduled expiration of the Investment Tax Credit at the end of 2024, impact of the Inflation Reduction Act of 2022 (the "IRA") and transferability of tax credits on our business and the financing market for installations of our products, impact of new foreign tax rules on our financial statements, growth of the hydrogen market, sufficiency of our cash and our liquidity, the potential to engage in equity or debt financing transactions, future capital requirements and use of proceeds, our commitments or contingencies, and statements under "Key Macro Trends." All statements contained in this Quarterly Report on Form 10-Q other than statements of historical fact are forward-looking statements. Forward-looking statements may be identified by words such as "future," "anticipates," "believes," "estimates," "expects," "intends," "designs," "plans," "predicts," "targets," "forecasts," "will," "would," "could," "can," "may," "aim," "potential," "mission," "commit" 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, outcomes and the timing of certain events to differ materially from future results or outcomes expressed or implied by such forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those factors discussed in the section titled "Risk Factors" included in Part I, Item 1A of our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, and in our other filings with the U.S. Securities and Exchange Commission ("SEC"). You should review these risk factors for a more complete understanding of the risks associated with an investment in our securities. Such forward-looking statements speak only as of the date of this report. We disclaim any obligation to update any forward-looking statements made in this Quarterly Report on Form 10-Q to reflect events or circumstances after the date of this report or to reflect new information or the occurrence of unanticipated events, except as required by law. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. The following discussion and analysis should be read in conjunction with our unaudited condensed consolidated financial statements and notes thereto included elsewhere in this Quarterly Report on Form 10-Q.

Overview

Description of Bloom Energy

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

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

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

We market and sell our Energy Servers primarily through our direct sales organization in the U.S., and we also have direct and indirect sales channels internationally. Recognizing that deploying our solutions requires a significant financial commitment, we have developed financing options to support sales of our Energy Servers to customers who lack the financial capability to purchase our Energy Servers directly, and who may prefer to use third-party financing.

Our typical target commercial or industrial customer has historically been either an investment-grade entity or a customer with investment-grade attributes such as size, assets and revenue, liquidity, geographically diverse operations and general financial stability. We have also expanded our product and financing options to below-investment-grade customers and have also expanded internationally, including 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. Once the sale is completed, we have a large multi-disciplined team to facilitate the deployment of our projects in a wide variety of locations under a myriad of regulatory environments.

We continue to innovate our products to offer energy solutions to our customers. In February 2024, we announced our Be Flexible™ offering which introduced load following capabilities to enable customers and utilities to meet variable electricity load and demand. Our Bloom Energy Servers allow us to provide energy solutions for customers, as our products are designed to work with existing carbon capture utilization and storage ("CCUS") and combined heat and power ("CHP") technologies. CCUS can mitigate emissions from natural gas as the Energy Server generates a relatively pure stream of CO_2 that can be used or sequestered. CHP allows the exhaust heat generated by the Energy Server to be channeled and available for use, further increasing efficiency of the system.

Energy Market Conditions

The global energy transition to a zero-carbon environment has created new challenges and opportunities for utilities, suppliers of energy solutions, and customers. Shifts and uncertainty in market and regulatory dynamics and corporate and governmental policies are currently impacting the selling process and extending sales cycles and timelines for our products. Increasing electricity rates, decreasing energy reliability, and delays in the development of transmission infrastructure and grid interconnection have led to increased customer interest in our power solutions. At the same time, natural gas supply and pricing concerns due to geopolitical stresses and resulting market changes as well as increasing focus on sustainability targets have led to increased caution from potential customers. Increasing demand for power has forced utilities, states and countries to revisit less clean sources of baseload and intermediate power, which our technology is designed to replace, in an attempt to ensure energy reliability. This supply and demand mismatch globally has threatened energy's security, reliability, availability, and increased its cost.

Bloom enables customers to address these energy market challenges by offering fuel flexible solutions that are designed to provide cost predictable, resilient, and reliable energy in a timely fashion. As customers and utilities navigate the energy transition and evolving landscape, the ability of our power solutions to fit their economic, regulatory, and policy needs depends on a number of factors, including natural gas availability and pricing, electrical interconnection needs and availability, redundant back up power requirements, cost requirements, and sustainability profiles. Even in those situations where the time to power from the utility is measured in years because of the need to build out energy transmission infrastructure, these factors still may impact a customer's buying decision.

Many data center customers and other large power users have signed exclusivity arrangements with their utilities, and this often creates a more complicated dynamic for them to move to a behind-the-meter solution.

The rising cost of natural gas, increases in gas distribution rates, limited availability of natural gas supply, as well as disruptions to the world gas markets, has increased the cost of our power solutions for customers and, in certain cases where there is a lack of fuel supply, a complete inability to operate the systems. In the U.S., the lack or slow development of pipeline infrastructure is impacting the timing of customers being able to take advantage of our power solution opportunities. In certain jurisdictions in the U.S. and Europe, natural gas bans prevent the use of our power solutions unless alternative fuels are available.

In addition, many of our potential data center and industrial customers are pursuing greenfield opportunities where the development cycle is long and laden with permitting requirements, and the uncertainty of these factors is leading to a more difficult customer decision-making process and longer sales cycles.

Key Macro Trends

Increases in Demand for Power, Driven by Data Centers and Artificial Intelligence (AI)

Demand for power has continued to significantly outpace available power generation supply from the grid. The transition towards the electrification of everything, including in a wide range of commercial and consumer products, has strained aging and unreliable power grids across the globe. The expanding use of AI has led to the expansion of existing data centers and plans for new greenfield data centers. The resulting increase in demand for power from Al-related companies has further reduced available supply from the grid and has led non-AI-related companies to consider on-site distributed power, including Bloom Energy Servers, to meet their power needs.

Time to Power Increases as Power Demand/Supply Mismatch Grows

In part because of the increases in demand for power, time to power has increased for companies seeking to connect new projects to the grid. According to the Lawrence Berkeley National Lab, U.S. interconnection queue delays have experienced significant growth, with a forty percent year over year increase in 2022. The typical project interconnection process for large scale projects grew to five years in 2022 compared to three years in 2015 and two years in 2008. Bloom Energy Servers can be configured as fully-islanded, microgrid solutions that are not interconnected to the grid, which can often provide a customer power in months instead of years. Our fully-islanded microgrid solutions can provide power on-site, without the need for costly transmission and distribution systems required by electrical grids. If a customer desires back up power or a "grid parallel" solution in combination with the Bloom microgrid, required interconnection studies and lengthy interconnection queues remain, eroding the time to power value proposition.

Impact of Climate Change and Sustainability Goals

The impacts of climate change, including more severe and unpredictable weather events, have placed further strain on aging utility grids and led to periods of power outages for those reliant on the grid. In addition, the recognition of the threat of climate change has led companies and governments to set ambitious emissions goals to reduce their carbon footprints. These emissions goals are expected to be difficult to meet using currently available renewable energy technologies such as wind and solar power. As the world transitions to lower-carbon energy sources, natural gas has been increasingly recognized as a necessary bridge fuel. Using natural gas, Bloom Energy Server can produce electricity efficiently without combustion. CCUS and CHP can further improve efficiency and lower carbon emissions of using Bloom Energy Servers compared to marginal generation resources on the grid.

Increasingly, customers want a zero-carbon solution for power, and, although our power solutions are designed to run on biofuels or hydrogen (in addition to natural gas) and help our customers achieve their sustainability goals, these fuels continue to have very limited availability and, for most customers, are not yet economical. This customer desire for zero-carbon solutions today, combined with the current lack of availability of zero-carbon fuels, is adversely impacting our power solution selling opportunities.

Other Factors Affecting our Performance

Delayed Project

In the fourth quarter of 2022, we entered into a Power Purchase Agreement ("PPA") contract for the sale of electricity to a customer for three greenfield sites that were at various stages of development (the "Project"). The first site was expected to be operational with power by the third quarter of 2024. We sold 73 megawatts of the Energy Servers to a distributor with the expectation that the distributor would support installation on the Project and install the Energy Servers at the three Project sites. For site specific reasons, in the first quarter of 2024, the end customer decided not to deploy the Energy Servers at the originally selected sites and is looking at alternative sites for deployment. In the interim, the end customer has commenced payments under the PPA and has agreed to continue such payments for the earlier of the full term of the PPA or deployment of the Energy Servers. We will continue to assist the distributor to deploy the Energy Servers at the alternative installation sites selected by the end customer. Notwithstanding this, depending on the length of the installation delay, the distributor may decide to reduce future orders or cancel existing orders until the Energy Servers are deployed, and either action could materially and adversely affect our product revenue and the timing of the associated cash flows in 2024.

Shifting Regulatory Environment

In 2023, the South Korean government moved to a new, government-run bidding process for fuel cell purchases, which has impacted and may continue to impact demand for our power solutions. In the U.S., absent Congressional action, the Investment Tax Credit ("ITC") for fuel cells running on a non-zero carbon fuel is currently scheduled to expire at the end of fiscal year 2024. To date, Congress has not renewed the ITC. Because 2024 is a presidential election year in the U.S., it is possible Congress may be unable to achieve an extension of the ITC for commercial fuel cell purchasers this year. If the ITC is not extended for fuel cells, U.S. bookings, revenue and gross margins could be materially impacted. In 2024, the expiration of the ITC could increase demand for ITC-compliant sales of our Energy Servers due to customer desire to secure ITC for their projects through safe harboring. However, if our customers or project-level investors prove reluctant to make sufficient cash outlays in 2024 for purchases of Energy Servers for future projects, our sales could be negatively impacted. The Inflation Reduction Act of 2022 ("IRA") established a new clean electricity production credit and a clean electricity investment credit. There is considerable uncertainty around whether, or the conditions under which, such credits will be available for transactions involving our Energy Servers. In addition, delays in adoption of Renewable Fuel Standard regulations in the U.S. for the use of biogas to generate electricity for electric vehicles, along with minimal governmental focus on utilization of biogas outside of

use by methane-fueled vehicles, have created uncertainty in prospects for broader biogas availability for industrial uses, including our power solutions. In addition, in most jurisdictions, air permits and various land use permits are required for installation of our solutions over a certain amount of mega-watts, and generally the length of time to obtain these permits increased, while the level of certainty of issuance has decreased and if issued, the cost of compliance requirements can be cost prohibitive. We have experienced a reluctance in certain states to issue permits for gas generation equipment. Even if issued, states may require a blend of costly renewable fuels or other measures to advance climate goals. In Ireland, which is a large data center market, a directive from the Minister of the Department of the Environment, Climate and Communications to restrict grid connections to data centers and other large power users, along with a halt in high-pressure gas installations has delayed our selling activities. This has adversely impacted our selling activities.

Working with Utilities

The imbalance between power demand and supply has contributed to utilities seeking alternative sources of power to supply to their end customers. Utilities have been unable to meet this demand through the deployment of renewable sources of energy such as solar and wind power. Bloom Energy Servers can be installed at the utility's point of distribution or directly on the customer's site. The energy produced by Bloom Energy Servers can be utilized by utilities to provide power to a specific customer or customers, or may be used by customers generally. Increasing the supply of available power can allow utilities to encourage end customers to remain in their current locations rather than relocating to areas where power is more available.

Hydrogen Market Developments

In the second quarter of 2024, we entered into an agreement to sell Bloom Electrolyzers in the European market. The significant governmental interest, investment, and stimulation of clean hydrogen in the U.S., Europe and in many other regions across the globe have not yet had significant impacts on the supply of hydrogen. To date, while the number of proposed hydrogen production projects has grown rapidly, only a small fraction has reached the final investment decision stage, and an even smaller fraction have been deployed. In addition, the infrastructure needed to transport hydrogen, whether through pipelines or maritime or land-based tankers, is currently only sufficient for existing uses, and has not begun to be significantly extended for anticipated future uses, with hydrogen blending and other approaches remaining at pilot stages. It remains unclear whether regulators in some jurisdictions will allow hydrogen to be introduced into gas distribution systems, which could limit our customers' ability to transport hydrogen from the point of production to the point of consumption. Additionally, U.S. Treasury Department rules surrounding the use of market-based renewable energy could make it more difficult for hydrogen projects to acquire energy needed to access the Production Tax Credit.

Lengthening Sales Cycles

Many of the factors discussed above have lengthened the selling cycles for our products and we have experienced delays in our anticipated bookings as a result. Our revenue, margins, and cash flow in any given year are largely dependent on bookings during the prior year. Historically, the majority of our bookings have occurred in the second half of the year, with a significant portion occurring in the fourth quarter. That trend did not continue to the same degree in 2023. If a substantial portion of our anticipated bookings continue to be delayed, our future revenue, margins and cash flow could be materially adversely impacted.

Supply Chain Constraints

We continue to see effects from global supply chain tightness due to the current inflationary environment, war in Ukraine, and trade tensions between the U.S. and China. We are not aware of, and do not expect any significant direct impact on our business or supply chain from the Israel-Gaza Strip armed conflict. While we have not experienced any significant component shortages to date, we are facing pressures from inflation. These dynamics could worsen as a result of continued geopolitical instability. We are also reliant on third party providers of storage equipment, infrastructure equipment and pipelines, and other materials and technologies that work with our products to provide an energy solution for customers. In the event we are unable to mitigate the impacts of delays and/or price increases in raw materials and components, it could delay the manufacturing and installation of, and increase the costs of, our products, which would adversely impact our cash flows and results of operations, including our revenues and gross margin. We expect these supply chain challenges to continue in the short term.

Customer Financing Constraints

Our ability to obtain financing for our products depends partially on the creditworthiness of our customers, and deterioration of our customers' credit ratings could impact this financing. Regional banking and financial institution instability, such as the failure of Silicon Valley Bank in the first quarter of 2023, may make it more difficult for our customers to obtain

financing. Rising interest rates have also increased the cost of financing for our customers. As interest rates rise, the financiers of our installations demand a higher rate of return, which puts pressure on our margins. We continue to work on obtaining the financing required for our 2024 installations, but if we are unable to secure such financing, our revenue, cash flow, and liquidity could be materially impacted. We expect that in the U.S., the IRA and the transferability of tax credits should make the financing market more robust in 2024, thereby easing some of these customer financing constraints, but this cannot be assured.

Manufacturing and Labor Market Constraints

As recently as 2022, we experienced impacts from labor shortages and challenges in hiring for our manufacturing facilities. While these constraints have since abated, and we reduced headcount as part of the Restructuring Plan adopted in September 2023, we may still experience difficulties with hiring and retention, and may face additional labor shortages in the future. For details on the Restructuring Plan refer to Part II, Item 8, Note 12 — *Restructuring in our Annual Report* on Form 10-K for the fiscal year ended December 31, 2023. In addition, the current inflationary environment has led to rising wages and labor costs as well as increased competition for labor. In the event these constraints continue, and we are unable to mitigate the impacts of these challenges, it could delay the manufacturing and installation of our products, and we may be unable to meet customer demand, which could adversely impact our cash flows and results of operations, including our revenues and gross margin.

Installations and Maintenance of Energy Servers

In the second quarter of 2024, our installation projects experienced some delays relating to, among other things, permitting, utility delays, and access to customer facilities. However, these delays did not significantly impact our revenue.

If we are delayed in or unable to perform maintenance, our previously installed Energy Servers would likely experience adverse performance impacts, including reduced output and/or efficiency, which could result in warranty and/or guaranty claims by our customers. Further, due to the nature of our Energy Servers, if we are unable to replace worn parts in accordance with our standard maintenance schedule, we may incur higher costs in the future. During the six months ended June 30, 2024, we experienced no significant delays in servicing our Energy Servers.

Strategic Investment

For information on the strategic investment with SK ecoplant Co., Ltd. ("SK ecoplant", formerly known as SK Engineering & Construction Co., Ltd.), a subsidiary of the SK Group, see Part II, Item 8, Note 1 — *Nature of Business, Liquidity and Basis of Presentation, Liquidity* section and Note 17 — *SK ecoplant Strategic Investment* in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023.

On March 27, 2024, Bloom, Bloom SK Fuel Cell, LLC, a joint venture in the Republic of Korea with SK ecoplant (the "Korean JV"), and SK ecoplant entered into the Third Amendment to the Amended and Restated Preferred Distribution Agreement (the "Third ARPDA"). The Third ARPDA adds SK Eternix Co., Ltd., as an additional distributor of Bloom products and ancillary equipment in the Republic of Korea.

Sustainability

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

In April 2024, we released our 2023 Sustainability Report, Transforming Energy for the Digital Age (the "Sustainability Report"), using generally accepted sustainability frameworks and standards, including alignment with Sustainability Accounting Standards Board standards and the Task Force on Climate-related Financial Disclosures recommendations. In addition, the Sustainability Report also utilized certain Global Reporting Initiative standards and was mapped against the United Nations Sustainable Development Goals. We plan to issue a sustainability report on an annual basis.

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

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

Inflation Reduction Act of 2022

For information on the IRA, which was signed into law on August 16, 2022, and its impact on our business, see Part II, Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations, Inflation Reduction Act of 2022* section in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023.

On March 29, 2024, we received notification from the Internal Revenue Service (the "IRS") of the acceptance of our application for a Qualifying Advanced Energy Project Credit of up to $75.3 million. The application for qualifying advanced energy project credit allocation under Internal Revenue Code Section 48C(e) for the manufacturing facility in Fremont, California (the "Facility"), was submitted by Bloom on December 21, 2023. After a technical review of Bloom's Section 48C(e) application, the Department of Energy provided a recommendation to the IRS to grant a $75.3 million credit allocation for the Facility. The approval is subject to satisfaction of the underlying certification requirements, including the prevailing wage and apprenticeship requirements, within two years from the date of the application acceptance.

Liquidity and Capital Resources

We raised cash and supplemented liquidity by issuing the 3% Green Convertible Senior Notes due June 2029 (the "3% Green Notes due June 2029") in the second quarter of 2024, as well as through financing activities with SK ecoplant in the first quarter of 2023 and issuing the 3% Green Convertible Senior Notes due June 2028 (the "3% Green Notes due June 2028") in the second quarter of 2023. We expanded our warehouse space in Delaware and California to store more inventory to meet the anticipated increase in demand. If this increase in demand does not materialize to the degree we anticipated, our liquidity and financial condition may be adversely impacted.

On May 29, 2024, we issued the 3% Green Notes due June 2029 in an aggregate principal amount of $402.5 million due June 2029, unless earlier repurchased, redeemed or converted, less the initial purchasers' discount of $12.1 million and other issuance costs of $0.7 million, resulting in net proceeds of $389.7 million. On May 29, 2024, we used approximately $141.8 million of the net proceeds from this issuance to repurchase $115.0 million, or 50%, of the outstanding principal amount of our 2.5% Green Convertible Senior Notes due August 2025 (the "2.5% Green Notes") in privately negotiated transactions. The repurchase amount equaled 122.6% of the principal amount repurchased plus related accrued and unpaid interest.

For further information on issuance of 3% Green Notes due June 2029 and partial repurchase of our 2.5% Green Notes, please see Part I, Item 1, Note 7 — *Outstanding Loans and Security Agreements*.

As of June 30, 2024, we had cash and cash equivalents of $581.7 million. Our cash and cash equivalents consist of highly liquid investments with maturities of three months or less, including money market funds of $548.7 million. We seek to maintain these balances with high credit quality counterparties, regularly monitor the amount of our credit exposure to any one issuer and diversify our investments in order to minimize our exposure.

As of June 30, 2024, we had $1,121.0 million of recourse debt, $4.3 million of non-recourse debt and $8.5 million of other long-term liabilities. As of June 30, 2024, all of our debt was classified as long-term. For a complete description of our outstanding debt, please see Part I, Item 1, Note 7 — *Outstanding Loans and Security Agreements*.

The combination of our cash and cash equivalents and cash flow to be generated by our operations is expected to be sufficient to meet our anticipated cash flow needs for at least the next 12 months. If these sources of cash are insufficient or are not received in a timely manner to satisfy our near-term or future cash needs, we may require additional capital from equity or debt financings to fund our operations, our manufacturing capacity, product development, and market expansion requirements and to timely respond to competitive market pressures or strategic opportunities, among other things. We may, from time to time, engage in a variety of financing transactions for such purposes, including factoring our accounts receivable. During the six months ended June 30, 2024, we factored $102.3 million of accounts receivable. However, we may not be able to secure timely additional financing on favorable terms, or at all. The terms of any additional financing may place limits on our financial and operating flexibility. Although currently we do not have any floating-rate notes on our balance sheet, rising interest rates may increase our overall cost of capital. If we raise additional funds through further issuances of equity or equity-linked securities, our existing stockholders could suffer dilution in their percentage ownership of us, and any new securities we issue could have rights, preferences, and privileges senior to those of holders of our common stock.

Our future capital requirements depend on many factors, including our rate of revenue growth, the timing and extent of spending on research and development efforts and other business initiatives, the rate of growth in the volume of system builds

and the need for additional working capital, the expansion of sales and marketing activities both in domestic and international markets, market acceptance of our products, our ability to secure financing for customer use of our products, the timing of installations and of inventory build in anticipation of future sales and installations, and overall economic conditions. In order to support and achieve our future growth plans, we may need or seek advantageously to obtain additional funding through equity or debt financing. Failure to obtain this financing in future quarters may affect our results of operations, including our revenues and cash flows.

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

	Six Months Ended June 30,	
	2024	2023
Net cash (used in) provided by:		
Operating activities	$ (322,761)	$ (361,195)
Investing activities	(33,432)	(46,125)
Financing activities	249,987	811,826

Operating Activities

Our operating activities consisted of net loss adjusted for certain non-cash items plus changes in our operating assets and liabilities or working capital. Net cash used in operating activities during the six months ended June 30, 2024, was $322.8 million, a decrease of $38.4 million compared to the prior year period. The decrease in cash used in operating activities during the six months ended June 30, 2024, as compared to the prior year period, was primarily driven by changes in our working capital of $305.7 million due to (1) an increase in accounts receivable and contract assets by $183.3 million and $49.0 million, respectively, triggered by the timing of revenue transactions, corresponding collections and billing milestones, (2) an increase in inventory levels by $19.1 million to support future demand, and (3) the timing of payments to vendors.

Investing Activities

Our investing activities have consisted of capital expenditures, including investments to increase our production capacity. Cash used in investing activities during the six months ended June 30, 2024, was $33.4 million, a decrease of $12.7 million compared to the prior year period and was primarily due to the decrease in expenditures on tenant improvements for a newly leased engineering and manufacturing building in Fremont, California, which opened in July 2022. We expect to continue to make capital investments over the next few quarters to expand production capacity at our new manufacturing facility in Fremont, California, which includes the purchase of new equipment and other tenant improvements. We intend to fund these capital expenditures from cash on hand as well as cash flow to be generated from operations. We may also evaluate and arrange equipment lease financing to fund these capital expenditures.

Financing Activities

Our financing activities consist of borrowings and repayments of debt, proceeds and repayments of financing obligations, distributions paid to noncontrolling interests, contributions from noncontrolling interests, payments of dividends, proceeds from the issuances of our common stock, and other financing activities. Net cash provided by financing activities during the six months ended June 30, 2024 was $250.0 million, a decrease of $561.8 million compared to the prior year period, predominantly due to (1) a decrease in the proceeds from issuance of redeemable convertible preferred stock of $310.6 million, net of paid issuance costs of $0.4 million, as a result of the SK ecoplant Second Tranche Closing in the six months ended June 30, 2023 (please refer to Part II, Item 8, Note 17 — *SK ecoplant Strategic Investment* in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023), (2) a decrease in proceeds from the issuance of debt by $231.5 million, and (3) an increase in the repayment of debt by $68.1 million. The decrease was partially offset by the purchase in fiscal year 2023 of the capped call of $54.5 million related to the 3% Green Notes due June 2028 issued in the second quarter of fiscal year 2023.

Net cash provided by financing activities for the six months ended June 30, 2024, consisted of (1) the proceeds from issuance of the 3% Green Notes due June 2029 of $402.5 million, (2) the proceeds from issuance of common stock of $7.0 million, (3) the contribution from a noncontrolling interest of $4.0 million, (4) the proceeds from financing obligations of $1.3 million, (5) the partial repurchase of the 2.5% Green Notes of $141.0 million, (6) the repayment of debt issuance costs of $12.3 million pertaining to the 3% Green Notes due June 2029, (7) the repayment of financing obligations of $10.0 million, and (8) a

dividend payment of $1.5 million. Our working capital was strengthened by the issuance of the 3% Green Notes due June 2029 and 3% Green Notes due June 2028 in May 2024 and May 2023, respectively, as well as financing activities with SK ecoplant in the first quarter of 2023, but we may still enter the equity or debt market as needed to support the expansion of our business. Please refer to Part I, Item 1, Note 7 — *Outstanding Loans and Security Agreements* of this Quarterly Report on Form 10-Q and Part I, Item 1A, *Risk Factors — Risks Related to Our Liquidity — Our indebtedness, and restrictions imposed by the agreements governing our outstanding indebtedness, may limit our financial and operating activities and may adversely affect our ability to incur additional debt to fund future needs* section in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023 for more information regarding the terms of and risks associated with our debt.

Purchase and Financing Options

For information about our purchase and financing options, see Part II, Item 7 — *Management's Discussion and Analysis of Financial Condition and Results of Operations, Purchase and Financing Options* section in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023.

Performance Guarantees

As of June 30, 2024, we had incurred no liabilities due to failure to repair or replace Energy Servers pursuant to any performance warranties made under operations and maintenance agreements ("O&M Agreements").

For O&M Agreements that are subject to renewal, our future service revenue from such agreements are subject to our obligations to make payments for underperformance against the performance guaranties, which are capped at an aggregate total of approximately $577.7 million (including $451.9 million related to portfolio financing entities and $125.8 million related to all other transactions, and include payments for both low output and low efficiency) and our aggregate remaining potential payment related to these underperformance obligations was approximately $489.1 million as of June 30, 2024. For the six months ended June 30, 2024, we made performance guarantee payments of $16.9 million.

International Channel Partners

There were no significant changes in our international channel partners during the six months ended June 30, 2024. For information on international channel partners, see Part II, Item 7 — *Management's Discussion and Analysis of Financial Condition and Results of Operations, International Channel Partners* section in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023.

Key Operating Metrics

For a description of the key operating metrics, we use to evaluate business activity, to measure performance, to develop financial forecasts and to make strategic decisions, see Part II, Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations, Key Operating Metrics* section in our Annual Report on Form 10-K for the year ended December 31, 2023.

Product Acceptances

The product and megawatt acceptances in the three and six months ended June 30, 2024, and 2023 were as follows:

	Three Months Ended June 30,		Change		Six Months Ended June 30,		Change	
	2024	2023	Amount	%	2024	2023	Amount	%
Product accepted	673	606	67	11.1 %	1,151	1,118	33	3.0 %
Megawatts accepted, net	67	61	6	11.1 %	115	112	3	3.0 %

Product accepted increased approximately by 67 systems, or 11.1%, for the three months ended June 30, 2024, as compared to the prior year period, which is equivalent to 6 megawatts. Acceptance volume increased as demand increased for our products.

Product accepted increased approximately by 33 systems, or 3.0%, for the six months ended June 30, 2024, as compared to the prior year period, which is equivalent to 3 megawatts. Acceptance volume increased as demand increased for our products, offset by the effect of a large transaction in the first quarter of fiscal year 2023 that did not repeat in fiscal 2024.

The increase in acceptances of 115 megawatts achieved for the six months ended June 30, 2024, was added to our installed base and, therefore, increased our total megawatts accepted, net, from 1,241 megawatts to 1,356 megawatts.

Purchase Alternatives

Our customers have several purchase alternatives for our Energy Servers. The portion of acceptances attributable to each purchase alternative in the three and six months ended June 30, 2024, and 2023 was as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2024	2023	2024	2023
Direct purchase (including third-party PPAs and international channels)	100 %	97 %	99 %	97 %
Managed services	— %	3 %	1 %	3 %

The portion of total revenue attributable to each purchase option in the three and six months ended June 30, 2024, and 2023 was as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2024	2023	2024	2023
Direct purchase (including third-party PPAs and international channels)	95 %	89 %	93 %	87 %
Traditional Lease	— %	1 %	— %	1 %
Managed Services	5 %	8 %	7 %	9 %
Portfolio Financings	— %	2 %	— %	3 %

Costs Related to Our Products

Total product related costs for the three and six months ended June 30, 2024, and 2023 was as follows:

	Three Months Ended June 30,		Change		Six Months Ended June 30,		Change	
	2024	2023	Amount	%	2024	2023	Amount	%
Product costs of product accepted in the period	$2,176/kW	$2,106/kW	$70/kW	3.3 %	$2,127/kW	$2,189/kW	$(62)/kW	(2.8)%
Period costs of manufacturing related expenses not included in product costs (in thousands)	$ 14,914	$ 17,479	$ (2,565)	(14.7)%	$ 32,355	$ 30,073	$ 2,282	7.6 %
Installation costs on product accepted in the period	$658/kW	$443/kW	$215/kW	48.5 %	$519/kW	$463/kW	$56/kW	12.1 %

Product costs of product accepted increased by $70 per kilowatt, or 3.3%, for the three months ended June 30, 2024, as compared to the prior year period. The increase in costs was primarily driven by changes in mix of the solutions delivered.

Product costs of product accepted decreased by $62 per kilowatt, or 2.8%, for the six months ended June 30, 2024, as compared to the prior year period. The decrease in costs was primarily driven by our continued efforts to reduce material costs, implement cost reduction programs with our vendors, improved processes, and automation at our manufacturing facilities, and reduced labor and overhead costs through restructuring programs executed in fiscal year 2023. The decrease was partially offset by changes in mix of the solutions delivered.

Period costs of manufacturing related expenses decreased by $2.6 million, or 14.7%, for the three months ended June 30, 2024, as compared to the prior year period. Our period costs of manufacturing related expenses decreased primarily as a result of ongoing cost reduction efforts and manufacturing efficiencies.

Period costs of manufacturing related expenses increased by $2.3 million, or 7.6%, for the six months ended June 30, 2024, as compared to the prior year period. Our period costs of manufacturing related expenses increased primarily as a result of costs incurred to support capacity expansion efforts, which are expected to be brought online in future periods.

Installation costs on product accepted increased by $215 per kilowatt, or 48.5%, and by $56 per kilowatt, or 12.1%, for the three and six months ended June 30, 2024, respectively, as compared to the prior year period. Each customer site is unique and installation costs can vary due to a number of factors, including site complexity, size, and location of gas, among other factors. As such, installation on a per kilowatt basis can vary significantly from period to period. For the three and six months ended June 30, 2024, this increase in cost was primarily driven by the change in the mix of sites requiring Bloom installation.

Results of Operations

A discussion regarding the comparison of our financial condition and results of operations for the three and six months ended June 30, 2024, and 2023 is presented below.

Revenue

	Three Months Ended June 30,		Change		Six Months Ended June 30,		Change	
	2024	2023	Amount	%	2024	2023	Amount	%
	(dollars in thousands)				(dollars in thousands)			
Product	$ 226,308	$ 214,706	$ 11,602	5.4 %	$ 379,672	$ 408,451	$ (28,779)	(7.0)%
Installation	42,733	24,321	18,412	75.7 %	54,177	44,846	9,331	20.8 %
Service	52,531	42,298	10,233	24.2 %	108,991	82,961	26,030	31.4 %
Electricity	14,195	19,770	(5,575)	(28.2)%	28,225	40,028	(11,803)	(29.5)%
Total revenue	$ 335,767	$ 301,095	$ 34,672	11.5 %	$ 571,065	$ 576,286	$ (5,221)	(0.9)%

Total Revenue

Total revenue increased by $34.7 million, or 11.5%, for the three months ended June 30, 2024, as compared to the prior year period. This increase was driven by a $18.4 million increase in installation revenue, a $11.6 million increase in product revenue, and a $10.2 million increase in service revenue, partially offset by a $5.6 million decrease in electricity revenue.

Total revenue decreased by $5.2 million, or 0.9%, for the six months ended June 30, 2024, as compared to the prior year period. This decrease was driven by a $28.8 million decrease in product revenue and a $11.8 million decrease in electricity revenue, partially offset by a $26.0 million increase in service revenue and a $9.3 million increase in installation revenue.

Product Revenue

Product revenue increased by $11.6 million, or 5.4%, for the three months ended June 30, 2024, as compared to the prior year period. This increase was driven primarily by a 11.1% increase in product acceptances resulting from higher demand for our products, partially offset by the lower average selling price attributable to large transaction in the first quarter of fiscal year 2023 that did not repeat in fiscal year 2024. Average selling price for our product can vary depending on several factors including the solution delivered and the geographical location of the site.

Product revenue decreased by $28.8 million, or 7.0%, for the six months ended June 30, 2024, as compared to the prior year period. This decrease was primarily driven by the lower average selling price attributable to large transactions in the first half of fiscal year 2023 that did not repeat in fiscal year 2024. The decrease was partially offset by a 3.0% increase in product acceptances resulting from higher demand for our products.

Installation Revenue

Installation revenue increased by $18.4 million, or 75.7%, and by $9.3 million, or 20.8%, for the three and six months ended June 30, 2024, respectively, as compared to the prior year period. The increase for each period was primarily driven by the timing of achieving key project milestones on sites requiring installations by us in the three and six months ended June 30, 2024.

Service Revenue

Service revenue increased by $10.2 million, or 24.2%, for the three months ended June 30, 2024, as compared to the prior year period. This increase was primarily driven by (1) 159 megawatts of Energy Servers reaching full power in the past twelve months, which contributed to a $5.6 million increase in revenue from maintenance contracts associated with our fleet of Energy Servers, and (2) a decrease of $4.7 million in product performance guarantees that resulted from improved fleet performance.

Service revenue increased by $26.0 million, or 31.4%, for the six months ended June 30, 2024, as compared to the prior year period. This increase was primarily driven by (1) 159 megawatts of Energy Servers reaching full power in the past twelve months, which contributed to a $18.3 million increase in revenue from maintenance contracts associated with our fleet of Energy Servers, and (2) a decrease of $7.8 million in product performance guarantees that resulted from improved fleet performance.

Electricity Revenue

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

Electricity revenue decreased by $5.6 million, or 28.2%, and by $11.8 million, or 29.5%, for the three and six months ended June 30, 2024, respectively, as compared to the prior year period. The decrease for each period was predominantly due to the decrease in installed units, primarily driven by the upgrade of 2015 ESA Project Company, LLC ("PPA V"), which was sold in the third quarter of fiscal year 2023.

Cost of Revenue

	Three Months Ended June 30,		Change		Six Months Ended June 30,		Change	
	2024	2023	Amount	%	2024	2023	Amount	%
	(dollars in thousands)				(dollars in thousands)			
Product	$ 161,332	$ 145,146	$ 16,186	11.2 %	$ 277,089	$ 274,759	$ 2,330	0.8 %
Installation	44,298	26,879	17,419	64.8 %	59,651	51,979	7,672	14.8 %
Service	52,401	57,263	(4,862)	(8.5)%	108,907	108,507	400	0.4 %
Electricity	9,214	15,457	(6,243)	(40.4)%	18,820	30,424	(11,604)	(38.1)%
Total cost of revenue	$ 267,245	$ 244,745	$ 22,500	9.2 %	$ 464,467	$ 465,669	$ (1,202)	(0.3)%

Total Cost of Revenue

Total cost of revenue increased by $22.5 million, or 9.2%, for the three months ended June 30, 2024, as compared to the prior year period. The increase was driven by a $17.4 million increase in costs of installation revenue and a $16.2 million increase in cost of product revenue, partially offset by a $6.2 million decrease in cost of electricity revenue and a $4.9 million decrease in cost of service revenue.

Total cost of revenue decreased by $1.2 million, or 0.3%, for the six months ended June 30, 2024, as compared to the prior year period. The decrease was driven by a $11.6 million decrease in cost of electricity revenue, partially offset by a $7.7 million increase in costs of installation revenue, a $2.3 million increase in cost of product revenue, and a $0.4 million increase in cost of service revenue.

Cost of Product Revenue

Cost of product revenue increased by $16.2 million, or 11.2%, and by $2.3 million, or 0.8%, for the three and six months ended June 30, 2024, respectively, as compared to the prior year period. The increase in cost of product revenue was primarily driven by a 11.1% and a 3.0% increase in product acceptances for the three and six months ended June 30, 2024, respectively, partially offset by (1) our ongoing efforts to reduce material costs, (2) reduced labor and overhead costs through restructuring programs executed in fiscal year 2023, and (3) improved processes and automation at our manufacturing facilities.

Cost of Installation Revenue

Cost of installation revenue increased by $17.4 million, or 64.8%, and by $7.7 million, or 14.8%, for the three and six months ended June 30, 2024, respectively, as compared to the prior year periods. The increase for each period was primarily driven by the timing of achieving key project milestones on sites requiring installations by us in the three and six months ended June 30, 2024.

Cost of Service Revenue

Cost of service revenue decreased by $4.9 million, or 8.5%, for the three months ended June 30, 2024, as compared to the prior year period. This decrease was primarily due to (1) repair and overhaul cost reductions of $3.5 million and (2) our cost reduction efforts to proactively manage fleet optimizations. The decrease was partially offset by an increase in maintenance material and labor and overhead costs of $2.7 million.

Cost of service revenue increased by $0.4 million, or 0.4%, for the six months ended June 30, 2024, as compared to the prior year period. This increase was primarily due to (1) an increase in the deployment of field replacement units, contributing an increase of $4.2 million, and (2) an increase in maintenance material and labor and overhead costs of $5.4 million. The increase was partially offset by (1) repair and overhaul cost reductions of $6.2 million and (2) our cost reduction efforts to proactively manage fleet optimizations.

Cost of Electricity Revenue

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

Cost of electricity revenue decreased by $6.2 million, or 40.4%, and by $11.6 million, or 38.1%, for the three and six months ended June 30, 2024, respectively, as compared to the prior year period. This decrease was predominantly due to a decrease in installed units, primarily driven by the upgrade of PPA V, which was sold in the third quarter of fiscal year 2023.

Gross Profit (Loss) and Gross Margin

	Three Months Ended June 30,		Change	Six Months Ended June 30,		Change
	2024	2023		2024	2023	
	(dollars in thousands)					
Gross profit (loss):						
Product	$ 64,976	$ 69,560	$ (4,584)	$ 102,583	$ 133,692	$ (31,109)
Installation	(1,565)	(2,558)	993	(5,474)	(7,133)	1,659
Service	130	(14,965)	15,095	84	(25,546)	25,630
Electricity	4,981	4,313	668	9,405	9,604	(199)
Total gross profit	$ 68,522	$ 56,350	$ 12,172	$ 106,598	$ 110,617	$ (4,019)
Gross margin:						
Product	29 %	32 %		27 %	33 %	
Installation	(4)%	(11)%		(10)%	(16)%	
Service	0 %	(35)%		0 %	(31)%	
Electricity	35 %	22 %		33 %	24 %	
Total gross margin	20 %	19 %		19 %	19 %	

Total Gross Profit

Total gross profit improved by $12.2 million in the three months ended June 30, 2024, as compared to the prior year period. This change was predominantly due to a $15.1 million improvement in service gross profit (loss), due to our efforts to proactively manage fleet optimizations, and our ongoing efforts to reduce product costs. Total gross profit improvement was partially offset by a $4.6 million decrease in product gross profit, predominantly driven by the lower average selling price of

our products attributable to a large transaction in the first quarter of fiscal year 2023 that did not repeat in fiscal year 2024.

Total gross profit decreased by $4.0 million in the six months ended June 30, 2024, as compared to the prior year period. This decrease was predominantly due to a $31.1 million decrease in product gross profit, primarily driven by the lower average selling price of our products attributable to large transactions in the first half of fiscal year 2023 that did not repeat in fiscal year 2024. The decrease was partially offset by a $25.6 million improvement in service gross profit (loss), due to our efforts to proactively manage fleet optimizations, and our ongoing efforts to reduce product costs.

Product Gross Profit

Product gross profit decreased by $4.6 million and $31.1 million in the three and six months ended June 30, 2024, respectively, as compared to the prior year period. The decrease for each period was primarily driven by the lower average selling price of our products attributable to large transactions in the first half of fiscal year 2023 that did not repeat in fiscal year 2024, partially offset by (1) a 11.1% and a 3.0% increase in product acceptances for the three and six months ended June 30, 2024, respectively, (2) reduced labor and overhead costs through restructuring programs executed in fiscal year 2023, and (3) improved processes and automation at our manufacturing facilities.

Installation Gross Loss

Installation gross loss improved by $1.0 million and $1.7 million in the three and six months ended June 30, 2024, respectively, as compared to the prior year period. The change for each period was primarily driven by the timing of achieving key project milestones on sites requiring installations by us in the three and six months ended June 30, 2024, and other site related factors such as site complexity, size, local ordinance requirements, and location of the utility interconnect.

Service Gross Profit (Loss)

Service gross profit (loss) improved by $15.1 million in the three months ended June 30, 2024, as compared to the prior year period. This was primarily due to (1) 159 megawatts of the Energy Servers reaching full power in the past twelve months, which contributed to a $5.6 million increase in revenue from maintenance contracts associated with our fleet of Energy Servers, (2) repair and overhaul cost reductions of $3.5 million, (3) the reduction of product performance guarantees of $4.7 million that resulted from the higher efficiency of our Energy Server, and (4) our cost reduction efforts to proactively manage fleet optimizations.

Service gross profit (loss) improved by $25.6 million in the six months ended June 30, 2024, as compared to the prior year period. This was primarily due to (1) 159 megawatts of the Energy Servers reaching full power in the past twelve months, which contributed to a $18.3 million increase in revenue from maintenance contracts associated with our fleet of Energy Servers, (2) repair and overhaul cost reductions of $6.2 million, (3) the reduction of product performance guarantees of $7.8 million that resulted from the higher efficiency of our Energy Server, and (4) our cost reduction efforts to proactively manage fleet optimizations. The change was partially offset primarily due to higher deployment of field replacement units with an impact of $4.2 million.

Electricity Gross Profit

Electricity gross profit increased (decreased) by $0.7 million and $(0.2) million in the three and six months ended June 30, 2024, respectively, as compared to the prior year period. The year over year changes were immaterial.

Operating Expenses

	Three Months Ended June 30,		Change		Six Months Ended June 30,		Change	
	2024	2023	Amount	%	2024	2023	Amount	%
	(dollars in thousands)				(dollars in thousands)			
Research and development	$ 37,364	$ 41,493	$ (4,129)	(10.0)%	$ 72,849	$ 87,183	$ (14,334)	(16.4)%
Sales and marketing	17,901	26,822	(8,921)	(33.3)%	31,500	53,933	(22,433)	(41.6)%
General and administrative	36,385	42,491	(6,106)	(14.4)%	74,394	87,638	(13,244)	(15.1)%
Total operating expenses	$ 91,650	$ 110,806	$ (19,156)	(17.3)%	$ 178,743	$ 228,754	$ (50,011)	(21.9)%

Total Operating Expenses

Total operating expenses decreased by $19.2 million in the three months ended June 30, 2024, as compared to the prior year period. This decrease was primarily attributable to (1) a decrease in employee compensation and benefits of $12.1 million, predominantly as a consequence of the restructuring efforts in the second half of fiscal year 2023, as well as the voluntary resignation of certain of our executives in the second half of fiscal year 2023, (2) a decrease in consulting, advisory and other professional services costs of $5.5 million, (3) a decrease in consumable laboratory supplies and other laboratory related costs of $3.7 million both as a result of our cost reduction efforts initiated in fiscal year 2023, and (4) a decrease in facility costs of $1.5 million, primarily due to reduction in rent and utility costs. The overall decrease was partially offset by (1) an increase in depreciation expenses of $1.4 million, (2) office expenses of $1.0 million, and (3) computer equipment maintenance expenses of $0.8 million.

Total operating expenses decreased by $50.0 million in the six months ended June 30, 2024, as compared to the prior year period. This decrease was primarily attributable to (1) a decrease in employee compensation and benefits of $31.5 million, predominantly as a consequence of the restructuring efforts in the second half of fiscal year 2023, as well as the voluntary resignation of certain of our executives in the second half of fiscal year 2023, (2) a decrease in consulting, advisory and other professional services costs of $11.8 million, (3) a decrease in consumable laboratory supplies and other laboratory related costs of $8.1 million both as a result of our cost reduction efforts initiated in fiscal year 2023, and (4) a decrease in facility costs of $3.7 million, primarily due to reduction in rent and utility costs. The overall decrease was partially offset by (1) an increase in depreciation expenses of $2.3 million, (2) computer equipment maintenance expenses of $1.8 million, and (3) office expenses of $1.3 million.

Research and Development

Research and development expenses decreased by $4.1 million in the three months ended June 30, 2024, as compared to the prior year period. This decrease was primarily driven by (1) a decrease in consumable laboratory supplies and other laboratory related costs of $3.5 million as a result of our cost reduction efforts initiated in fiscal year 2023, and (2) a decrease in employee compensation and benefits of $1.8 million, predominantly as a consequence of the restructuring efforts in the second half of fiscal year 2023. The decrease was partially offset by an increase in depreciation and amortization expenses of $0.4 million.

Research and development expenses decreased by $14.3 million in the six months ended June 30, 2024, as compared to the prior year period. This decrease was primarily driven by (1) a decrease in consumable laboratory supplies and other laboratory related costs of $8.0 million as a result of our cost reduction efforts initiated in fiscal year 2023, and (2) a decrease in employee compensation and benefits of $6.8 million, predominantly as a consequence of the restructuring efforts in the second half of fiscal year 2023. The decrease was partially offset by an increase in depreciation and amortization expenses of $0.3 million.

Sales and Marketing

Sales and marketing expenses decreased by $8.9 million and $22.4 million in the three and six months ended June 30, 2024, respectively, as compared to the prior year period. The decrease in the three and six months ended June 30, 2024, was primarily driven by (1) a decrease in employee compensation and benefits of $5.9 million and $15.1 million, respectively, predominantly as a consequence of the restructuring efforts in the second half of fiscal year 2023, as well as the voluntary resignation of our Executive Vice President and Chief Business Development and Marketing Officer on September 1, 2023, and (2) a decrease in consulting, advisory and other professional services costs of $2.4 million and $5.7 million, respectively, as a result of our cost reduction efforts initiated in fiscal year 2023.

General and Administrative

General and administrative expenses decreased by $6.1 million in the three months ended June 30, 2024, as compared to the prior year period. This decrease was primarily driven by (1) a decrease in employee compensation and benefits of $4.5 million, predominantly as a consequence of the restructuring efforts in the second half of fiscal year 2023, as well as the voluntary resignation of certain of our executives in the second half of fiscal 2023, (2) a decrease in consulting, advisory and other professional services costs of $3.0 million as a result of our cost reduction efforts initiated in fiscal year 2023, and (3) a decrease in facility costs of $1.3 million, primarily due to reduction in rent and utility costs. The overall decrease was partially offset by an increase in office expenses of $0.9 million, computer equipment maintenance expenses of $0.9 million, and depreciation expenses of $1.1 million.

General and administrative expenses decreased by $13.2 million in the six months ended June 30, 2024, as compared to the prior year period. This decrease was primarily driven by (1) a decrease in employee compensation and benefits of $9.7 million, predominantly as a consequence of the restructuring efforts in the second half of fiscal year 2023, as well as the voluntary resignation of certain of our executives in the second half of fiscal 2023, (2) a decrease in consulting, advisory and other professional services costs of $5.6 million as a result of our cost reduction efforts initiated in fiscal year 2023, and (3) a decrease in facility costs of $3.4 million, primarily due to reduction in rent and utility costs. The overall decrease was partially offset by an increase in depreciation expenses of $2.0 million, computer equipment maintenance expenses of $1.8 million, office expenses of $1.5 million, and other operating expenses of $0.4 million.

Stock-Based Compensation

	Three Months Ended June 30,		Change		Six Months Ended June 30,		Change	
	2024	2023	Amount	%	2024	2023	Amount	%
	(dollars in thousands)				(dollars in thousands)			
Cost of revenue	$ 4,110	$ 5,067	$ (957)	(18.9)%	$ 7,924	$ 9,228	$ (1,304)	(14.1)%
Research and development	6,008	7,678	(1,670)	(21.8)%	11,092	16,088	(4,996)	(31.1)%
Sales and marketing	3,270	6,257	(2,987)	(47.7)%	5,360	12,074	(6,714)	(55.6)%
General and administrative	6,035	9,477	(3,442)	(36.3)%	13,907	20,642	(6,735)	(32.6)%
Total stock-based compensation	$ 19,423	$ 28,479	$ (9,056)	(31.8)%	$ 38,283	$ 58,032	$ (19,749)	(34.0)%

Total stock-based compensation for the three months ended June 30, 2024, decreased by $9.1 million as compared to the prior year period, and the decrease was predominantly related to a decrease in stock-based compensation related to PSUs and RSUs of $7.5 million and a decrease of stock-based compensation costs related to the 2018 ESPP of $3.5 million. The decrease was primarily driven by (1) the separation of full-time employees holding equity awards as a result of the restructuring in the second half of fiscal year 2023, (2) the change in the mix of award types, (3) a decrease in contributions to 2018 ESPP, (4) the voluntary resignation of the former Chief Financial Officer in June 2024, and (5) the voluntary resignation in fiscal 2023 of certain executives holding equity awards. The decrease was partially offset by stock-based compensation expenses related to granted RSUs and PSUs awards to the new Chief Financial Officer and the Head of Quality and Reliability in May 2024.

Total stock-based compensation for the six months ended June 30, 2024, decreased by $19.7 million as compared to the prior year period, and the decrease was predominantly related to a decrease in stock-based compensation related to PSUs and RSUs of $12.3 million and a decrease of stock-based compensation costs related to the 2018 ESPP of $11.1 million. The decrease was primarily driven by (1) the separation of full-time employees holding equity awards as a result of the restructuring in the second half of fiscal year 2023, (2) the change in the mix of award types, (3) a decrease in contributions to 2018 ESPP, (4) the voluntary resignation in fiscal year 2023 of certain executives, and (5) the voluntary resignation in June 2024 of the former CFO, holding equity awards. The decrease was partially offset by stock-based compensation expenses related to granted RSUs, PSUs and the stock option awards (the "2024 Executive Awards") in March and May 2024.

Other Income and Expense

	Three Months Ended June 30,		Change	Six Months Ended June 30,		Change
	2024	2023		2024	2023	
	(in thousands)					
Interest income	$ 6,430	$ 4,357	$ 2,073	$ 13,961	$ 6,352	$ 7,609
Interest expense	(15,376)	(13,953)	(1,423)	(29,922)	(25,699)	(4,223)
Other expense, net	(985)	(740)	(245)	(2,155)	(2,083)	(72)
Loss on extinguishment of debt	(27,182)	(2,873)	(24,309)	(27,182)	(2,873)	(24,309)
Gain on revaluation of embedded derivatives	(88)	(1,216)	1,128	70	(1,099)	1,169
Total	$ (37,201)	$ (14,425)	$ (22,776)	$ (45,228)	$ (25,402)	$ (19,826)

Interest Income

Interest income is derived from investment earnings on our cash balances, primarily from money market funds. The increase in interest income of $2.1 million and $7.6 million for the three and six months ended June 30, 2024, respectively, was primarily due to an increase in average cash balance in our money market funds for the respective period, compared to the prior year period.

Interest Expense

Interest expense for the three and six months ended June 30, 2024, decreased by $1.4 million and $4.2 million, respectively, as compared to the prior year period. The decrease for each period was primarily due to a decrease in interest expense as a result of the redemption on June 1, 2023, of the 10.25% Senior Secured Notes due March 2027, the repayment of the 3.04% Senior Secured Notes due June 2031, on August 24, 2023, and the partial repurchase of the 2.5% Green Notes, on May 29, 2024. The decrease was partially offset by an increase in interest expense related to the 3% Green Notes due June 2028, and the 3% Green Notes due June 2029, issued on May 16, 2023, and May 29, 2024, respectively.

Other Expense, net

Other expense, net is primarily derived from the impact of foreign currency transactions. Other expense, net for the three and six months ended June 30, 2024, decreased by $0.2 million and $0.1 million, as compared to the prior year period, respectively, primarily as a result of foreign currency transactions.

Loss on extinguishment of debt

Loss on extinguishment of debt for the three and six months ended June 30, 2024, was $27.2 million, which was recognized as a result of partial repurchase on May 29, 2024 of the 2.5% Green Notes, and consisted of repayment of the 22.6% premium of $26.0 million and the write off of $1.2 million in debt issuance costs.

Loss on extinguishment of debt for the three and six months ended June 30, 2023, was $2.9 million, which was recognized as a result of redemption on June 1, 2023, of 10.25% Senior Secured Notes due March 2027, and consisted of repayment of the 4% premium of $2.3 million and the write off of $0.6 million in debt issuance costs.

(Loss) Gain on Revaluation of Embedded Derivatives

(Loss) gain on revaluation of embedded derivatives is derived from the change in fair value of our sales contracts of embedded EPP derivatives valued using historical grid prices and available forecasts of future electricity prices to estimate future electricity prices. (Loss) gain on revaluation of embedded derivatives for the three and six months ended June 30, 2024, as compared to the prior year period, was immaterial.

Income Tax Provision

	Three Months Ended December 31,		Change		Six Months Ended June 30,		Change	
	2024	2023	Amount	%	2024	2023	Amount	%
	(dollars in thousands)							
Income tax provision	$ 856	$ 178	$ 678	380.9 %	$ 355	$ 437	$ (82)	(18.8)%

Income tax provision consists primarily of income taxes in foreign jurisdictions in which we conduct business. We maintain a full valuation allowance for domestic deferred tax assets, including net operating loss and certain tax credit carryforwards. The income tax provision for the three months ended June 30, 2024, increased by $0.7 million, and for the six months ended June 30, 2024, decreased by $0.1 million, as compared to the prior year period. The changes were primarily due to fluctuations in the effective tax rates on income earned by international entities.

Net Income (Loss) Attributable to Noncontrolling Interests

	Three Months Ended June 30,		Change		Six Months Ended June 30,		Change	
	2024	2023	Amount	%	2024	2023	Amount	%
	(dollars in thousands)							
Net income (loss) attributable to noncontrolling interest	$ 602	$ (2,998)	$ (3,600)	(120.1)%	$ 1,583	$ (6,348)	$ 7,931	124.9 %

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

Net income attributable to noncontrolling interests for the three months ended June 30, 2024, as compared to the prior year period, improved by $3.6 million due to a $3.1 million decrease in losses in PPA V, which was sold in the third quarter of fiscal year 2023, and a $0.5 million increase in income related to Korean JV, which is allocated to our noncontrolling interest.

Net income attributable to noncontrolling interests for the six months ended June 30, 2024, as compared to the prior year period, improved by $7.9 million due to a $5.9 million decrease in losses in PPA V, which was sold in the third quarter of fiscal year 2023, and a $2.0 million increase in income related to Korean JV, which is allocated to our noncontrolling interest.

Critical Accounting Policies and Estimates

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

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

- Revenue Recognition;
- Valuation of Assets and Liabilities of the SK ecoplant Strategic Investment;
- Income Taxes; and
- Principles of Consolidation.

Part II, Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operation* in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, provides a more complete discussion of our critical accounting policies and estimates. During the six months ended June 30, 2024, there were no significant changes to our critical accounting policies and estimates.

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 six months ended June 30, 2024. 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, 2023, for a more complete discussion of the market risks we consider.

ITEM 4 — CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

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

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act), as of June 30, 2024. Based on such an evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that as of June 30, 2024, our disclosure controls and procedures were effective.

Changes in Internal Control over Financial Reporting

During the three months ended June 30, 2024, there were no changes in our internal control over financial reporting, which were identified in connection with management's evaluation required by paragraphs (d) of Rules 13a-15 and 15d-15 under the Exchange Act, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

For further information on inherent limitations on effectiveness of internal controls and management's report on internal control over financial reporting, see Part II, Item 9A, *Controls and Procedures* in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023.

PART II — OTHER INFORMATION

ITEM 1 — LEGAL PROCEEDINGS

We are, and from time to time we may become, involved in legal proceedings or subject to claims arising in the ordinary course of our business. For a discussion of our legal proceedings, see Part I, Item 1, Note 12 — *Commitments and Contingencies*. We are not presently a party to any other legal proceedings that in the opinion of our management and if determined adversely to us, would individually or taken together have a material adverse effect on our business, operating results, financial condition or cash flows.

ITEM 1A — RISK FACTORS

There were no material changes in risk factors as disclosed in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023.

ITEM 2 — UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

None.

ITEM 3 — DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4 — MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5 — OTHER INFORMATION

Amendment of Bylaws

On August 7, 2024, the Board of Directors adopted an amendment and restatement of the Company's Amended and Restated Bylaws (as so amended and restated, the "Amended and Restated Bylaws"), effective as of such date, in order to, among other things: (1) align the Company's bylaws with developments in Delaware law and jurisprudence; (2) revise the advance notice provisions regarding procedural and disclosure requirements for stockholders' director nominations and proposals for other business, including to address matters related to Rule 14a-19 under the Exchange Act; (3) revise the indemnification provisions to clarify the basis for directors and officers to obtain indemnification and advancement of expenses; (4) permit special meetings of the Board of Directors to be called on less than 24 hours' notice, if necessary; and (5) clarify personal jurisdiction and service of process matters for foreign actions. The Amended and Restated Bylaws also implement non-substantive, technical, and conforming changes, including removing obsolete provisions.

The foregoing description does not purport to be complete and is qualified in its entirety by reference to the complete text of the Amended and Restated Bylaws, a copy of which is filed as Exhibit 3.7 to this Quarterly Report on Form 10-Q and incorporated herein by reference.

Rule 10b5-1 Trading Arrangements

During the fiscal quarter ended June 30, 2024, no director or Section 16 officer adopted or terminated any Rule 10b5-1 trading arrangement or non-Rule 10b5-1 trading arrangement (in each case as defined under SEC rules).

ITEM 6 — EXHIBITS

Exhibit Number		Description	Incorporated by Reference			
			Form	File No.	Exhibit	Filing Date
3.1		Restated Certificate of Incorporation	10-Q	001-38598	3.1	9/7/2018
3.2		Certificate of Amendment to the Restated Certificate of Incorporation of Bloom Energy Corporation	10-Q	001-38598	3.1	8/9/2022
3.3		Certificate of Amendment to the Certificate of Designation of Series B Redeemable Convertible Preferred Stock	8-K	001-38598	3.1	4/18/2023
3.4		Certificate of Withdrawal of Certificate of Designation of Series A Redeemable Convertible Preferred Stock	10-Q	001-38598	3.3	5/9/2023
3.5		Certificate of Retirement for Class B Common Stock	10-Q	001-38598	3.2	11/8/2023
3.6		Certificate of Elimination of Certificate of Designations of Series B Convertible Preferred Stock	10-Q	001-38598	3.3	11/8/2023
3.7		Amended and Restated Bylaws, as effective August 7, 2024				Filed herewith
4.1		Indenture, dated as of May 29, 2024, between Bloom Energy Corporation and U.S. Bank Trust Company, National Association, as trustee	8-K	001-38598	4.1	5/29/2024
4.2		Form of certificate representing the 3.00% Green Convertible Senior Notes due 2029 (included as Exhibit A to Exhibit 4.1)	8-K	001-38598	4.2	5/29/2024
10.1	^	Offer Letter between the Company and Daniel Berenbaum, dated April 15, 2024	8-K	001-38598	10.1	4/17/2024
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	*	Certifications of the Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002				Furnished herewith
101.INS		XBRL Instance Document- the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document				Filed herewith
101.SCH		Inline XBRL Taxonomy Extension Schema Document				Filed herewith
101.CAL		Inline XBRL Taxonomy Extension Calculation Linkbase Document				Filed herewith
101.DEF		Inline XBRL Taxonomy Extension Definition Linkbase Document				Filed herewith
101.LAB		Inline XBRL Taxonomy Extension Label Linkbase Document				Filed herewith
101.PRE		Inline XBRL Taxonomy Extension Presentation Linkbase Document				Filed herewith
104		Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)				

* 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.

^ Management contracts or compensation plans or arrangements in which directors or executive officers are eligible to participate.

SIGNATURES

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

BLOOM ENERGY CORPORATION

Date: August 8, 2024

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

Date: August 8, 2024

By: /s/ Daniel Berenbaum
Daniel Berenbaum
Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 3.8

BLOOM ENERGY CORPORATION

(a Delaware corporation)

AMENDED AND RESTATED BYLAWS

As effective August 7, 2024

4864-1485-6659

BLOOM ENERGY CORPORATION

(a Delaware corporation)

AMENDED AND RESTATED
BYLAWS TABLE OF CONTENTS

ARTICLE I: STOCKHOLDERS

Section 1.1: Annual Meetings
Section 1.2: Special Meetings
Section 1.3: Notice of Meetings
Section 1.4: Adjournments
Section 1.5: Quorum
Section 1.6: Organization
Section 1.7: Voting; Proxies
Section 1.8: Fixing Date for Determination of Stockholders of Record
Section 1.9: List of Stockholders Entitled to Vote
Section 1.10: Inspectors of Elections
Section 1.11: Notice of Stockholder Business; Nominations

ARTICLE II: BOARD OF DIRECTORS

Section 2.1: Number; Qualifications
Section 2.2: Election; Resignation; Removal; Vacancies
Section 2.3: Regular Meetings
Section 2.4: Special Meetings
Section 2.5: Remote Meetings Permitted
Section 2.6: Quorum; Vote Required for Action
Section 2.7: Organization
Section 2.8: Unanimous Action by Directors in Lieu of a Meeting
Section 2.9: Powers
Section 2.10: Compensation of Directors
Section 2.11: Confidentiality

ARTICLE III: COMMITTEES

Section 3.1: Committees
Section 3.2: Committee Rules

ARTICLE IV: OFFICERS; CHAIRPERSON; LEAD INDEPENDENT DIRECTOR

Section 4.1: Generally
Section 4.2: Chief Executive Officer
Section 4.3: Chairperson of the Board
Section 4.4: Lead Independent Director
Section 4.5: President
Section 4.6: Chief Financial Officer
Section 4.7: Treasurer
Section 4.8: Vice President
Section 4.9: Secretary
Section 4.10: Delegation of Authority
Section 4.11: Removal
Section 4.12: Signature Authority

ARTICLE V: STOCK

Section 5.1: Certificates; Uncertificated Shares
Section 5.2: Lost, Stolen or Destroyed Stock Certificates; Issuance of New Certificates or Uncertificated Shares
Section 5.3: Other Regulations

ARTICLE VI: INDEMNIFICATION

Section 6.1: Indemnification of Officers and Directors
Section 6.2: Advance of Expenses
Section 6.3: Non-Exclusivity of Rights
Section 6.4: Indemnification Contracts
Section 6.5: Right of Indemnitee to Bring Suit
Section 6.6: Nature of Rights.
Section 6.7: Insurance

ARTICLE VII: NOTICES

Section 7.1: Notice
Section 7.2: Waiver of Notice

ARTICLE VIII: INTERESTED DIRECTORS

Section 8.1: Interested Directors
Section 8.2: Quorum

ARTICLE IX: MISCELLANEOUS

Section 9.1: Fiscal Year
Section 9.2: Seal
Section 9.3: Form of Records
Section 9.4: Reliance Upon Books and Records
Section 9.5: Certificate of Incorporation Governs
Section 9.6: Severability
Section 9.7: Time Periods

ARTICLE X: AMENDMENT

ARTICLE XI: EXCLUSIVE FORUM

BLOOM ENERGY CORPORATION

(a Delaware corporation)

AMENDED AND RESTATED BYLAWS

As effective August 7, 2024

ARTICLE I: STOCKHOLDERS

Section 1.1: Annual Meetings. An annual meeting of stockholders shall be held for the election of directors at such date and time as the Board of Directors (the "***Board***") (or its designee) of Bloom Energy Corporation (the "***Corporation***") shall fix. The meeting may be held either at a place, within or without the State of Delaware as permitted by the Delaware General Corporation Law (the "***DGCL***"), or by means of remote communication as the Board (or its designee) in its sole discretion may determine. Any proper business may be transacted at the annual meeting.

Section 1.2: Special Meetings. Special meetings of stockholders for any purpose or purposes shall be called in the manner set forth in the Restated Certificate of Incorporation of the Corporation (as the same may be amended or restated from time to time, the "***Certificate of Incorporation***"). A special meeting may be held either at a place, within or without the State of Delaware, or by means of remote communication as the Board in its sole discretion may determine. Business transacted at special meetings of stockholders shall be limited to the purpose or purposes stated in the notice of meeting.

Section 1.3: Notice of Meetings. Notice of all meetings of stockholders shall be given in writing or by electronic transmission in the manner provided by applicable law (including, without limitation, as set forth in Section 7.1.1 of these Bylaws) stating the date, time and place, if any, of the meeting, the means of remote communication, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such meeting, and the record date for determining the stockholders entitled to vote at the meeting, if such date is different from the record date for determining stockholders entitled to notice of the meeting. In the case of a special meeting, such notice shall also set forth the purpose or purposes for which the meeting is called. Unless otherwise required by applicable law or the Certificate of Incorporation, notice of any meeting of stockholders shall be given not less than ten (10), nor more than sixty (60), days before the date of the meeting to each stockholder of record entitled to notice of such meeting.

Section 1.4: Adjournments. The chairperson of the meeting shall have the power to adjourn any meeting of stockholders, annual or special, to another place (if any), date or time (including an adjournment taken to address a technical failure to convene or continue a meeting using remote communication), whether or not a quorum is present. When a meeting is adjourned to another time or place, notice need not be given of any such adjourned meeting if the time, date and place (if any) thereof and the means of remote communication (if any) by which stockholders and proxy holders may be deemed to be present in person and vote at such adjourned meeting are (i) announced at the meeting at which the adjournment is taken; (ii) displayed, during the time scheduled for the meeting, on the same electronic network used to enable stockholders and proxy holders to participate in the meeting by means of remote communication; or (iii) set forth in the notice of meeting given in accordance with Section 1.3 of these Bylaws; provided, however, that (i) if the adjournment is for more than thirty (30) days, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at

the meeting, and (ii) if a new record date for stockholders entitled to vote at the adjourned meeting is fixed for any adjourned meeting, the Board shall fix a new record date for notice of such adjourned meeting, and shall give notice of the adjourned meeting to each stockholder of record entitled to vote at such adjourned meeting as of the record date fixed for notice of such adjourned meeting. At the adjourned meeting, the Corporation may transact any business that might have been transacted at the original meeting. To the fullest extent permitted by law, the Board may postpone, reschedule or cancel any previously scheduled special or annual meeting of stockholders before it is to be held, regardless of whether any notice or Public Announcement (as defined below) with respect to any such meeting has been sent or made pursuant to Section 1.3 of these Bylaws or otherwise.

Section 1.5: Quorum. Except as otherwise provided by applicable law, the Certificate of Incorporation or these Bylaws, at each meeting of stockholders the holders of a majority of the voting power of the shares of stock issued and outstanding and entitled to vote at the meeting, present in person or represented by proxy, shall constitute a quorum for the transaction of business; provided, however, that where a separate vote by a class or classes or series of stock is required by applicable law or the Certificate of Incorporation, the holders of a majority of the voting power of the shares of such class or classes or series of the stock issued and outstanding and entitled to vote on such matter, present in person or represented by proxy at the meeting, shall constitute a quorum entitled to take action with respect to the vote on such matter. If a quorum shall fail to attend any meeting, the chairperson of the meeting or, if directed to be voted on by the chairperson of the meeting, the stockholders, acting by the affirmative vote of a majority of the voting power of the shares of stock issued and outstanding and entitled to vote who are present in person or represented by proxy at the meeting may adjourn the meeting, without notice other than as required by Section 1.4 of these Bylaws. Shares of the Corporation's stock belonging on the record date for the meeting to the Corporation (or to another entity, if a majority of the shares entitled to vote in the election of directors of such other entity are held, directly or indirectly, by the Corporation), shall neither be entitled to vote nor be counted for quorum purposes; provided, however, that the foregoing shall not limit the right of the Corporation or any other corporation to vote any shares of the Corporation's stock held by it in a fiduciary capacity and to count such shares for purposes of determining a quorum. A quorum, once established at a meeting, shall not be broken by the withdrawal of enough votes to leave less than a quorum.

Section 1.6: Organization. Meetings of stockholders shall be presided over by the Chairperson of the Board or such person as the Board may designate. Such person shall be chairperson of the meeting. The Board may adopt such rules, regulations and procedures for the conduct of any meeting of stockholders as it shall deem appropriate. Except to the extent inconsistent with such rules, regulations and procedures adopted by the Board, the chairperson of the meeting shall have the right and authority to convene and (for any or no reason) to recess and/or adjourn the meeting and shall determine the order of business and have the authority to adopt and enforce such rules, regulations and procedures for the conduct of any meeting of stockholders and the safety of those in attendance at the meeting and do all such acts and things as, in the judgment of the chairperson, are necessary, appropriate or desirable for the proper conduct of the meeting. Rules, regulations and procedures for the conduct of meetings of stockholders, whether adopted by the Board or by the chairperson of the meeting, may include without limitation, the establishment of procedures for the maintenance of order and safety, limitations on attendance at or participation in the meeting to stockholders entitled to vote at the meeting, their duly authorized and constituted proxies or such other persons as the chairperson of

the meeting shall determine, limitations on the time allotted to questions or comments on the affairs of the Corporation, restrictions on entry to such meeting after the time prescribed for the commencement thereof and regulation of the opening and closing of polls and the manner of voting. The Secretary of the Corporation shall act as secretary of the meeting, but in such person's absence, the chairperson of the meeting may appoint any person to act as secretary of the meeting.

Section 1.7: Voting; Proxies. Each stockholder of record entitled to vote at a meeting of stockholders may authorize another person or persons to act for such stockholder by proxy. Such a proxy may be prepared, transmitted and delivered in any manner permitted by applicable law. A duly executed proxy shall be irrevocable if it states that it is irrevocable and if and only as long as it is coupled with an interest sufficient in law to support an irrevocable power. A stockholder may revoke any proxy which is not irrevocable by attending the meeting and voting in person or by delivering a revocation of the proxy or another duly executed proxy bearing a later date to the Secretary of the Corporation. Except as may be required in the Certificate of Incorporation, directors shall be elected by a plurality of the votes of the shares present in person or represented by proxy at the meeting and entitled to vote on the election of directors. Unless applicable law, rule or regulation applicable to the Corporation or its securities, the rules or regulations of any stock exchange applicable to the Corporation, the Certificate of Incorporation or these Bylaws requires a greater number of affirmative votes for approval of such matter, in which case such greater vote shall be the applicable vote on the matter, every matter other than the election of directors shall be decided by the affirmative vote of a majority of the votes cast for or against the matter(or if there are two or more classes or series of stock entitled to vote as separate classes, then in the case of each class or series, the affirmative vote of a majority of the votes cast for or against such matter).

Section 1.8: Fixing Date for Determination of Stockholders of Record. In order that the Corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, the Board may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board, and which record date shall, unless otherwise required by law, not be more than sixty (60) nor less than ten (10) days before the date of such meeting. If the Board so fixes a date, such date shall also be the record date for determining the stockholders entitled to vote at such meeting unless the Board determines, at the time it fixes the record date, that a later date on or before the date of the meeting shall be the date for making such determination. If no record date is fixed by the Board, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business (as defined in Section 1.11.3(d) of these Bylaws) on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board may fix a new record date for determination of stockholders entitled to vote at the adjourned meeting, and in such case shall fix the same date or an earlier date as the record date for the stockholders entitled to notice of such adjourned meeting. In order that the Corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board may fix, in advance, a record date, which shall not precede the date upon which the resolution fixing the record date is adopted by the Board and which shall not be more than sixty (60) days prior to such action. If no

such record date is fixed by the Board, then the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board adopts the resolution relating thereto.

Section 1.9: List of Stockholders Entitled to Vote. The Corporation shall prepare, no later than the tenth day before each meeting of stockholders, a complete list of stockholders entitled to vote at the meeting (provided, however, if the record date for determining the stockholders entitled to vote is less than ten (10) days before the date of the meeting, the list shall reflect the stockholders entitled to vote as of the tenth (10th) day before the meeting date), arranged in alphabetical order and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Nothing in this Section 1.9 shall require the Corporation to include electronic mail addresses or other electronic contact information on such list. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, for ten (10) days ending on the day before the meeting date, (a) on a reasonably accessible electronic network, provided that the information required to gain access to the list is provided with the notice of the meeting, or (b) during ordinary business hours, at the principal place of business of the Corporation. Except as otherwise provided by law, the list shall presumptively determine the identity of the stockholders entitled to vote at the meeting and the number of shares held by each of them.

Section 1.10: Inspectors of Elections

i. Appointment. The Corporation shall, in advance of any meeting of stockholders, appoint one or more inspectors of election to act at the meeting and make a written report thereof. The Corporation may designate one or more persons as alternate inspectors to replace any inspector who fails to act. If no inspector or alternate is able to act at a meeting of stockholders, the person presiding at the meeting shall appoint one or more inspectors to act at the meeting.

ii. Inspector's Oath. Each inspector of election, before entering upon the discharge of his duties, shall take and sign an oath faithfully to execute the duties of inspector with strict impartiality and according to the best of such inspector's ability.

iii. Duties of Inspectors. At a meeting of stockholders, the inspectors of election shall (a) ascertain the number of shares outstanding and the voting power of each share, (b) determine the shares represented at a meeting and the validity of proxies and ballots, (c) count all votes and ballots, (d) determine and retain for a reasonable period of time a record of the disposition of any challenges made to any determination by the inspectors, and (e) certify their determination of the number of shares represented at the meeting, and their count of all votes and ballots. The inspectors may appoint or retain other persons or entities to assist the inspectors in the performance of the duties of the inspectors.

iv. Opening and Closing of Polls. The date and time of the opening and the closing of the polls for each matter upon which the stockholders will vote at a meeting shall be announced by the chairperson of the meeting or other person authorized by the Board at the meeting. No ballot, proxies or votes, nor any revocations thereof or changes thereto, shall be accepted by the inspectors after the closing of the polls unless the Court of Chancery upon application by a stockholder shall determine otherwise.

v. Determinations. In determining the validity and counting of proxies and ballots, the inspectors shall be limited to an examination of the proxies, any envelopes submitted with those proxies, any information provided in connection with proxies pursuant to the DGCL,

ballots and the regular books and records of the Corporation, except that the inspectors may consider other reliable information for the limited purpose of reconciling proxies and ballots submitted by or on behalf of banks, brokers, their nominees or similar persons which represent more votes than the holder of a proxy is authorized by the record owner to cast or more votes than the stockholder holds of record. If the inspectors consider other reliable information for the limited purpose permitted herein, the inspectors at the time they make their certification of their determinations pursuant to this Section 1.10 shall specify the precise information considered by them, including the person or persons from whom they obtained the information, when the information was obtained, the means by which the information was obtained and the basis for the inspectors' belief that such information is accurate and reliable.

Section 1.11: Notice of Stockholder Business; Nominations.

1.11.1. Annual Meeting of Stockholders.

(a) Nominations of persons for election to the Board and the proposal of other business to be considered by the stockholders may be made at an annual meeting of stockholders only: (i) pursuant to the Corporation's notice of such meeting (or any supplement thereto), (ii) by or at the direction of the Board or any committee of the Board authorized by the Board to take such action or (iii) by any stockholder of the Corporation who was a stockholder of record at the time of giving of the notice provided for in this Section 1.11 (the "***Record Stockholder***") and at the time of the annual meeting, who is entitled to vote at such meeting and who complies with the notice and other procedures set forth in this Section 1.11 in all applicable respects. For the avoidance of doubt, the foregoing clause (iii) shall be the exclusive means for a stockholder to make nominations or propose other business (other than business included in the Corporation's proxy materials pursuant to Rule 14a-8 under the Securities Exchange Act of 1934, as amended (such act, and the rules and regulations promulgated thereunder, the "***Exchange Act***")) at an annual meeting of stockholders, and such stockholder must fully comply with the notice and other procedures set forth in this Section 1.11 to make such nominations or propose business before an annual meeting.

(b) For nominations or other business to be properly brought before an annual meeting by a Record Stockholder pursuant to Section 1.11.1(a)(iii) of these Bylaws:

(i) the Record Stockholder must have given timely notice thereof in writing to the Secretary of the Corporation and provide any updates or supplements to such notice at the times and in the forms required by this Section 1.11;

(ii) such business (other than the nomination of persons for election to the Board) must otherwise be a proper matter for stockholder action; and

(iii) the Record Stockholder must comply with all other applicable requirements set forth in this Section 1.11.

To be timely, a Record Stockholder's notice must be delivered to, or mailed and received by, the Secretary at the principal executive offices of the Corporation, in a form that complies with this Section 1.11, not later than the close of business on the 90th day nor earlier than the 120th day prior to the first anniversary of the preceding year's annual meeting; *provided*, *however*, that in the event that the date of the annual meeting is more than thirty (30) days before or more than sixty (60) days after such anniversary date, or if no annual meeting was held in the preceding year, notice by the Record Stockholder to be timely must be so delivered (A) no earlier than the 120th day prior to such annual meeting and (B) no later than the close of business on the

later of the 90th day prior to such annual meeting or the tenth (10th) day following the day on which Public Announcement (as defined below) of the date of such meeting is first made by the Corporation. In no event shall an adjournment or recess of an annual meeting, or postponement of an annual meeting for which notice has been given or a Public Announcement of the meeting date has been made, commence a new time period (or extend any time period) for providing the Record Stockholder's notice. A Record Stockholder's notice given in accordance with this Section 1.11.1 must contain only the names of the nominees for whom such Record Stockholder (or beneficial owner, if any) intends to solicit proxies, and a Record Stockholder shall not be entitled to make additional or substitute nominations following the expiration of the time periods set forth in this Section 1.11.1(b); *provided* that, in the event a Record Stockholder's notice includes one or more substitute nominees, such Record Stockholder must provide timely notice of such substitute nominee(s) in accordance with the provisions of this Section 1.11.1 (including, without limitation, satisfaction of all applicable informational requirements set forth therein). For the avoidance of doubt, the number of nominees a stockholder may nominate for election at the annual meeting (or in the case of a Record Stockholder giving the notice on behalf of a beneficial owner, the number of nominees a Record Stockholder may nominate for election at the annual meeting on behalf of such beneficial owner) shall not exceed the number of directors to be elected at such annual meeting.

(iv) Such Record Stockholder's notice shall set forth:

as to each person whom the Proposing Person (as defined in Section 1.11.3(d)) proposes to nominate for election or reelection as a director:

(A) a written statement, not to exceed 500 words, in support of such person;

(B) the name, age, business address and residence address of such person;

(C) the principal occupation or employment of such nominee;

(D) the class, series and number of any shares of stock of the Corporation that are directly or indirectly beneficially owned (as defined in Section 1.11.3(d)) or owned of record by such person or any Associated Person (as defined in Section 1.11.3(d));

(E) the date or dates such shares referred to in the foregoing clause (D) were acquired and the investment intent of such acquisition;

(F) all other information relating to such person that would be required to be disclosed in solicitations of proxies for election of directors in a contested election, or would be otherwise required, in each case pursuant to and in accordance with Section 14(a) (or any successor provision) under the Exchange Act and the rules and regulations thereunder (including such person's written consent to being named as a nominee in a proxy statement and form of proxy relating to the meeting at which directors are to be elected, to the public disclosure of information regarding or related to such person provided to the Corporation by such person or otherwise pursuant to this Section 1.11 and to serving as a director if elected);

(G) a written questionnaire with respect to the background and qualifications of the nominee, completed by the nominee, in the form required by the Corporation (including those questionnaires required of the Corporation's directors and any other questionnaire the Corporation determines is necessary or advisable to assess whether a nominee will satisfy any qualifications or requirements imposed by the Certificate of Incorporation or these Bylaws, any law, rule, regulation or listing standard that may be applicable to the Corporation, and the

Corporation's corporate governance policies and guidelines), which questionnaires the Proposing Person shall request in writing from the Secretary and which the Secretary shall provide to such Proposing Person within five (5) business days after receiving such a request;

(H) a written representation and agreement, which shall be signed by the nominee, that the nominee: (x) has read and agrees, if elected, as a director of the Corporation, to comply with all of the Corporation's corporate governance, conflict of interest, confidentiality, and stock ownership and trading policies and guidelines, and any other policies and guidelines applicable to directors, which policies and guidelines the Proposing Person shall request in writing from the Secretary and which the Secretary shall provide to such Proposing Person within five (5) business days after receiving such a request and (y) intends to serve a full term as director of the Corporation, if elected;

(I) a written representation and agreement, which shall be signed by the nominee, that the nominee is not and will not become a party to any agreement, arrangement or understanding with, and has not given any commitment or assurance to, any person or entity (x) as to how such nominee will vote or act on any issue if elected as a director, except such as is already existing and has been fully disclosed to the Corporation prior to or concurrently with the submission of this nomination or (y) that would reasonably be expected to limit or interfere with the person's ability to comply, if elected as a director, with such person's fiduciary duties under applicable law;

(J) a written representation and agreement, which shall be signed by the nominee, that the nominee is not and will not become a party to any agreement, arrangement or understanding with any person or entity other than the Corporation with respect to any direct or indirect compensation, reimbursement or indemnification in connection with service or action as a director or nominee that has not been disclosed to the Corporation. For the avoidance of doubt, all fully completed and signed questionnaires and all written and signed representations and agreements described in the foregoing clauses (G)-(J) shall be provided to the Corporation at the same time as the Record Stockholder's notice; and

(K) a representation that the nominee will provide to the Corporation such other information as the Corporation may reasonably request, including such information reasonably necessary for the Corporation to determine whether a nominee will satisfy any qualifications or requirements imposed by the Certificate of Incorporation or these Bylaws, any law, rule, regulation or listing standard that may be applicable to the Corporation, or relevant to a determination whether such person can be considered an independent director (which information shall be provided to the Corporation promptly upon request by the Corporation, but in any event within five (5) business days after such request (or by the day prior to the day of the meeting of stockholders, if earlier), and shall be deemed part of the Record Stockholder's notice);

(v) as to any other business that the Proposing Person proposes to bring before the meeting: a brief description of the business desired to be brought before the meeting, the text of the proposal or business (including the text of any resolutions proposed for consideration and in the event that such business includes a proposal to amend the Bylaws, the text of the proposed amendment), the reasons for conducting such business at the meeting and any substantial interest (within the meaning of Item 5 of Schedule 14A under the Exchange Act) in such business of such Proposing Person (other than as a stockholder), including any anticipated benefit to any Proposing Person therefrom; and

(vi) as to each Proposing Person:

(A) the current name and address of such Proposing Person, including, if applicable, their name and address as they appear on the Corporation's stock ledger, if different;

(B) the class or series and number of shares of stock of the Corporation that are directly or indirectly owned of record or beneficially owned by such Proposing Person or any Associated Person, including any shares of any class or series of the Corporation as to which such Proposing Person or any Associated Person has a right to acquire beneficial ownership at any time in the future;

(C) a description of: (w) all agreements, arrangements or understandings, written or oral, (including any derivative or short positions, profit interests, hedging transactions, forwards, futures, swaps, options, warrants, convertible securities, stock appreciation or similar rights, repurchase agreements or arrangements, borrowed or loaned shares and so-called "stock borrowing" agreements or arrangements) that have been entered into by, or on behalf of, such Proposing Person or any Associated Person, the effect or intent of which is to mitigate loss, manage risk or benefit from changes in the price of any securities of the Corporation, or maintain, increase or decrease the voting power of such Proposing Person or any Associated Person with respect to securities of the Corporation, whether or not such instrument or right shall be subject to settlement in underlying shares of capital stock of the Corporation (any of the foregoing, a "***Derivative Instrument***"); (x) any rights to dividends on the shares of any class or series of shares of the Corporation that are separated or separable from the underlying shares of the Corporation); (y) any proportionate interest in shares of the Corporation or Derivative Instruments held, directly or indirectly, by a general or limited partnership in which any Proposing Person or any of its respective Associated Persons (as defined in Section 1.11.3(d)) is a general partner or, directly or indirectly, beneficially owns an interest in a general partner of such general or limited partnership; and (z) any significant equity interests or any Derivative Instruments in any principal competitor of the Corporation (as defined for the purposes of Section 8 of the Clayton Antitrust Act of 1914) (each, a "***Principal Competitor***") held by such Proposing Party or any Associated Person;

(D) any other material relationship between such Proposing Person, on the one hand, and the Corporation, any affiliate of the Corporation or any Principal Competitor, on the other hand;

(E) any direct or indirect material interest in any material contract or agreement with the Corporation, any affiliate of the Corporation or any Principal Competitor (including, in any such case, any employment agreement, collective bargaining agreement or consulting agreement);

(F) any other information relating to such Proposing Person or any Associated Person that would be required to be disclosed in a proxy statement or other filing required to be made in connection with solicitations of proxies or consents by such Proposing Person for the election of any proposed nominee in a contested election or in support of business proposed to be brought before the meeting pursuant to Section 14(a) (or any successor provision) under the Exchange Act and the rules and regulations thereunder;

(G) a complete written description (which description shall include, in addition to all other information, information identifying all parties thereto) of (x) any plans or proposals

which such Proposing Person may have with respect to securities of the Corporation that would be required to be disclosed pursuant to Item 4 of Exchange Act Schedule 13D and (y) any agreement, arrangement or understanding (whether oral or in writing) between or among such Proposing Person and any of its Associated Persons in connection with the proposal of such nomination or other business, including without limitation any agreements that would be required to be disclosed pursuant to Item 5 or Item 6 of Exchange Act Schedule 13D (in the case of either clause (x) or (y), regardless of whether the requirement to file a Schedule 13D is applicable);

(H) a representation that the Record Stockholder is a holder of record of stock of the Corporation entitled to vote at such meeting and that the Record Stockholder (or a Qualified Representative (as defined in Section 1.11.3(d) of the Record Stockholder) intends to appear in person at the meeting to propose such business or nomination;

(I) a representation whether such Proposing Person or any other participant (as defined in Item 4 of Schedule 14A under the Exchange Act) intends (or is part of a group that intends) to engage in a solicitation (within the meaning of Exchange Act Rule 14a-1(l)) with respect to the nomination or other business and, if so, whether such solicitation will be conducted as an exempt solicitation as described in Rule 14a-2(b) under the Exchange Act, the name of each participant (as defined in Item 4 of Schedule 14A under the Exchange Act) in such solicitation and the amount of the cost of solicitation that has been and will be borne, directly or indirectly, by each participant in such solicitation and (x) in the case of a proposal of business other than nominations, whether such Proposing Person intends (or is part of a group that intends) to deliver, through means satisfying each of the conditions that would be applicable to the Corporation under either Rule 14a-16(a) or Rule 14a-16(n) of the Exchange Act, a proxy statement and form of proxy to holders of at least the percentage of the voting power of the stock required under applicable law to carry the proposal or (y) in the case of any solicitation that is subject to Rule 14a-19 of the Exchange Act, confirming that such Proposing Person or group will deliver, through means satisfying each of the conditions that would be applicable to the Corporation under either Rule 14a-16(a) or Rule 14a-16(n) of the Exchange Act, a proxy statement and form of proxy to holders of at least 67% of the voting power of the Corporation's stock entitled to vote generally in the election of directors, and/or (z) whether such Proposing Person intends (or is part of a group that intends) to otherwise solicit proxies from holders of the Corporation's stock in support of such proposal or nomination (for purposes of this clause (I), the term "holders" shall include, in addition to stockholders of record, any beneficial owners pursuant to Rule 14b-1 and Rule 14b-2 of the Exchange Act);

(J) a representation that immediately after soliciting the percentage of stockholders referred to in the representation required under clause (I) above, and in any event no later than the tenth (10th) day before such meeting of stockholders, such Proposing Person will provide the Corporation with documents, which may take the form of a certified statement and documentation from a proxy solicitor, specifically demonstrating that the necessary steps have been taken to deliver a proxy statement and form of proxy to holders of such percentage of the Corporation's stock;

(K) any proxy (other than a revocable proxy given in response to a public proxy solicitation made pursuant to, and in accordance with, the Exchange Act), contract, arrangement, or relationship pursuant to which the Proposing Person has a right to vote, directly or indirectly, any shares of any security of the Corporation; and

(L) such other information relating to any proposed item of business as the Corporation may reasonably require to determine whether such proposed item of business is a proper matter for stockholder action (the disclosures to be made pursuant to the foregoing clauses (iv) through (vi) are referred to as "***Disclosable Interests***"). For purposes hereof, "Disclosable Interests" shall not include any information with respect to the ordinary course business activities of any broker, dealer, commercial bank, trust company or other nominee who is a Proposing Person solely as a result of being the stockholder directed to prepare and submit the notice required by these Bylaws on behalf of a beneficial owner.

Notwithstanding anything in this Section 1.11 to the contrary, if any information or communication submitted pursuant to this Section 1.11 is inaccurate or incomplete in any material respect (as determined by the Board (or any authorized committee thereof)) such information shall be deemed not to have been provided in accordance with this Section 1.11. Upon written request of the Secretary of the Corporation, the Record Stockholder giving notice of an intent to nominate a candidate for election or propose other business shall provide, within five (5) business days after delivery of such request (or such longer period as may be specified in such request), (i) written verification, reasonably satisfactory to the Corporation, to demonstrate the accuracy of any information submitted and (ii) a written affirmation of any information submitted as of an earlier date. If such stockholder fails to provide such written verification or affirmation within such time period, the information as to which written verification or affirmation was requested may be deemed not to have been provided in accordance with this Section 1.11.

A Record Stockholder providing written notice required by this Section 1.11 will update and supplement such notice, and any other information provided to the Corporation, in writing, if necessary, so that the information provided or required to be provided in such notice is true and correct in all material respects as of (i) the close of business on the record date for determining stockholders entitled to notice of the meeting and (ii) the close of business on the fifth (5th) business day prior to the meeting and, in the event of any adjournment or postponement thereof, the close of business on the fifth (5th) business day prior to such adjourned or postponed meeting. In the case of an update and supplement pursuant to clause (i) of the foregoing sentence, such update and supplement shall be received by the Secretary of the Corporation at the principal executive office of the Corporation not later than five (5) business days after the later of the record date for determining stockholders entitled to notice of the meeting or the Public Announcement of such record date, and in the case of an update and supplement pursuant to clause (ii) of the foregoing sentence, such update and supplement shall be received by the Secretary of the Corporation at the principal executive office of the Corporation not later than two (2) business days prior to the date for the meeting, and, in the event of any adjournment or postponement thereof, two (2) business days prior to such adjourned or postponed meeting. In addition, any stockholder that provides notice pursuant to Rule 14a-19(b) promulgated under the Exchange Act shall notify the Secretary of the Corporation within two business days of any change in any Proposing Person's intent to solicit proxies in accordance with Rule 14a-19 promulgated under the Exchange Act. Upon request by the Corporation, if any stockholder making such a nomination provides notice pursuant to Rule 14a-19(b) promulgated under the Exchange Act, such stockholder shall deliver to the Corporation, not later than five business days prior to the applicable meeting, reasonable evidence that it has met the requirements of Rule 14a-19(a)(3) promulgated under the Exchange Act. The obligation to update and supplement as set forth in this Section 1.11 or any other section of these Bylaws shall not limit the Corporation's rights with respect to any deficiencies in any Record Stockholder's notice, extend any applicable deadlines hereunder or under any other provision of these Bylaws or enable or be

deemed to permit a Record Stockholder who has previously submitted notice hereunder or under any other provision of these Bylaws to amend or update any nomination or other business proposal or to submit any new nomination or other business proposal, including by changing or adding nominees, matters, business and or resolutions proposed to be brought before a meeting of stockholders.

(c) Notwithstanding anything in the second sentence of Section 1.11.1(b) of these Bylaws to the contrary, in the event that the number of directors to be elected to the Board at an annual meeting is increased and there is no Public Announcement by the Corporation naming all of the nominees proposed by the Board to be elected at such meeting or specifying the size of the increased Board at least ten (10) days prior to the last day a Record Stockholder may deliver a notice in accordance with Section 1.11.1(b) of these Bylaws, a Record Stockholder's notice required by Section 1.11.1(b) shall also be considered timely, but only with respect to nominees for any new positions created by such increase, if it shall be delivered to the Secretary of the Corporation at the principal executive office of the Corporation no later than the close of business on the tenth (10th) day following the day on which such Public Announcement is first made by the Corporation.

1.11.2. Special Meetings of Stockholders.

Only such business shall be conducted at a special meeting of stockholders as shall have been brought before the meeting pursuant to the Corporation's notice of such meeting (or any supplement thereto). Nominations of persons for election to the Board may be made at a special meeting of stockholders at which directors are to be elected pursuant to the Corporation's notice of such meeting (a) by or at the direction of the Board or any committee thereof or (b) *provided* that the Board has determined that directors shall be elected at such meeting, by any stockholder of the Corporation who is a stockholder of record at the time of the Corporation's giving of notice of the special meeting and at the time of the special meeting, who shall be entitled to vote at the meeting, who delivers notice thereof in writing setting forth the information required by Section 1.11.1 above (including, without limitation, all information required of any proposed nominees for director and each Proposing Person) and who complies with the other procedures set forth in this Section 1.11 in all applicable respects. For such purpose, all references in Section 1.11.1 to annual meetings shall be deemed to refer to special meetings and all references to Record Stockholders shall be deemed to refer to stockholders of record at the time of the Corporation's giving of notice of the special meeting, *provided* that to be timely, a notice of nomination with respect to a special meeting must be submitted (i) no earlier than the one hundred twentieth (120th) day prior to such special meeting and (ii) no later than the close of business on the later of the ninetieth (90th) day prior to such special meeting or the tenth (10th) day following the day on which Public Announcement is first made of the date of the special meeting and of the nominees proposed by the Board to be elected at such meeting. In no event shall an adjournment, recess or postponement of a special meeting commence a new time period (or extend any time period) for providing the notice as described above. A stockholder's notice given in accordance with this Section 1.11.2 must contain the names of the nominees for whom such stockholder (or beneficial owner, if any) intends to solicit proxies, and a stockholder shall not be entitled to make additional or substitute nominations following the expiration of the time periods set forth in this Section 1.11.2; *provided* that, in the event a stockholder's notice includes one or more substitute nominees, such stockholder must provide timely notice of such substitute nominee(s) in accordance with the provisions of this Section 1.11.2 (including, without limitation, satisfaction of all applicable informational requirements set forth in Section 1.11.1 above). For the avoidance of doubt, the number of nominees a stockholder may nominate for

election at the special meeting (or in the case of a stockholder giving the notice on behalf of a beneficial owner, the number of nominees a stockholder may nominate for election at the special meeting on behalf of such beneficial owner) shall not exceed the number of directors to be elected at such special meeting.

1.11.3. General.

(a) Except as otherwise required by law, only such persons who are nominated in accordance with the procedures set forth in this Section 1.11 shall be eligible to be elected at a meeting of stockholders and serve as directors and only such other business shall be conducted at a meeting of stockholders as shall have been brought before the meeting in accordance with the procedures set forth in this Section 1.11. Notwithstanding any other provision of these Bylaws, a stockholder (and any other Proposing Person or Associated Person) shall also comply with all applicable requirements of state law and the Exchange Act and the rules and regulations thereunder with respect to the matters set forth in this Section 1.11, and a violation thereof shall be deemed a violation of this Section 1.11; *provided*, *however*, that any references in these Bylaws to state law and the Exchange Act or the rules and regulations promulgated thereunder are not intended to and shall not limit any requirements applicable to nominations or proposals as to any other business to be considered pursuant to this Section 1.11. Except as otherwise provided by law or these Bylaws, the Board, the Chairperson of the Board, the chairperson of the meeting or any other person designated by the Board shall have the power and duty to determine whether a nomination or any other business proposed to be brought before the meeting was made or proposed, as the case may be, in accordance with the procedures set forth in this Section 1.11 (including whether a stockholder or beneficial owner provided all information and complied with all representations required under this Section 1.11 and/or complied with the requirements of Rule 14a-19 under the Exchange Act) and, if any proposed nomination or business is not in compliance herewith, to declare that such nomination shall not be presented for stockholder action at the meeting and shall be disregarded (and, in such case, that any such nominee shall be disqualified from standing for election or re-election) or such proposed business shall not be presented for stockholder action at the meeting or shall not be transacted, notwithstanding that votes and proxies in respect of any such nomination or other business may have been received by the Corporation. In furtherance of and not by way of limitation of the foregoing provisions of this Section 1.11, unless otherwise required by law, or otherwise determined by Board, the Chairperson of the Board, the chairperson of the meeting or any other person designated by the Board, (A) if the stockholder does not provide the information required under this Section 1.11 to the Corporation within the time frames specified herein or (B) if the stockholder (or a Qualified Representative of the stockholder (as defined below)) does not appear at the annual or special meeting of stockholders of the Corporation to present a nomination or proposed business, such nomination shall be disregarded (and any such nominee shall be disqualified from standing for election or re-election) and such proposed business shall not be transacted, notwithstanding that votes and proxies in respect of such nomination or other business may have been received by the Corporation. Without limiting any remedy available to the Corporation, a stockholder may not present nominations for director at a meeting of stockholders (and any such nominee shall be disqualified from standing for election or re-election), notwithstanding that proxies in respect of such vote may have been received by the Corporation, if such stockholder, any Proposing Person (as applicable) or any nominee for director (as applicable) acted contrary to any representation, certification or agreement required by this Section 1.11 otherwise failed to comply with this Section 1.11 (or with any applicable law, rule or regulation identified in this Section 1.11 including, without limitation, Rule 14a-19 promulgated under the Exchange Act) or provided false or misleading information to the Corporation.

(b) Nothing in this Section 1.11 shall be deemed to affect any rights of (a) stockholders to request inclusion of proposals in the Corporation's proxy statement pursuant to Rule 14a-8 under the Exchange Act or (b) the holders of any series of Preferred Stock to elect directors pursuant to any applicable provisions of the Certificate of Incorporation.

(c) Any stockholder directly or indirectly soliciting proxies from other stockholders must use a proxy card color other than white, which shall be reserved for the exclusive use by the Board.

(d) For purposes of this Section 1.11 the following definitions shall apply:

(i) "***affiliate***" shall have the meaning set forth in Rule 12b-2 of the Exchange Act;

(ii) "***Associated Person***" shall mean with respect to any subject stockholder or other person (including any proposed nominee) (1) any affiliate of such stockholder or other person, (2) any beneficial owner of shares of stock of the Corporation owned of record or beneficially by such stockholder or other person, (3) any associate (as defined in Rule 12b-2 of the Exchange Act) of such stockholder or other person, and (4) any person or entity who is a part of a "group" (as such term is used in Rule 13d-5 under the Exchange Act);

(iii) "***Proposing Person***" shall mean (1) the stockholder providing the notice of business proposed to be brought before an annual or special meeting or nomination of persons for election to the Board at a stockholder meeting, (2) the beneficial owner or beneficial owners, if different, on whose behalf the notice of business proposed to be brought before the annual or special meeting or nomination of persons for election to the Board at a stockholder meeting is made, and (3) if such stockholder or beneficial owner is an entity, each individual who is a director, executive officer, general partner or managing member of such entity or of any other entity that has or is part of a group that has control of such entity and each such other entity;

(iv) "***Public Announcement***" shall mean disclosure in a press release reported by a national news service or in a document publicly filed by the Corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the Exchange Act;

(v) to be considered a "***Qualified Representative***" of a stockholder, a person must be a duly authorized officer, manager or partner of such stockholder or must be authorized by a writing executed by such stockholder or an electronic transmission delivered by such stockholder to act for such stockholder as a proxy at the meeting of stockholders and such person must produce such writing or electronic transmission, or a reliable reproduction thereof, to the Corporation prior to the making of such nomination or proposal at such meeting (and in any event not less than five (5) business days before the meeting); *provided*, *however*, that if the stockholder is (1) a general or limited partnership, any general partner or person who functions as a general partner of the general or limited partnership or who controls the general or limited partnership shall be deemed a Qualified Representative, (2) a corporation or a limited liability company, any officer or person who functions as the substantial equivalent of an officer of the corporation or limited liability company or any officer, director, general partner or person who

functions as an officer, director or general partner of any entity ultimately in control of the corporation or limited liability company shall be deemed a Qualified Representative or (3) a trust, any trustee of such trust shall be deemed a Qualified Representative. The Secretary of the Corporation, or any other person who shall be appointed to serve as secretary of the meeting, may require, on behalf of the Corporation, reasonable and appropriate documentation to verify the status of a person purporting to be a "Qualified Representative" for purposes hereof;

(vi) the "***close of business***" shall mean 5:00 p.m. local time at the principal executive offices of the Corporation on any calendar day, whether or not the day is a business day; and

(vii) shares shall be treated as "***beneficially owned***" by a person if the person beneficially owns such shares, directly or indirectly, pursuant to the meaning for such term under Section 13(d) of the Exchange Act and Regulations 13D and 13G thereunder or has or shares pursuant to any agreement, arrangement or understanding (whether or not in writing): (A) the right to acquire such shares (whether such right is exercisable immediately or only after the passage of time or the fulfillment of a condition or both); (B) the right to vote such shares, alone or as part of a group; *provided*, *however*, that a person shall not be deemed to beneficially own such shares if the right to vote such shares arises solely from a revocable proxy or consent given to such person in response to a public proxy or consent solicitation made pursuant to and in accordance with applicable rules and regulations promulgated under the Exchange Act; and/or (C) investment power with respect to such shares, including the power to dispose of, or to direct the disposition of, such shares.

1.11.4. Delivery to the Corporation. Whenever this Section 1.11 requires one or more persons (including a record or beneficial owner of stock) to deliver a document or information (other than a document authorizing another person to act for a stockholder by proxy at a meeting of stockholders pursuant to Section 212 of the DGCL) to the Corporation or any officer, employee or agent thereof (including any notice, request, questionnaire, revocation, representation or other document or agreement), the Corporation shall not be required to accept delivery of such document or information unless the document or information is in writing exclusively (and not in an electronic transmission) and delivered exclusively by hand (including, without limitation, overnight courier service) or by certified or registered mail, return receipt requested. For the avoidance of doubt, the Corporation expressly opts out of Section 116 of the DGCL with respect to the delivery of information and documents (other than a document authorizing another person to act for a stockholder by proxy at a meeting of stockholders pursuant to Section 212 of the DGCL) to the Corporation required by this Article I.

ARTICLE II: BOARD OF DIRECTORS

Section 2.1: Number; Qualifications. The total number of directors constituting the Board (the "***Whole Board***") shall be fixed from time to time in the manner set forth in the Certificate of Incorporation. No decrease in the authorized number of directors constituting the Whole Board shall shorten the term of any incumbent director. Directors need not be stockholders of the Corporation. The Certificate of Incorporation or these Bylaws may prescribe other qualifications for directors.

Section 2.2: Election; Resignation; Removal; Vacancies. Election of directors need not be by written ballot, unless otherwise directed by the Board. Subject to the special rights of holders of any series of Preferred Stock to elect directors and as set forth in the Certificate of Incorporation, the Board shall be divided into three classes, designated as Class I, Class II and Class III. Each class shall consist, as nearly as may be possible, of one-third of the Whole Board. Each director shall hold office until the annual meeting at which such director's term expires and until such director's successor is elected and qualified or until such director's earlier death, resignation, disqualification, or removal. Any director may resign by delivering a resignation in writing or by electronic transmission to the Corporation at its principal office or to the Chairperson of the Board, the Chief Executive Officer, or the Secretary. Such resignation shall be effective upon delivery unless it is specified to be effective at a later time or upon the happening of an event. Subject to the special rights of holders of any series of Preferred Stock to elect directors, directors may be removed only as provided by the Certificate of Incorporation and applicable law. All vacancies occurring in the Board and any newly created directorships resulting from any increase in the authorized number of directors shall be filled in the manner set forth in the Certificate of Incorporation.

Section 2.3: Regular Meetings. Regular meetings of the Board may be held at such places (if any), within or without the State of Delaware, and at such times as the Board may from time to time determine. Notice of regular meetings need not be given if the date, times and places (if any) thereof are fixed by resolution of the Board.

Section 2.4: Special Meetings. Special meetings of the Board may be called by the Chairperson of the Board, the Chief Executive Officer, the Lead Independent Director or a majority of the members of the Board then in office and may be held at any time, date or place (if any), within or without the State of Delaware, as the person or persons calling the meeting shall fix. Notice of the time, date and place of such meeting shall be given, orally, in writing or by electronic transmission (including electronic mail), by the person or persons calling the meeting to all directors at least four (4) days before the meeting if the notice is mailed, or at least twenty-four (24) hours before the meeting if such notice is given by telephone, hand delivery, telegram, telex, mailgram, facsimile, electronic mail or other means of electronic transmission, or on such shorter notice as the person or persons calling such meeting may deem necessary or appropriate in the circumstances. Any oral notice given personally or by telephone may be communicated either to the director or to a person at the office of the director who the person giving the notice has reason to believe will promptly communicate it to the director. The notice need not specify the purpose of the meeting or the place of the meeting if the meeting is to be held at the principal executive office of the Corporation or by conference telephone or other communication equipment. Unless otherwise indicated in the notice, any and all business may be transacted at a special meeting.

Section 2.5: Remote Meetings Permitted. Members of the Board, or any committee of the Board, may participate in a meeting of the Board or such committee by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting pursuant to conference telephone or other communications equipment shall constitute presence in person at such meeting.

Section 2.6: Quorum; Vote Required for Action. At all meetings of the Board, a majority of the Whole Board shall constitute a quorum for the transaction of business. If a quorum shall fail to attend any meeting, a majority of those present may adjourn the meeting to another place (if any), date or time without further notice thereof. The chairperson of the meeting

may adjourn the meeting to another place (if any), date or time without further notice thereof whether or not a quorum is present. Except as otherwise provided herein or in the Certificate of Incorporation, or as required by law, the affirmative vote of a majority of the directors present at a meeting at which a quorum is present shall be the act of the Board.

Section 2.7: Organization. Meetings of the Board shall be presided over by (a) the Chairperson of the Board, or (b) in such person's absence, the Lead Independent Director, or (c) in such person's absence, by the Chief Executive Officer (if also a director), or (d) in such person's absence, by a chairperson chosen by the Board at the meeting. The Secretary shall act as secretary of the meeting, but in such person's absence, the chairperson of the meeting may appoint any person to act as secretary of the meeting.

Section 2.8: Unanimous Action by Directors in Lieu of a Meeting. Any action required or permitted to be taken at any meeting of the Board, or of any committee thereof, may be taken without a meeting if all members of the Board or such committee, as the case may be, consent thereto in writing or by electronic transmission. After an action is taken, the consent or consents relating thereto shall be filed with the minutes of proceedings of the Board or committee, as applicable, in the same paper or electronic form as the minutes are maintained.

Section 2.9: Powers. Except as otherwise provided by the Certificate of Incorporation or the DGCL, the business and affairs of the Corporation shall be managed by or under the direction of the Board.

Section 2.10: Compensation of Directors. Members of the Board, as such, may receive, pursuant to a resolution of the Board, fees and other compensation and reimbursement for their services as directors, including without limitation their services as members of committees of the Board.

Section 2.11: Confidentiality. Except as permitted by Delaware Law and any written agreement entered into with the Corporation, each director shall maintain the confidentiality of, and shall not share with any third party person or entity (including third parties that originally sponsored, nominated or designated such director (the "***Sponsoring Party***")), any non-public information learned in his or her capacity as a director, including communications among Board members in their capacities as directors. The Board may adopt a board confidentiality policy further implementing and interpreting this bylaw (a "***Board Confidentiality Policy***").

ARTICLE III: COMMITTEES

Section 3.1: Committees. The Board may designate one or more committees, each committee to consist of one or more of the directors of the Corporation. The Board may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of the committee, the member or members thereof present at any meeting of such committee who are not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another member of the Board to act at the meeting in place of any such absent or disqualified member. Any such committee, to the extent provided in a resolution of the Board, shall have and may exercise all the powers and authority of the Board in the management of the business and affairs of the Corporation and may authorize the seal of the Corporation to be affixed to all papers that may require it; but no such committee shall have the power or authority in reference to the following matters: (a) approving,

adopting, or recommending to the stockholders any action or matter (other than the election or removal of directors) expressly required by the DGCL to be submitted to stockholders for approval or (b) adopting, amending or repealing any bylaw of the Corporation.

Section 3.2: Committee Rules. Each committee shall keep records of its proceedings and make such reports as the Board may from time to time request. Unless the Board otherwise provides, each committee designated by the Board may make, alter and repeal rules for the conduct of its business and shall act in accordance therewith, except as otherwise provided herein or required by law. In the absence of such rules, each committee shall conduct its business in the same manner as the Board conducts its business pursuant to Article II of these Bylaws. Except as otherwise provided in the Certificate of Incorporation, these Bylaws or the resolution of the Board designating the committee, any committee may create one or more subcommittees, each subcommittee to consist of one or more members of the committee, and may delegate to any such subcommittee any or all of the powers and authority of the committee.

ARTICLE IV: OFFICERS; CHAIRPERSON; LEAD INDEPENDENT DIRECTOR

Section 4.1: Generally. The officers of the Corporation shall consist of a Chief Executive Officer (who may also be the Chairperson of the Board and/or the President), a President, a Secretary and a Treasurer and may consist of such other officers, including, without limitation, a Chief Financial Officer, and one or more Vice Presidents, as may from time to time be appointed by the Board (or its designee). All officers shall be elected by the Board or its designee; *provided*, *however*, that the Board may empower the Chief Executive Officer of the Corporation to appoint any officer other than the Chief Executive Officer, the President, the Chief Financial Officer or the Treasurer. Except as otherwise provided by law, by the Certificate of Incorporation or these Bylaws or by the resolution of the Board electing any officer, each officer shall hold office until such officer's successor is duly elected and qualified or until such officer's earlier resignation, death, disqualification or removal. Any number of offices may be held by the same person. Any officer may resign by delivering a resignation in writing or by electronic transmission to the Corporation at its principal office or to the Chairperson of the Board, the Chief Executive Officer, or the Secretary. Such resignation shall be effective upon delivery unless it is specified to be effective at some later time or upon the happening of some later event. Any vacancy occurring in any office of the Corporation by death, resignation, removal or otherwise may be filled by the Board (or its designee) and the Board may, in its discretion, leave unfilled, for such period as it may determine, any offices. Each such successor shall hold office for the unexpired term of such officer's predecessor and until a successor is duly elected and qualified or until such officer's earlier resignation, death, disqualification or removal. The Board may determine to leave any office vacant.

Section 4.2: Chief Executive Officer. Subject to the control of the Board and such supervisory powers, if any, as may be given by the Board, the powers and duties of the Chief Executive Officer of the Corporation shall include:

(i) to act as the general manager and, subject to the control of the Board, to have general supervision, direction and control of the business and affairs of the Corporation;

(ii) subject to the Certificate of Incorporation and Section 1.2 of these Bylaws, to call special meetings of the stockholders to be held at such times and, subject to the limitations prescribed by law or by these Bylaws, at such places (if any) as he or she shall deem proper; and

(iii) to affix the signature of the Corporation to all deeds, conveyances, mortgages, guarantees, leases, obligations, bonds, certificates and other papers and instruments in writing which have been authorized by the Board or which, in the judgment of the Chief Executive Officer, should be executed on behalf of the Corporation; to sign certificates for shares of stock of the Corporation (if any); and, subject to the direction of the Board, to have general charge of the property of the Corporation and to supervise and control all officers, agents and employees of the Corporation.

The person holding the office of President shall be the Chief Executive Officer of the Corporation unless the Board shall designate another officer to be the Chief Executive Officer.

Section 4.3: Chairperson of the Board. Subject to the provisions of Section 2.7 of these Bylaws, the Chairperson of the Board shall have the power to preside at all meetings of the Board and shall have such other powers and duties as provided in these Bylaws and as the Board may from time to time prescribe.

Section 4.4: Lead Independent Director. The Board may, in its discretion, elect a lead independent director from among its members that are Independent Directors (as defined below) (such director, the "***Lead Independent Director***"), by the vote of the Independent Directors. He or she shall preside at all meetings at which the Chairperson of the Board is not present and shall exercise such other powers and duties as may from time to time be assigned to him or her by the Board or as prescribed by these Bylaws. For purposes of these Bylaws, "***Independent Director***" has the meaning ascribed to such term under the rules of the exchange upon which the Corporation's Common Stock is primarily traded.

Section 4.5: President. The person holding the office of Chief Executive Officer shall be the President of the Corporation unless the Board shall have designated one individual as the President and a different individual as the Chief Executive Officer of the Corporation. Subject to the provisions of these Bylaws and to the direction of the Board, and subject to the supervisory powers of the Chief Executive Officer (if the Chief Executive Officer is an officer other than the President), and subject to such supervisory powers and authority as may be given by the Board to the Chairperson of the Board, and/or to any other officer, the President shall have the responsibility for the general management and control of the business and affairs of the Corporation and the general supervision and direction of all of the officers, employees and agents of the Corporation (other than the Chief Executive Officer, if the Chief Executive Officer is an officer other than the President) and shall perform all duties and have all powers that are commonly incident to the office of President or that are delegated to the President by the Board.

Section 4.6: Chief Financial Officer. The person holding the office of Chief Financial Officer shall be the Treasurer of the Corporation unless the Board shall have designated another officer as the Treasurer of the Corporation. Subject to the direction of the Board and the Chief Executive Officer, the Chief Financial Officer shall perform all duties and have all powers that are commonly incident to the office of Chief Financial Officer, or as the Board may from time to time prescribe.

Section 4.7: Treasurer. The person holding the office of Treasurer shall have custody of all monies and securities of the Corporation. The Treasurer shall make such disbursements of the funds of the Corporation as are authorized and shall render from time to time an account of all such transactions. The Treasurer shall also perform such other duties and have such other powers

as are commonly incident to the office of Treasurer, or as the Board or the Chief Executive Officer may from time to time prescribe.

Section 4.8: Vice President. Each Vice President shall have all such powers and duties as are commonly incident to the office of Vice President or that are delegated to him or her by the Board or the Chief Executive Officer. A Vice President may be designated by the Board to perform the duties and exercise the powers of the Chief Executive Officer or President in the event of the Chief Executive Officer's or President's absence or disability.

Section 4.9: Secretary. The Secretary shall issue or cause to be issued all authorized notices for, and shall keep, or cause to be kept, minutes of all meetings of the stockholders and the Board. The Secretary shall have charge of the corporate minute books and similar records and shall perform such other duties and have such other powers as are commonly incident to the office of Secretary, or as the Board or the Chief Executive Officer may from time to time prescribe.

Section 4.10: Delegation of Authority. The Board may from time to time delegate the powers or duties of any officer of the Corporation to any other officer or officers or agent or agents of the Corporation, notwithstanding any provision hereof.

Section 4.11: Removal. Any officer of the Corporation shall serve at the pleasure of the Board and may be removed at any time, with or without cause, by the Board (or its designee); *provided* that if the Board has empowered the Chief Executive Officer to appoint any officer of the Corporation, then such officer may also be removed by the Chief Executive Officer. Such removal shall be without prejudice to the contractual rights of such officer, if any, with the Corporation and an election of an officer shall not of itself create contractual rights.

Section 4.12: Signature Authority. Unless otherwise determined by the Board or otherwise provided by law or these Bylaws, contracts, evidences of indebtedness and other instruments or documents of the Corporation may be executed, signed or endorsed: (i) by the Chief Executive Officer; or (ii) by other officers of the Corporation, in each case only with regard to such instruments or documents that pertain to or relate to such person's duties or business functions.

ARTICLE V: STOCK

Section 5.1: Certificates; Uncertificated Shares. The shares of capital stock of the Corporation shall be uncertificated shares; provided, however, that the resolution of the Board that the shares of capital stock of the Corporation shall be uncertificated shares shall not apply to shares represented by a certificate until such certificate is surrendered to the Corporation (or the transfer agent or registrar, as the case may be). Notwithstanding the foregoing, the Board may provide by resolution or resolutions that some or all of any or all classes or series of its stock shall be certificated shares. Every holder of stock represented by certificates shall be entitled to have a certificate signed by , or in the name of, the Corporation by any two authorized officers of the Corporation, including without limitation the Chief Executive Officer and Chief Financial Officer representing the number of shares registered in certificate form. Any or all of the signatures on the certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by

the Corporation with the same effect as if such person were an officer, transfer agent or registrar at the date of issue.

Section 5.2: Lost, Stolen or Destroyed Stock Certificates; Issuance of New Certificates or Uncertificated Shares. The Corporation may issue a new certificate of stock or uncertificated shares in the place of any certificate previously issued by it, alleged to have been lost, stolen or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen or destroyed, and the Corporation may require the owner of the lost, stolen or destroyed certificate, or such owner's legal representative, to agree to indemnify the Corporation and/or to give the Corporation a bond sufficient to indemnify it, against any claim that may be made against it on account of the alleged loss, theft or destruction of any such certificate or the issuance of such new certificate or uncertificated shares.

Section 5.3: Other Regulations. Subject to applicable law, the Certificate of Incorporation and these Bylaws, the issue, transfer, conversion and registration of shares represented by certificates and of uncertificated shares shall be governed by such other regulations as the Board may establish.

ARTICLE VI: INDEMNIFICATION

Section 6.1: Indemnification of Officers and Directors. Each person who was or is made a party to, or is threatened to be made a party to, or is involved in any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative, legislative, investigative or any other type whatsoever (a "**Proceeding**"), by reason of the fact that such person (or a person of whom such person is the legal representative), is or was a director or officer of the Corporation or, while serving as a director or officer of the Corporation, is or was serving at the request of the Corporation as a director, officer, employee, agent or trustee of another corporation, or of a partnership, joint venture, trust or other enterprise, including service with respect to employee benefit plans (for purposes of this Article VI, an "**Indemnitee**"), whether the basis of such proceeding is alleged action in an official capacity while serving as a director, officer, employee, agent or trustee or in any other capacity while serving as a director, officer, employee, agent or trustee, shall be indemnified and held harmless by the Corporation to the fullest extent permitted by the DGCL as the same exists or may hereafter be amended (but, in the case of any such amendment, only to the extent that such amendment permits the Corporation to provide broader indemnification rights than such law permitted the Corporation to provide prior to such amendment), against all expenses, liability and loss (including attorneys' fees, judgments, fines, ERISA excise taxes and penalties and amounts paid or to be paid in settlement) reasonably incurred or suffered by such Indemnitee in connection therewith, provided such Indemnitee acted in good faith and in a manner that the Indemnitee reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal Proceeding, had no reasonable cause to believe the Indemnitee's conduct was unlawful. Such indemnification shall continue as to an Indemnitee who has ceased to be a director or officer of the Corporation and shall inure to the benefit of such Indemnitees' heirs, executors and administrators. Notwithstanding the foregoing, subject to Section 6.5 of these Bylaws, the Corporation shall indemnify any such Indemnitee seeking indemnity in connection with a Proceeding (or part thereof) initiated by such Indemnitee only if such Proceeding (or part thereof) was authorized by the Board or such indemnification is authorized by an agreement approved by the Board.

Section 6.2: Advance of Expenses. The Corporation shall pay all expenses (including attorneys' fees) incurred by an Indemnitee in defending any Proceeding in advance of its final disposition; provided, however, that if the DGCL then so requires, the advancement of such expenses shall be made only upon delivery to the Corporation of an undertaking, by or on behalf of such Indemnitee, to repay such amounts if it shall ultimately be determined that such Indemnitee is not entitled to be indemnified under this Article VI or otherwise.

Section 6.3: Non-Exclusivity of Rights. The rights conferred on any person in this Article VI shall not be exclusive of any other right that such person may have or hereafter acquire under any statute, provision of the Certificate of Incorporation, Bylaws, agreement, vote or consent of stockholders or disinterested directors, or otherwise. Additionally, nothing in this Article VI shall limit the ability of the Corporation, in its discretion, to indemnify or advance expenses to persons whom the Corporation is not obligated to indemnify or advance expenses pursuant to this Article VI.

Section 6.4: Indemnification Contracts. The Board is authorized to cause the Corporation to enter into indemnification contracts with any director, officer, employee or agent of the Corporation, or any person serving at the request of the Corporation as a director, officer, employee, agent or trustee of another corporation, partnership, joint venture, trust or other enterprise, including employee benefit plans, providing indemnification or advancement rights to such person. Such rights may be greater than those provided in this Article VI.

Section 6.5: Right of Indemnitee to Bring Suit. The following shall apply to the extent not in conflict with any indemnification contract provided for in Section 6.4 of these Bylaws.

i. Right to Bring Suit. If a claim under Section 6.1 or 6.2 of these Bylaws is not paid in full by the Corporation within sixty (60) days after a written claim has been received by the Corporation, except in the case of a claim for an advancement of expenses, in which case the applicable period shall be twenty (20) days, the Indemnitee may at any time thereafter bring suit against the Corporation to recover the unpaid amount of the claim. If successful in whole or in part in any such suit, or in a suit brought by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the Indemnitee shall be entitled to be paid, to the fullest extent permitted by law, the expense of prosecuting or defending such suit. In (i) any suit brought by the Indemnitee to enforce a right to indemnification hereunder (but not in a suit brought by the Indemnitee to enforce a right to an advancement of expenses) it shall be a defense that, and (ii) any suit brought by the Corporation to recover an advancement of expenses pursuant to an undertaking, the Corporation shall be entitled to recover such expenses upon a final adjudication that, the Indemnitee has not met any applicable standard of conduct which makes it permissible under the DGCL (or other applicable law) for the Corporation to indemnify the Indemnitee for the amount claimed.

ii. Effect of Determination. Neither the absence of a determination by the Corporation (including any of its directors, independent legal counsel or its stockholders) prior to the commencement of such suit that indemnification of the Indemnitee is proper in the circumstances because the Indemnitee has met the applicable standard of conduct set forth in applicable law, nor an actual determination by the Corporation (including any of its directors, independent legal counsel or its stockholders) that the Indemnitee has not met such applicable standard of conduct, shall create a presumption that the Indemnitee has not met the applicable standard of conduct or, in the case of such a suit brought by the Indemnitee, be a defense to such suit.

iii. Burden of Proof. In any suit brought by the Indemnitee to enforce a right to indemnification or to an advancement of expenses hereunder, or brought by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the burden of proving that the Indemnitee is not entitled to be indemnified, or to such advancement of expenses, under this Article VI or otherwise, shall be on the Corporation.

Section 6.6: Nature of Rights. The rights conferred upon Indemnitees in this Article VI shall be contract rights and such rights shall continue as to an Indemnitee who has ceased to be a director, officer or trustee and shall inure to the benefit of the Indemnitee's heirs, executors and administrators. Any amendment, repeal or modification of any provision of this Article VI that adversely affects any right of an Indemnitee or an Indemnitee's successors shall be prospective only, and shall not adversely affect any right or protection conferred on a person pursuant to this Article VI with respect to any Proceeding involving any occurrence or alleged occurrence of any action or omission to act that took place prior to such amendment, repeal or modification.

Section 6.7: Insurance. The Corporation may purchase and maintain insurance, at its expense, to protect itself and any director, officer, employee or agent of the Corporation or another corporation, partnership, joint venture, trust or other enterprise against any expense, liability or loss, whether or not the Corporation would have the power to indemnify such person against such expense, liability or loss under the DGCL.

ARTICLE VII: NOTICES

Section 7.1: Notice.

7.1.1. Notice to Stockholders. Without limiting the manner by which notice otherwise may be given effectively to stockholders, any notice to stockholders given by the Corporation under any provision of the DGCL, the Certificate of Incorporation or these Bylaws may be given in writing directed to the stockholder's mailing address (or by electronic transmission directed to the stockholder's electronic mail address, as applicable) as it appears on the records of the Corporation. Notice shall be given (i) if mailed, when deposited in the United States mail, postage prepaid, (ii) if delivered by courier service, the earlier of when the notice is received or left at the stockholder's address, or (iii) if given by electronic mail, when directed to such stockholder's electronic mail address (unless the stockholder has notified the Corporation in writing or by electronic transmission of an objection to receiving notice by electronic mail or such notice is prohibited by the DGCL to be given by electronic transmission). A notice by electronic mail must include a prominent legend that the communication is an important notice regarding the Corporation. A notice by electronic mail will include any files attached thereto and any information hyperlinked to a website if such electronic mail includes the contact information of an officer or agent of the Corporation who is available to assist with accessing such files or information. Any notice to stockholders given by the Corporation under any provision of the DGCL, the Certificate of Incorporation or these Bylaws provided by means of electronic transmission (other than any such notice given by electronic mail) may only be given in a form consented to by such stockholder, and any such notice by such means of electronic transmission shall be deemed to be given as provided by the DGCL. The terms "electronic mail," "electronic mail address," "electronic signature" and "electronic transmission" as used herein shall have the meanings ascribed thereto in the DGCL.

7.1.2. Notice to Directors. Except as otherwise provided herein or permitted by applicable law, notices to any director may be in writing and delivered personally or mailed to such director

at such director's address appearing on the books of the Corporation, or may be given by telephone or by any means of electronic transmission (including, without limitation, electronic mail) directed to an address for receipt by such director of electronic transmissions appearing on the books of the Corporation.

7.1.3. Affidavit of Giving Notice. An affidavit of the Secretary or an Assistant Secretary or of the transfer agent or other agent of the Corporation that the notice has been given in writing or by a form of electronic transmission shall, in the absence of fraud, be prima facie evidence of the facts stated therein.

Section 7.2: Waiver of Notice. Whenever notice is required to be given under any provision of the DGCL, the Certificate of Incorporation or these Bylaws, a written waiver of notice, signed by the person entitled to notice, or waiver by electronic transmission by such person, whether before or after the time stated therein, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting at the beginning of the meeting to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders, directors or members of a committee of directors need be specified in any waiver of notice.

ARTICLE VIII: INTERESTED DIRECTORS

Section 8.1: Interested Directors. No contract or transaction between the Corporation and one or more of its directors or officers, or between the Corporation and any other corporation, partnership, association or other organization in which one or more of its directors or officers are members of the board of directors or officers, or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board or committee thereof that authorizes the contract or transaction, or solely because such director's or officer's votes are counted for such purpose, if: (a) the material facts as to such director's or officer's relationship or interest and as to the contract or transaction are disclosed or are known to the Board or the committee, and the Board or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum; (b) the material facts as to the director's or officer's relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or (c) the contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified by the Board, a committee thereof, or the stockholders.

Section 8.2: Quorum. Interested directors may be counted in determining the presence of a quorum at a meeting of the Board or of a committee which authorizes the contract or transaction.

ARTICLE IX: MISCELLANEOUS

Section 9.1: Fiscal Year. The fiscal year of the Corporation shall be determined by resolution of the Board.

Section 9.2: Seal. The Board may provide for a corporate seal, which may have the name of the Corporation inscribed thereon and shall otherwise be in such form as may be approved from time to time by the Board.

Section 9.3: Form of Records. Any records administered by or on behalf of the Corporation in the regular course of its business, including its stock ledger, books of account and minute books, may be kept on or by means of, or be in the form of any other information storage device or method, or one or more electronic networks or databases (including one or more distributed electronic networks or databases), *provided* that the records so kept can be converted into clearly legible paper form within a reasonable time. The Corporation shall convert any records so kept into clearly legible paper form upon the request of any person entitled to inspect such records pursuant to any provision of the DGCL.

Section 9.4: Reliance Upon Books and Records. A member of the Board, or a member of any committee designated by the Board shall, in the performance of such person's duties, be fully protected in relying in good faith upon the books and records of the Corporation and upon such information, opinions, reports or statements presented to the Corporation by any of the Corporation's officers or employees, or committees of the Board, or by any other person as to matters the member reasonably believes are within such other person's professional or expert competence and who has been selected with reasonable care by or on behalf of the Corporation.

Section 9.5: Certificate of Incorporation Governs. In the event of any conflict between the provisions of the Certificate of Incorporation and Bylaws, the provisions of the Certificate of Incorporation shall govern.

Section 9.6: Severability. If any provision of these Bylaws shall be held to be invalid, illegal, unenforceable or in conflict with the provisions of the Certificate of Incorporation, then such provision shall nonetheless be enforced to the maximum extent possible consistent with such holding and the remaining provisions of these Bylaws (including without limitation, all portions of any section of these Bylaws containing any such provision held to be invalid, illegal, unenforceable or in conflict with the Certificate of Incorporation, that are not themselves invalid, illegal, unenforceable or in conflict with the Certificate of Incorporation) shall remain in full force and effect.

Section 9.7: Time Periods. In applying any provision of these Bylaws which requires that an act be done or not be done a specified number of days prior to an event or that an act be done during a period of a specified number of days prior to an event, calendar days shall be used (unless otherwise required by these Bylaws), the day of the doing of the act shall be excluded, and the day of the event shall be included.

ARTICLE X: AMENDMENT

Notwithstanding any other provision of these Bylaws, any alteration, amendment or repeal of these Bylaws, and any adoption of new Bylaws, shall require the approval of the Board or the stockholders of the Corporation as expressly provided in the Certificate of Incorporation.

ARTICLE XI: EXCLUSIVE FORUM

Unless the Corporation consents in writing to the selection of an alternative forum (an "***Alternative Forum Consent***"), the Court of Chancery of the State of Delaware (or, if the Court

of Chancery does not have jurisdiction, the federal district court for the District of Delaware) shall, to the fullest extent permitted by law, be the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim of breach of a fiduciary duty owed by, or other wrongdoing by, any director, stockholder, officer or other employee or agent of the Corporation to the Corporation or the Corporation's stockholders, (iii) any action asserting a claim against the Corporation arising pursuant to any provision of the DGCL or the Certificate of Incorporation or these Bylaws (as they may be amended from time to time), (iv) any action to interpret, apply, enforce or determine the validity of the Certificate of Incorporation of the Corporation or these Bylaws or (v) any action asserting a claim governed by the internal affairs doctrine.

Subject to the foregoing paragraph, unless the Corporation consents in writing to the selection of an alternative forum, the federal district courts of the United States of America shall, to the fullest extent permitted by law, be the sole and 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***").

Any person or entity purchasing or otherwise acquiring or holding any interest in any security of the Corporation shall be deemed to have notice of and consented to the provisions of this Article XI. Failure to enforce the foregoing provisions would cause the Corporation irreparable harm and the Corporation shall be entitled to equitable relief, including injunctive relief and specific performance, to enforce the foregoing provisions. If any action the subject matter of which is within the scope of this Article XI is filed in a court other than the applicable court required under this Article XI (a "***Foreign Action***") by or in the name of any stockholder, such stockholder shall be deemed to have consented to (i) the personal jurisdiction of the Delaware Court of Chancery (or the federal district court for the District of Delaware or, in the case of a cause of action arising under the Securities Act, the federal district courts of the United States of America) in connection with any action brought in any such court to enforce this Article XI and (ii) have service of process made upon such stockholder in any such action by service upon such stockholder's counsel in the Foreign action as agent for such stockholder. The existence of any prior Alternative Forum Consent shall not act as a waiver of the Corporation's ongoing consent right as set forth above in this Article XI with respect to any current or future actions or proceedings. If any provision of this Article XI shall be held to be invalid, illegal or unenforceable as applied to any person or entity or circumstance for any reason whatsoever, then, to the fullest extent permitted by law, the validity, legality and enforceability of such provision in any other circumstance and of the remaining provisions of this Article XI (including, without limitation, each portion of any sentence of this Article XI containing any such provision held to be invalid, illegal or unenforceable that is not itself held to be invalid, illegal or unenforceable) and the application of such provision to other persons or entities or circumstances shall not in any way be affected or impaired thereby.

EXHIBIT 31.1

CERTIFICATIONS OF CHIEF EXECUTIVE OFFICER

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

OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED,

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

I, KR Sridhar, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the quarter period ended June 30, 2024 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: August 8, 2024

By: /s/ KR Sridhar

KR Sridhar
President and Chief Executive Officer
(Principal Executive Officer)

EXHIBIT 31.2

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

I, Daniel Berenbaum, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the quarter period ended June 30, 2024 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: August 8, 2024

By: /s/ Daniel Berenbaum
Daniel Berenbaum
Chief Financial Officer
(Principal Financial and Accounting Officer)

EXHIBIT 32.1

CERTIFICATIONS OF CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF
THE SARBANES-OXLEY ACT OF 2002

The following certifications are hereby made in connection with the Quarterly Report on Form 10-Q for the quarter period ended June 30, 2024 of Bloom Energy Corporation (the "Company") as filed with the Securities and Exchange Commission on the date hereof (the "Report"):

I, KR Sridhar, Founder, Chief Executive Officer, Chairman and Director, hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

1. The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

ate: August 8, 2024

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

I, Daniel Berenbaum, Chief Financial Officer, hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

1. The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: August 8, 2024

By: /s/ Daniel Berenbaum
Daniel Berenbaum
Chief Financial Officer
(Principal Financial and Accounting Officer)