
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

FORM 10-Q

- ☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the quarterly period ended **March 31, 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: 000-26966



ADVANCED ENERGY INDUSTRIES, INC.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	84-0846841 (I.R.S. Employer Identification No.)
1595 Wynkoop Street, Suite 800 , Denver , Colorado (Address of principal executive offices)	80202 (Zip Code)
(970) 407-6626 (Registrant's telephone number, including area code)	

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

Title of each class Common Stock, \$0.001 par value	Trading Symbol(s) AEIS	Name of each exchange on which registered Nasdaq Global Select Market
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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 ☒

As of April 26, 2024, there were 37,442,660 shares of the registrant's common stock, par value \$0.001 per share, outstanding.

ADVANCED ENERGY INDUSTRIES, INC.
FORM 10-Q
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PART I FINANCIAL INFORMATION
ITEM 1. UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS

ADVANCED ENERGY INDUSTRIES, INC.
Unaudited Consolidated Balance Sheets
(In thousands, except per share amounts)

	March 31, 2024	December 31, 2023
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 1,017,780	\$ 1,044,556
Accounts receivable, net	247,510	282,430
Inventories	361,337	336,137
Other current assets	44,990	48,771
Total current assets	1,671,617	1,711,894
Property and equipment, net	175,453	167,665
Operating lease right-of-use assets	106,167	95,432
Other assets	135,627	136,448
Intangible assets, net	154,390	161,478
Goodwill	280,834	283,840
TOTAL ASSETS	\$ 2,524,088	\$ 2,556,757
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 137,934	\$ 141,850
Accrued payroll and employee benefits	49,384	73,595
Other accrued expenses	60,094	66,662
Customer deposits and other	13,531	15,997
Current portion of long-term debt	20,000	20,000
Current portion of operating lease liabilities	17,049	17,744
Total current liabilities	297,992	335,848
Long-term debt, net	891,495	895,679
Operating lease liabilities	99,853	89,330
Pension benefits	48,567	49,135
Other long-term liabilities	43,298	42,583
Total liabilities	1,381,205	1,412,575
Commitments and contingencies (Note 15)		
Stockholders' equity:		
Preferred stock, \$ 0.001 par value, 1,000 shares authorized, none issued and outstanding	—	—
Common stock, \$ 0.001 par value, 70,000 shares authorized; 37,434 and 37,318 issued and outstanding at March 31, 2024 and December 31, 2023, respectively	37	37
Additional paid-in capital	153,643	148,300
Accumulated other comprehensive income	(1,855)	6,114
Retained earnings	991,058	989,731
Total stockholders' equity	1,142,883	1,144,182
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	\$ 2,524,088	\$ 2,556,757

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

ADVANCED ENERGY INDUSTRIES, INC.
Unaudited Consolidated Statements of Operations
(In thousands, except per share amounts)

	Three Months Ended March 31,	
	2024	2023
Revenue, net	\$ 327,475	\$ 425,040
Cost of revenue	214,646	269,929
Gross profit	112,829	155,111
Operating expenses:		
Research and development	49,836	51,610
Selling, general, and administrative	55,124	55,358
Amortization of intangible assets	6,947	7,062
Restructuring, asset impairments, and other charges	245	1,043
Total operating expenses	112,152	115,073
Operating income	677	40,038
Interest income	12,645	3,585
Interest expense	(7,127)	(2,730)
Other income (expense), net	1,379	(1,405)
Income from continuing operations, before income tax	7,574	39,488
Income tax provision	1,787	7,736
Income from continuing operations	5,787	31,752
Loss from discontinued operations, net of income tax	(571)	(831)
Net income	\$ 5,216	\$ 30,921
Basic weighted-average common shares outstanding	37,359	37,475
Diluted weighted-average common shares outstanding	37,687	37,757
Earnings per share:		
Continuing operations:		
Basic earnings per share	\$ 0.15	\$ 0.85
Diluted earnings per share	\$ 0.15	\$ 0.84
Discontinued operations:		
Basic loss per share	\$ (0.02)	\$ (0.02)
Diluted loss per share	\$ (0.02)	\$ (0.02)
Net income:		
Basic earnings per share	\$ 0.14	\$ 0.83
Diluted earnings per share	\$ 0.14	\$ 0.82

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

ADVANCED ENERGY INDUSTRIES, INC.
Unaudited Consolidated Statements of Comprehensive Income (Loss)
(In thousands)

	Three Months Ended March 31,	
	2024	2023
Net income	\$ 5,216	\$ 30,921
Other comprehensive loss, net of income tax		
Foreign currency translation	(6,589)	(196)
Change in fair value of cash flow hedges	(1,380)	(1,817)
Comprehensive income (loss)	<u>\$ (2,753)</u>	<u>\$ 28,908</u>

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

ADVANCED ENERGY INDUSTRIES, INC.
Unaudited Consolidated Statements of Stockholders' Equity
(In thousands, except per share amounts)

	<u>Common Stock</u>						
	Shares	Amount	Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Stockholders' Equity	
Balances, December 31, 2022	37,429	\$ 37	\$ 134,640	\$ 16,320	\$ 915,270	\$ 1,066,267	
Stock issued from equity plans	100	—	(1,991)	—	—	(1,991)	
Stock-based compensation	—	—	6,543	—	—	6,543	
Dividends declared (\$ 0.10 per share)	—	—	—	—	(3,814)	(3,814)	
Other comprehensive loss	—	—	—	(2,013)	—	(2,013)	
Net income	—	—	—	—	30,921	30,921	
Balances, March 31, 2023	<u>37,529</u>	<u>\$ 37</u>	<u>\$ 139,192</u>	<u>\$ 14,307</u>	<u>\$ 942,377</u>	<u>\$ 1,095,913</u>	
Balances, December 31, 2023	37,318	\$ 37	\$ 148,300	\$ 6,114	\$ 989,731	\$ 1,144,182	
Stock issued from equity plans	116	—	(5,327)	—	—	(5,327)	
Stock-based compensation	—	—	10,591	—	—	10,591	
Dividends declared (\$ 0.10 per share)	—	—	—	—	(3,810)	(3,810)	
Other comprehensive loss	—	—	—	(7,969)	—	(7,969)	
Deferred compensation	—	—	79	—	(79)	—	
Net income	—	—	—	—	5,216	5,216	
Balances, March 31, 2024	<u>37,434</u>	<u>\$ 37</u>	<u>\$ 153,643</u>	<u>\$ (1,855)</u>	<u>\$ 991,058</u>	<u>\$ 1,142,883</u>	

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

ADVANCED ENERGY INDUSTRIES, INC.
Unaudited Consolidated Statements of Cash Flows
(In thousands)

	Three Months Ended March 31,	
	2024	2023
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income	\$ 5,216	\$ 30,921
Less: loss from discontinued operations, net of income tax	(571)	(831)
Income from continuing operations, net of income tax	5,787	31,752
Adjustments to reconcile net income to net cash from operating activities:		
Depreciation and amortization	16,952	16,523
Stock-based compensation	11,005	6,801
Amortization of debt issuance costs and debt discount	816	128
Deferred income tax benefit	(9)	(617)
Loss (gain) on disposal and sale of assets	(7)	115
Unrealized gain on investment	(441)	—
Changes in operating assets and liabilities, net of assets acquired		
Accounts receivable, net	33,444	13,590
Inventories	(26,786)	(25,699)
Other assets	2,617	(8,971)
Accounts payable	(3,001)	16,770
Other liabilities and accrued expenses	(32,384)	(18,512)
Net cash from operating activities from continuing operations	7,993	31,880
Net cash from operating activities from discontinued operations	(710)	(2,069)
Net cash from operating activities	7,283	29,811
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchases of long-term investments	(2,092)	—
Purchases of property and equipment	(16,629)	(16,210)
Net cash from investing activities	(18,721)	(16,210)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Payments on long-term borrowings	(5,000)	(5,000)
Dividend payments	(3,810)	(3,814)
Net payments related to stock-based awards	(5,327)	(1,991)
Net cash from financing activities	(14,137)	(10,805)
EFFECT OF CURRENCY TRANSLATION ON CASH AND CASH EQUIVALENTS	(1,201)	51
NET CHANGE IN CASH AND CASH EQUIVALENTS	(26,776)	2,847
CASH AND CASH EQUIVALENTS, beginning of period	1,044,556	458,818
CASH AND CASH EQUIVALENTS, end of period	\$ 1,017,780	\$ 461,665
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:		
Cash paid for interest	\$ 6,302	\$ 2,590
Cash paid for income taxes	\$ 2,471	\$ 2,838

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

ADVANCED ENERGY INDUSTRIES, INC.
NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS
(In thousands, except per share data)

NOTE 1. DESCRIPTION OF BUSINESS AND BASIS OF PRESENTATION

Advanced Energy Industries, Inc., a Delaware corporation, and its consolidated subsidiaries (“we,” “us,” “our,” “Advanced Energy,” or the “Company”) provides highly engineered, critical, precision power conversion, measurement, and control solutions to our global customers. We design, manufacture, sell and support precision power products that transform, refine, and modify the raw electrical power coming from either the utility or the building facility and convert it into various types of highly controllable, usable power that is predictable, repeatable, and customizable to meet the necessary requirements for powering a wide range of complex equipment. Many of our products enable customers to reduce or optimize their energy consumption through increased power conversion efficiency, power density, power coupling, and process control across a wide range of applications.

In management’s opinion, the accompanying unaudited consolidated financial statements contain all adjustments, consisting of normal, recurring adjustments, necessary to present fairly Advanced Energy’s financial position as of March 31, 2024, and the results of our operations and cash flows for the three months ended March 31, 2024 and 2023.

The unaudited consolidated financial statements included herein have been prepared pursuant to the rules and regulations of the Securities and Exchange Commission (“SEC”). Certain information and footnote disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”) have been omitted pursuant to such rules and regulations. These unaudited consolidated financial statements should be read in conjunction with the audited consolidated financial statements and notes thereto contained in our Annual Report on Form 10-K for the year ended December 31, 2023 and other financial information filed with the SEC.

Use of Estimates in the Preparation of the Consolidated Financial Statements

The preparation of our consolidated financial statements in conformity with U.S. GAAP requires us to make estimates, assumptions, and judgments that affect the reported amounts of assets and liabilities, the disclosure of contingent liabilities at the date of the financial statements, and the reported amounts of revenue and expenses during the reporting period. The significant estimates, assumptions, and judgments include, but are not limited to, excess and obsolete inventory, income taxes and other provisions, and acquisitions and asset valuations.

Significant Accounting Policies

Our accounting policies are described in Note 1 to our audited consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2023.

New Accounting Standards

From time to time, the Financial Accounting Standards Board (“FASB”) or other standards setting bodies issue new accounting pronouncements. Updates to the FASB Accounting Standards Codification (“ASC”) are communicated through issuance of an Accounting Standards Update (“ASU”). Unless otherwise discussed, we believe that the impact of recently issued guidance, whether adopted or to be adopted in the future, will not have a material impact on the consolidated financial statements upon adoption.

New Accounting Standards Issued But Not Yet Adopted

In November 2023, the FASB issued ASU 2023-07 “Segment Reporting (Topic 280) Improvements to Reportable Segment Disclosures.” ASU 2023-07 expands disclosure requirements to require additional information about significant segment expenses. In addition, the ASU enhances interim disclosures, clarifies circumstances in which an entity can disclose multiple segment measures of profit or loss, and provides new disclosures requirements for entities with a single reportable segment. This guidance will be effective for us in our Annual Report on Form 10-K for the year

ADVANCED ENERGY INDUSTRIES, INC.
NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS — (Continued)
(In thousands, except per share data)

ending December 31, 2024. We do not expect the above guidance to materially impact our consolidated financial statements.

In December 2023, the FASB issued ASU 2023-09 “Improvements to Income Tax Disclosures.” ASU 2023-09 requires disaggregated information about a reporting entity’s effective tax rate reconciliation as well as additional disclosure on income taxes paid. This guidance will be effective for us on January 1, 2025. We do not expect the above guidance to materially impact our consolidated financial statements.

In March 2024, the U.S. Securities and Exchange Commission (the “SEC”) issued climate-related disclosure rules. These rules do not change accounting treatment, but they significantly expand the climate-related information companies are required to disclose. Several petitions were filed challenging these climate-related disclosure rules and, in April 2024, the SEC voluntarily stayed the rules, pending completion of judicial review. We do not expect the above disclosure requirement to materially impact our consolidated financial statements. We are evaluating the disclosure requirements and changes to our business processes, systems, and controls to support the additional disclosures.

NOTE 2. REVENUE

Disaggregation of revenue

The following tables present additional information regarding our revenue:

Revenue by Market

	Three Months Ended March 31,	
	2024	2023
Semiconductor Equipment	\$ 179,903	\$ 194,209
Industrial and Medical	83,418	123,020
Data Center Computing	41,902	59,659
Telecom and Networking	22,252	48,152
Total	\$ 327,475	\$ 425,040

Revenue by Region

	Three Months Ended March 31,			
	2024		2023	
North America	\$ 134,079	40.9 %	\$ 180,942	42.5 %
Asia	151,943	46.4	179,183	42.2
Europe	40,553	12.4	62,566	14.7
Other	900	0.3	2,349	0.6
Total	\$ 327,475	100.0 %	\$ 425,040	100.0 %

Revenue by Significant Countries

	Three Months Ended March 31,			
	2024		2023	
United States	\$ 107,816	32.9 %	\$ 153,506	36.1 %
Taiwan	39,473	12.1	36,361	8.6
China	18,891	5.8	37,456	8.8
All others	161,295	49.2	197,717	46.5
Total	\$ 327,475	100.0 %	\$ 425,040	100.0 %

ADVANCED ENERGY INDUSTRIES, INC.
NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS — (Continued)
(In thousands, except per share data)

We attribute revenue to individual countries and regions based on the customer's ship to location. Apart from the United States and Taiwan, no revenue attributable to any individual country exceeded 10% of our total consolidated revenues during the periods presented.

Revenue by Category

	Three Months Ended March 31,	
	2024	2023
Product	\$ 286,264	\$ 379,274
Services and other	41,211	45,766
Total	\$ 327,475	\$ 425,040

Other revenue includes certain spare parts and products sold by our service group.

Significant Customers

During the three months ended March 31, 2024, Applied Materials, Inc. and Lam Research Corporation accounted for 30 % and 10 %, respectively, of our total revenue. During the three months ended March 31, 2023, Applied Materials Inc. accounted for 21 % of our total revenue.

As of March 31, 2024, the account receivable balance from Applied Materials, Inc. and Lam Research Corporation accounted for 37 % and 10 %, respectively, of our total accounts receivable. As of December 31, 2023, the account receivable balance from Applied Materials, Inc. accounted for 26 % of our total accounts receivable. No other customer's account receivable exceeded 10% of our total accounts receivable in the periods presented.

NOTE 3. INCOME TAX

The following table summarizes tax expense and the effective tax rate for our income from continuing operations:

	Three Months Ended March 31,	
	2024	2023
Income from continuing operations, before income tax	\$ 7,574	\$ 39,488
Income tax provision	\$ 1,787	\$ 7,736
Effective tax rate	23.6 %	19.6 %

Our effective tax rates differ from the U.S. federal statutory rate of 21 % for the three months ended March 31, 2024 and 2023, primarily due to the benefit of earnings in foreign jurisdictions which are subject to lower tax rates, as well as tax credits, partially offset by net U.S. tax on foreign operations. The effective tax rate for 2024 was higher than the same periods in 2023 primarily due to unfavorable mix of earnings.

As of January 1, 2024, the Pillar II minimum global effective tax rate of 15% enacted by the Organization for Economic Cooperation and Development ("OECD") was effectuated. More than 140 countries agreed to enact the Pillar II global minimum tax. However, the timing of the implementation for each country varies. To date, we have determined that there was an immaterial global minimum tax liability as a result of Pillar II, as certain tax jurisdictions either will not have Pillar II enacted until after December 31, 2024 or satisfied the safe harbor test to prevent any minimum tax under Pillar II. We continue to monitor the jurisdictions for any changes and include any appropriate minimum tax throughout the year.

ADVANCED ENERGY INDUSTRIES, INC.
NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS — (Continued)
(In thousands, except per share data)

NOTE 4. STOCKHOLDERS' EQUITY AND EARNINGS PER SHARE

Accumulated Other Comprehensive Income

The following table summarizes the components of, and changes in, accumulated other comprehensive income (loss), net of income taxes.

	Foreign Currency Translation	Change in Fair Value of Cash Flow Hedges	Minimum Pension Benefit Retirement Liability	Total
Balance at December 31, 2023	\$ (10,796)	\$ 5,474	\$ 11,436	\$ 6,114
Other comprehensive income prior to reclassifications	(6,589)	1,405	-	(5,184)
Amounts reclassified from accumulated other comprehensive income	-	(2,785)	-	(2,785)
Balance at March 31, 2024	<u>\$ (17,385)</u>	<u>\$ 4,094</u>	<u>\$ 11,436</u>	<u>\$ (1,855)</u>

Amounts reclassified from accumulated other comprehensive income (loss) to the specific caption within the Consolidated Statements of Operations were as follows:

	Three Months Ended March 31, 2024	To Caption on Consolidated Statements of Operations
Cash flow hedges	\$ (2,785)	Interest expense

Earnings Per Share

The following table summarizes our earnings per share ("EPS"):

	Three Months Ended March 31,	
	2024	2023
Income from continuing operations	\$ 5,787	\$ 31,752
Basic weighted-average common shares outstanding	37,359	37,475
Dilutive effect of stock awards	328	282
Diluted weighted-average common shares outstanding	<u>37,687</u>	<u>37,757</u>

EPS from continuing operations

Basic EPS	\$ 0.15	\$ 0.85
Diluted EPS	\$ 0.15	\$ 0.84

Anti-dilutive shares not included above

Stock awards	28	102
Warrants	3,194	—
Total anti-dilutive shares	<u>3,222</u>	<u>102</u>

ADVANCED ENERGY INDUSTRIES, INC.
NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS — (Continued)
(In thousands, except per share data)

We compute basic earnings per share of common stock ("Basic EPS") by dividing income available to common stockholders by the weighted-average number of common shares outstanding during the period.

See Note 16. *Long-Term Debt* for information regarding our Convertible Notes, Note Hedges, and Warrants. For diluted earnings per share of common stock ("Diluted EPS"), we increase the weighted-average number of common shares outstanding during the period, as needed, to include the following:

- Dilutive impact associated with the Convertible Notes using the if-converted method. The Convertible Notes are repayable in cash up to par value and in cash or shares of common stock for the excess over par value. When the stock price is lower than the strike price, there is no dilutive or anti-dilutive impact. Prior to conversion, we do not consider the Note Hedges for purposes of Diluted EPS as their effect would be anti-dilutive. Upon conversion, we expect the Note Hedges to offset the dilutive effect of the Convertible Notes when the stock price is above \$ 137.46 but below \$ 179.76 ;
- Additional common shares that would have been outstanding if our outstanding stock awards had been converted to common shares using the treasury stock method. We exclude any stock awards that have an anti-dilutive effect; and
- Dilutive effect of the Warrants issued concurrently with the Convertible Notes using the treasury stock method. For all periods presented, the Warrants did not increase the weighted-average number of common shares outstanding because the \$ 179.76 exercise price of the Warrants exceeded the average market price of our common stock.

Share Repurchase

At March 31, 2024, the remaining amount authorized by the Board of Directors ("the Board") for future share repurchases was \$ 199.2 million with no time limitation. There were no share repurchases during any periods presented.

NOTE 5. FAIR VALUE MEASUREMENTS

The following tables present information about our assets and liabilities measured at fair value on a recurring basis:

		March 31, 2024			
Description	Balance Sheet Classification	Level 1	Level 2	Level 3	Total Fair Value
Certificates of deposit	Other current assets	\$ —	\$ 177	\$ —	\$ 177
Foreign currency forward contracts	Other accrued expenses	—	195	—	195
Interest rate swaps	Other current assets	—	5,211	—	5,211
Investments	Other assets	—	8,519	—	8,519

		December 31, 2023			
Description	Balance Sheet Classification	Level 1	Level 2	Level 3	Total Fair Value
Certificates of deposit	Other current assets	\$ —	\$ 163	\$ —	\$ 163
Interest rate swaps	Other assets	—	6,995	—	6,995
Investments	Other assets	—	5,952	—	5,952

ADVANCED ENERGY INDUSTRIES, INC.
NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS — (Continued)
(In thousands, except per share data)

NOTE 6. DERIVATIVE FINANCIAL INSTRUMENTS

Changes in foreign currency exchange rates impact our results of operations and cash flows. We may manage these risks through the use of derivative financial instruments, primarily forward contracts with banks. These forward contracts manage the exchange rate risk associated with assets and liabilities denominated in nonfunctional currencies. Typically, we execute these derivative instruments for one-month periods and do not designate them as hedges; however, they do partially offset the economic fluctuations of certain of our assets and liabilities due to foreign exchange rate changes.

The following table summarizes the notional amount of outstanding foreign currency forward contracts:

	March 31, 2024	December 31, 2023
Foreign currency forward contracts	\$ 86,825	\$ —

Gains and losses related to foreign currency exchange contracts were offset by corresponding gains and losses on the revaluation of the underlying assets and liabilities. Both are included as a component of other income (expense), net in our Consolidated Statements of Operations.

We have executed interest rate swap contracts that fix a portion of the interest payments related to the outstanding principal balance on our Term Loan Facility to a total interest rate of 1.172 %. The interest rate swap contracts expire on September 10, 2024 and are accounted for as cash flow hedging instruments. See *Note 16. Long-Term Debt* for information regarding the Term Loan Facility.

The following table summarizes the notional amount of our qualified hedging instruments:

	March 31, 2024	December 31, 2023
Interest rate swap contracts	\$ 216,344	\$ 220,719

The following table summarizes the amounts, net of tax, recorded in accumulated other comprehensive income on the Consolidated Balance Sheets for qualifying hedges.

	March 31, 2024	December 31, 2023
Interest rate swap contract gains	\$ 4,094	\$ 5,350

See *Note 6. Fair Value Measurements* for information regarding fair value of derivative instruments.

As a result of using derivative financial instruments, we are exposed to the risk that counterparties to contracts could fail to meet their contractual obligations. We manage this credit risk by reviewing counterparty creditworthiness on a regular basis and limiting exposure to any single counterparty.

ADVANCED ENERGY INDUSTRIES, INC.
NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS — (Continued)
(In thousands, except per share data)

NOTE 7. ACCOUNTS RECEIVABLE, NET

We record accounts receivable at net realizable value. Our accounts receivable, net balance on the Consolidated Balance Sheets was \$ 247.5 million at March 31, 2024. The following table summarizes the changes in expected credit losses related to receivables:

December 31, 2023	\$ 1,762
Additions	33
March 31, 2024	<u>\$ 1,795</u>

NOTE 8. INVENTORIES

We value inventories at the lower of cost or net realizable value, computed on a first-in, first-out basis. Components of inventories were as follows:

	March 31, 2024	December 31, 2023
Parts and raw materials	\$ 264,042	\$ 249,698
Work in process	15,730	14,595
Finished goods	81,565	71,844
Total	<u>\$ 361,337</u>	<u>\$ 336,137</u>

NOTE 9. PROPERTY AND EQUIPMENT, NET

Property and equipment, net is comprised of the following:

	Estimated Useful Life (in years)	March 31, 2024	December 31, 2023
Buildings, machinery, and equipment	5 to 25	\$ 196,042	\$ 191,744
Software	3 to 10	29,905	24,526
Computer equipment, furniture, fixtures, and vehicles	3 to 5	19,430	19,281
Leasehold improvements	2 to 10	81,365	79,764
Capital projects in process		25,159	21,721
		351,901	337,036
Less: Accumulated depreciation		(176,448)	(169,371)
Property and equipment, net		<u>\$ 175,453</u>	<u>\$ 167,665</u>

The following table summarizes depreciation expense. All depreciation expense is recorded in income from continuing operations:

	Three Months Ended March 31, 2024	2023
Depreciation expense	\$ 10,005	\$ 9,461

ADVANCED ENERGY INDUSTRIES, INC.
NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS — (Continued)
(In thousands, except per share data)

NOTE 10. INTANGIBLE ASSETS AND GOODWILL

Intangible assets consisted of the following:

	March 31, 2024			
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Weighted Average Remaining Useful Life (in years)
Technology	\$ 97,514	\$ (63,086)	\$ 34,428	6.9
Customer relationships	167,981	(61,451)	106,530	9.3
Trademarks and other	27,104	(13,672)	13,432	5.3
Total	<u>\$ 292,599</u>	<u>\$ (138,209)</u>	<u>\$ 154,390</u>	8.4

	December 31, 2023			
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Weighted Average Remaining Useful Life (in years)
Technology	\$ 97,961	\$ (60,412)	\$ 37,549	6.8
Customer relationships	168,685	(58,835)	109,850	9.5
Trademarks and other	27,141	(13,062)	14,079	5.6
Total	<u>\$ 293,787</u>	<u>\$ (132,309)</u>	<u>\$ 161,478</u>	8.5

Amortization expense related to intangible assets is as follows:

	Three Months Ended March 31,	
	2024	2023
Amortization expense	\$ 6,947	\$ 7,062

Estimated amortization expense related to intangibles is as follows:

Year Ending December 31,	
2024 (remaining)	\$ 18,259
2025	20,988
2026	19,272
2027	17,366
2028	16,131
Thereafter	62,374
Total	<u>\$ 154,390</u>

The following table summarizes the changes in goodwill:

December 31, 2023	\$ 283,840
Foreign currency translation and other	(3,006)
March 31, 2024	<u>\$ 280,834</u>

ADVANCED ENERGY INDUSTRIES, INC.
NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS — (Continued)
(In thousands, except per share data)

NOTE 11. RESTRUCTURING, ASSET IMPAIRMENTS, AND OTHER CHARGES

Details of restructuring, asset impairments, and other charges are as follows:

	Three Months Ended March 31,	
	2024	2023
Restructuring	\$ (31)	1,043
Other charges	276	—
Total restructuring, asset impairments, and other charges	<u>\$ 245</u>	<u>\$ 1,043</u>

Restructuring

We have two restructuring plans in process:

2023 Plan

In 2023, we approved a plan intended to optimize and further consolidate our manufacturing operations and functional support groups as well as a general reduction-in-force to align our expenses to revenue levels (the “2023 Plan”). We expect additional charges of \$ 1.0 million to \$ 2.0 million to be incurred in future periods through the second quarter of 2025. We anticipate the 2023 Plan will be substantially completed by the end of 2024, with the final activities concluding in the second quarter 2025.

2022 Plan

This plan was approved to further improve our operating efficiencies and drive the realization of synergies from our business combinations by consolidating our operations, optimizing our factory footprint, including moving certain production into our higher volume factories, reducing redundancies, and lowering our cost structure. We anticipate the 2022 Plan will be substantially completed by the end of 2024.

Our restructuring liabilities are included in other accrued expenses in our Consolidated Balance Sheets. Changes in restructuring liabilities were as follows:

	2023 Plan	2022 Plan	Other	Total
December 31, 2023	\$ 14,224	\$ 2,930	\$ 188	\$ 17,342
Costs incurred and charged to expense	(88)	57	—	(31)
Costs paid or otherwise settled	(4,099)	(2,220)	(188)	(6,507)
March 31, 2024	<u>\$ 10,037</u>	<u>\$ 767</u>	<u>\$ —</u>	<u>\$ 10,804</u>

Charges related to our restructuring plans are as follows:

	Three Months Ended March 31,	
	2024	2023
Severance and related charges	\$ (31)	\$ 1,043

	Cumulative Cost Through March 31, 2024		
	2023 Plan	2022 Plan	Total
Severance and related charges	\$ 17,015	\$ 14,044	\$ 31,059

Other Charges

In connection with vacating and relocating facilities, we incurred other charges of \$ 0.3 million.

ADVANCED ENERGY INDUSTRIES, INC.
NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS — (Continued)
(In thousands, except per share data)

NOTE 12. WARRANTIES

Our sales agreements include customary product warranty provisions, which generally range from 12 to 36 months after shipment. We record the estimated warranty obligations cost when we recognize revenue. This estimate is based on historical experience by product and configuration.

Our estimated warranty obligation is included in other accrued expenses in our Consolidated Balance Sheets. Changes in our product warranty obligation were as follows:

December 31, 2023	\$	4,007
Net increases to accruals		436
Warranty expenditures		(595)
Effect of changes in exchange rates		139
March 31, 2024	\$	<u>3,987</u>

NOTE 13. LEASES

Components of total operating lease cost were as follows:

	Three Months Ended March 31,	
	2024	2023
Operating lease cost	\$ 5,860	\$ 5,680
Short-term and variable lease cost	667	1,083
Total operating lease cost	<u>\$ 6,527</u>	<u>\$ 6,763</u>

Payments on our operating lease liabilities are as follows:

Year Ending December 31,		
2024 (remaining)	\$	17,405
2025		20,576
2026		17,968
2027		15,529
2028		15,168
Thereafter		60,360
Total lease payments		147,006
Less: Interest		(30,104)
Present value of lease liabilities	\$	<u>116,902</u>

In addition to the above, we have lease agreements with total payments of \$ 36.3 million that commence on various dates in 2024 and 2025 and extend through 2040.

ADVANCED ENERGY INDUSTRIES, INC.
NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS — (Continued)
(In thousands, except per share data)

The following tables present additional information about our lease agreements:

	March 31, 2024	December 31, 2023
Weighted average remaining lease term (in years)	8.5	8.3
Weighted average discount rate	5.2 %	5.0 %
	Three Months Ended March 31,	
	2024	2023
Cash paid for operating leases	\$ 5,721	\$ 5,820
Right-of-use assets obtained in exchange for operating lease liabilities	\$ 16,837	\$ 208

NOTE 14. STOCK-BASED COMPENSATION

The Compensation Committee of our Board administers our stock plans. As of March 31, 2024, we had two active stock-based incentive compensation plans: the 2023 Omnibus Incentive Plan ("the 2023 Incentive Plan") and the Employee Stock Purchase Plan ("ESPP"). The 2023 Incentive Plan was approved by stockholders on April 27, 2023 and amended and restated on November 2, 2023. We issue all new equity compensation grants under these two plans; however, outstanding awards previously issued under inactive plans will continue to vest and remain exercisable in accordance with the terms of the respective plans.

The 2023 Incentive Plan provides for the grant of awards including stock options, stock appreciation rights, performance stock units, performance units, stock, restricted stock, restricted stock units, and cash incentive awards.

The following table summarizes information related to our stock-based incentive compensation plans:

	March 31, 2024
Shares available for future issuance under the 2023 Incentive Plan	1,840
Shares available for future issuance under the ESPP	577

Stock-based Compensation Expense

We recognize stock-based compensation expense based on the fair value of the awards issued and the functional area of the employee receiving the award. During the three months ended March 31, 2024, stock-based compensation expense includes \$ 1.8 million related to a modification for accounting purposes of prior awards. Stock-based compensation was as follows:

	Three Months Ended March 31,	
	2024	2023
Stock-based compensation expense	\$ 11,005	\$ 6,801

Restricted Stock Units

Generally, we grant restricted stock units ("RSUs") with a three year time-based vesting schedule. Certain RSUs contain performance-based or market-based vesting conditions in addition to the time-based vesting requirements. RSUs are generally granted with a grant date fair value based on the market price of our stock on the date of grant.

ADVANCED ENERGY INDUSTRIES, INC.
NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS — (Continued)
(In thousands, except per share data)

Changes in our RSUs were as follows:

	Three Months Ended March 31, 2024	
	Number of	Weighted-Average
	RSUs	Grant Date
		Fair Value
RSUs outstanding at beginning of period	917	\$ 85.96
RSUs granted	502	\$ 105.06
RSUs vested	(171)	\$ 89.48
RSUs forfeited	(73)	\$ 74.93
RSUs outstanding at end of period	<u>1,175</u>	<u>\$ 94.29</u>

Stock Options

Generally, we grant stock option awards with an exercise price equal to the market price of our stock at the date of grant and with either a three or four-year vesting schedule or performance-based vesting. Stock option awards generally have a term of ten years .

Changes in our stock options were as follows:

	Three Months Ended March 31, 2024	
	Number of	Weighted-Average
	Options	Exercise Price
		per Share
Options outstanding at beginning of period	89	\$ 76.69
Options exercised	(2)	\$ 26.32
Options outstanding at end of period	<u>87</u>	<u>\$ 78.14</u>

NOTE 15. COMMITMENTS AND CONTINGENCIES

We are involved in disputes and legal actions arising in the normal course of our business. While we currently believe that the amount of any ultimate loss would not be material to our financial position, the outcome of these actions is inherently difficult to predict. In the event of an adverse outcome, the ultimate loss could have a material adverse effect on our financial position or reported results of operations. An unfavorable decision in intellectual property litigation also could require material changes in production processes and products or result in our inability to ship products or components found to have violated third party intellectual property rights. We accrue loss contingencies in connection with our commitments and contingencies, including litigation, when it is probable that a loss has occurred, and the amount of such loss can be reasonably estimated. We are not currently a party to any legal action that we believe would reasonably have a material adverse impact on our business, financial condition, results of operations or cash flows.

We maintain defined benefit pension plans for certain of our non-U.S. employees, including the United Kingdom. In light of the recent United Kingdom's High Court ruling in the case of Virgin Media Ltd v. NTL Pension Trustees II Ltd & Ors, which is scheduled for appeal in June 2024, we are reviewing past amendments made to our United Kingdom pension plans to evaluate whether any changes were implemented in conflict with section 37 of the United Kingdom Pension Schemes Act 1993. Should there be a challenge to any previous amendments to our pension plan in the United Kingdom, we could face potential litigation and compliance risks. We continue to account for our United Kingdom pension arrangements in accordance with the plan agreements and amendments, as we believe they represent a mutual understanding and agreement among all parties.

ADVANCED ENERGY INDUSTRIES, INC.
NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS — (Continued)
(In thousands, except per share data)

NOTE 16. LONG-TERM DEBT

Long-term debt on our Consolidated Balance Sheets consists of the following:

	March 31, 2024	December 31, 2023
Convertible Notes due 2028	\$ 575,000	\$ 575,000
Term Loan Facility due 2026	350,000	355,000
Gross long-term debt, including current maturities	925,000	930,000
Less: debt discount	(13,505)	(14,321)
Net long-term debt, including current maturities	911,495	915,679
Less: current maturities	(20,000)	(20,000)
Net long-term debt	<u>\$ 891,495</u>	<u>\$ 895,679</u>

For all periods presented, we were in compliance with the covenants under all debt agreements. Contractual maturities of our gross long-term debt, including current maturities, are as follows:

Year Ending December 31,	
2024 (remaining)	\$ 15,000
2025	20,000
2026	315,000
2027	—
2028	575,000
Total	<u>\$ 925,000</u>

	March 31, 2024	
	Balance	Interest Rate
Convertible Notes	\$ 575,000	2.50 %
Term Loan Facility at fixed interest rate due to interest rate swap	216,344	1.17 %
Term Loan Facility at variable interest rate	133,656	6.18 %
Total borrowings	<u>\$ 925,000</u>	

The interest rate swap contracts expire on September 10, 2024. After that date, this portion of our Term Loan Facility will be subject to a variable interest rate. For more information, see *Note 6. Derivative Financial Instruments*. The Term Loan Facility and Revolving Facility bear interest, at our option, at a rate based on the Base Rate or SOFR, as defined in the Credit Agreement, plus an applicable margin.

The following table summarizes interest expense related to our debt:

	Three Months Ended March 31, 2024	2023
Interest expense	\$ 6,302	\$ 2,590
Amortization of debt issuance costs	820	133
Total interest expense related to debt	<u>\$ 7,122</u>	<u>\$ 2,723</u>

Convertible Senior Notes due 2028

On September 12, 2023, we completed a private, unregistered offering of \$ 575.0 million aggregate principal amount of 2.50 % convertible senior notes ("Convertible Notes").

ADVANCED ENERGY INDUSTRIES, INC.
NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS — (Continued)
(In thousands, except per share data)

The \$ 562.6 million remaining outstanding principal amount of the 2.50 % Convertible Notes, net of unamortized issuance costs, continues to be classified as long-term debt as none of the conversion triggers occurred as of March 31, 2024. The redemption price is 100 % of the principal amount plus accrued and unpaid interest. The Convertible Notes mature on September 15, 2028, unless earlier repurchased, redeemed, or converted. Interest is payable semi-annually in arrears in March and September.

Concurrent with the Convertible Notes issuance, we entered into hedges and sold warrants with respect to our common stock. In combination, the hedges and warrants synthetically increase the initial conversion price on the Convertible Notes from \$ 137.46 to \$ 179.76 , reducing the potential dilutive effect.

Credit Agreement

Our credit agreement dated as of September 10, 2019, as amended (the "Credit Agreement") consists of a senior unsecured term loan facility ("Term Loan Facility") and a senior unsecured revolving facility ("Revolving Facility"). Both mature on September 9, 2026.

On March 31, 2023, we executed agreements pursuant to the Credit Agreement to transition the benchmark interest rate from LIBOR to SOFR. The impact of this transition was not material to our consolidated financial statements.

On September 7, 2023, we entered into an additional amendment to the Credit Agreement to amend certain definitions, covenants, and events of default.

The following table summarizes our availability to withdraw on the Revolving Facility:

	March 31, 2024	December 31, 2023
Available capacity on Revolving Facility	\$ 200,000	\$ 200,000

As part of our available capacity on the Revolving Facility, prior to the maturity date of the Credit Agreement, we may request an increase to the financing commitments in either the Term Loan Facility or Revolving Facility by an aggregate amount not to exceed \$ 115.0 million. Any requested increase is subject to lender approval.

We use level 2 measurements to estimate the fair value of our debt. As of March 31, 2024, we estimate the fair value of our Convertible Notes to be \$ 585.9 million, and the par value of the Term Loan Facility approximates its fair value.

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

This management discussion and analysis should be read in conjunction with our Annual Report on Form 10-K for the year ended December 31, 2023, which was filed with the Securities and Exchange Commission on February 20, 2024 ("2023 Form 10-K").

Special Note on Forward-Looking Statements

This Quarterly Report on Form 10-Q contains, in addition to historical information, forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Statements in this report that are not historical information are forward-looking statements. For example, statements relating to our beliefs, expectations, and plans are forward-looking statements, as are statements that certain actions, conditions, events, or circumstances will continue. The inclusion of words such as "anticipate," "expect," "estimate," "can," "may," "might," "continue," "enable," "plan," "intend," "should," "could," "would," "will," "likely," "potential," "believe," and similar expressions and the negative versions thereof indicate forward-looking statements; however, not all forward-looking statements may contain such words or expressions. These forward-looking statements are based upon information available as of the date of this report and management's current estimates, forecasts, and assumptions. Although we believe that our expectations reflected in or suggested by these forward-looking statements are reasonable, we may not achieve the results, performance, plans, or objectives expressed or implied by such forward-looking statements. Forward-looking statements involve risks and uncertainties, which are difficult to predict and many of which are beyond our control.

Risks and uncertainties to which our forward-looking statements are subject include:

- volatility and business fluctuations in the industries in which we compete;
- our ability to achieve design wins with new and existing customers;
- our ability to accurately forecast and meet customer demand;
- risks related to global economic conditions, including, but not limited to, the impact of escalating global conflicts on macroeconomic conditions, economic uncertainty, market volatility, rising interest rates, inflation, or recession;
- risks inherent in our international operations, including the effect of trade and export controls, political and geographical risks, fluctuations in currency exchange rates;
- customer price sensitivity;
- concentration of our customer base;
- risks associated with breach of our information security measures;
- our loss of or inability to attract and retain key personnel;
- disruptions to our manufacturing operations or those of our customers or suppliers;
- risks associated with our manufacturing footprint optimization and movement of manufacturing locations for certain products;
- our ability to successfully identify, close, integrate and realize anticipated benefits from our acquisitions;
- quality issues or unanticipated costs in fulfilling our warranty obligations (including our discontinued solar inverter product line), and adequacy of our warranty reserves;
- our ability to enforce, protect and maintain our proprietary technology and intellectual property rights;
- our ability to achieve cost savings, profitability, and gross margin goals;

- changes to tax laws and regulations or our tax rates;
- changes in federal, state, local and foreign regulations, including with respect to privacy and data protection, and environmental regulation;
- effect of our debt obligations and restrictive covenants on our ability to operate our business;
- risks related to our unfunded pension obligations;
- restructuring and severance activities;
- legal matters, claims, and proceedings;
- our estimates of the fair value of intangible assets; and
- the potential impact of dilution related to our convertible debt, hedge, and warrant transactions .

Actual results could differ materially and adversely from those expressed in any forward-looking statements, and readers are cautioned not to place undue reliance on forward-looking statements. Factors that could contribute to these differences or prove our forward-looking statements, by hindsight, to be overly optimistic or unachievable include, but are not limited to, the risks and uncertainties listed above and described in Part I, Item 1A in the 2023 Form 10-K. We assume no obligation to update any forward-looking statement or provide the reasons why our actual results might differ.

BUSINESS AND MARKET OVERVIEW

Company Overview

Advanced Energy provides highly engineered, critical, precision power conversion, measurement, and control solutions to our global customers. We design, manufacture, sell and support precision power products that transform, refine, and modify the raw electrical power coming from either the utility or the building facility and convert it into various types of highly controllable, usable power that is predictable, repeatable, and customizable to meet the necessary requirements for powering a wide range of complex equipment. Many of our products enable customers to reduce or optimize their energy consumption through increased power conversion efficiency, power density, power coupling, and process control across a wide range of applications.

We are organized on a global, functional basis and operate as a single segment of power electronics conversion products. Within this segment, our products are sold into the Semiconductor Equipment, Industrial and Medical, Data Center Computing, and Telecom and Networking markets.

Product and Services

Our precision power products and solutions are designed to enable new process technologies, improve productivity, lower the cost of ownership, and provide critical power capabilities for our customers. These products are designed to meet our customers' demanding requirements in efficiency, flexibility, performance, and reliability. The majority of Advanced Energy's products are capable of meeting various customer requirements. We also provide repair and maintenance services for our products.

Our plasma power products offer solutions to enable innovation in complex semiconductor and thin film plasma processes such as dry etch and deposition. Our broad portfolio of high and low voltage power products are used in a wide range of applications, such as semiconductor equipment, industrial production, medical and life science equipment, data center computing, networking, and telecommunications. We also supply related sensing, controls, and instrumentation products primarily for advanced measurement and calibration of power and temperature for multiple industrial markets. Our network of global service support centers provides repair services, calibration, conversions, upgrades, refurbishments, and used equipment to companies using our products.

Our service group offers warranty and after-market repair services, providing our customers with preventive maintenance opportunities to support a lower cost of ownership and higher utilization for their capital equipment. We offer comprehensive repair service and customer support through our worldwide support organization. Support services include warranty and non-warranty repair services, calibration, upgrades, and refurbishments of our products.

End Markets Summary

The demand environment in each of our markets is impacted by macroeconomic conditions, various market trends, customer buying patterns, design wins, and other factors. Although we are currently experiencing a lower demand environment, we continue to believe that the long-term market growth drivers support our long-term strategy, research and development efforts, and capital investments. However, in the short-term it is unclear how certain macroeconomic conditions, including higher interest rates impacting end customers' capital investment and customer buying patterns, will affect customer demand and our revenue.

Semiconductor Equipment Market

In the first quarter of 2024, the ongoing Semiconductor Equipment market downturn continued to limit our business. The market entered a downturn beginning in the fourth quarter of 2022 due to a combination of unfavorable macroeconomic conditions, overcapacity in the market for memory devices, prolonged weakness in demand for consumer electronics, built up semiconductor inventory consumption resulting in falling manufacturing utilization, and U.S. export restrictions to China for certain semiconductor equipment.

Although we expect these factors to continue to impact our business levels in the near term, we believe the long-term growth drivers for demand in this market will resume due to the need for more manufacturing capacity to support expected demand growth for semiconductor devices and related capital equipment.

Industrial and Medical Market

Following a year of record revenue in the Industrial and Medical market, starting in the second half of 2023, we began to experience the impact of weaker macroeconomic conditions on our demand. In addition, in the first quarter of 2024, we saw a rebalancing of customers' inventories as a result of fulfilling outstanding backlog and shorter lead times for our products. This trend accelerated in the first quarter of 2024. While we believe the long term growth drivers in these markets remain strong, we expect these factors will continue to limit our revenue levels in the near term.

Data Center Computing Market

While there is increased demand for high end computing applications, such as artificial intelligence, continued slow demand in the enterprise server and storage market and timing of large customer orders impacted our revenue in the first quarter of 2024. However, we are beginning to see indications of recovery in this market driven by hyperscale and artificial intelligence investments.

Telecom and Networking Market

Starting in 2023, leading companies in this market reported weak demand, and the slower demand environment continued in 2024. In addition, we experienced the impact of customers rebalancing inventories as a result of fulfilling outstanding backlog and shorter lead times for our products.

Results of Continuing Operations

The analysis presented below is organized to provide the information we believe will be helpful for understanding of our historical performance and relevant trends going forward and should be read in conjunction with our "Unaudited Consolidated Financial Statements" in Part I, Item 1 of this report, including the notes thereto. Also included in the following analysis are measures that are not prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP"). A reconciliation of the non-GAAP measures to U.S. GAAP is provided below.

The following table sets forth certain data derived from our Consolidated Statements of Operations (in thousands):

	Three Months Ended March 31,			
	2024		2023	
Revenue	\$ 327,475	100.0 %	\$ 425,040	100.0 %
Gross profit	112,829	34.5	155,111	36.5
Operating expenses	112,152	34.2	115,073	27.1
Operating income from continuing operations	677	0.2	40,038	9.4
Interest income	12,645	3.9	3,585	0.8
Interest expense	(7,127)	(2.2)	(2,730)	(0.6)
Other income (expense), net	1,379	0.4	(1,405)	(0.3)
Income from continuing operations, before income tax	7,574	2.3	39,488	9.3
Income tax provision	1,787	0.5	7,736	1.8
Income from continuing operations	<u>\$ 5,787</u>	<u>1.8 %</u>	<u>\$ 31,752</u>	<u>7.5 %</u>

Revenue

The following tables summarize net sales and percentages of net sales, by markets (in thousands):

	Three Months Ended March 31,				Change 2024 v. 2023	
	2024		2023		Dollar	Percent
Semiconductor Equipment	\$ 179,903	54.9 %	\$ 194,209	45.7 %	\$ (14,306)	(7.4)%
Industrial and Medical	83,418	25.5	123,020	28.9	(39,602)	(32.2)%
Data Center Computing	41,902	12.8	59,659	14.0	(17,757)	(29.8)%
Telecom and Networking	22,252	6.8	48,152	11.3	(25,900)	(53.8)%
Total	\$ 327,475	100.0 %	\$ 425,040	100.0 %	\$ (97,565)	(23.0)%

Total revenue decreased from the same period in the prior year due to a cyclical downturn in the semiconductor and data center industries as well as lower demand within our Industrial and Medical and Telecom and Networking markets.

Revenue by Market

	Three Months Ended March 31,		Change 2024 v. 2023	
	2024	2023	Dollar	Percent
	(in thousands)			
Semiconductor Equipment	\$ 179,903	\$ 194,209	\$ (14,306)	(7.4)%

The decrease in Semiconductor Equipment revenue was primarily due to an ongoing cyclical downturn in the semiconductor industry.

	Three Months Ended March 31,		Change 2024 v. 2023	
	2024	2023	Dollar	Percent
	(in thousands)			
Industrial and Medical	\$ 83,418	\$ 123,020	\$ (39,602)	(32.2)%

The decrease in Industrial and Medical revenue was primarily due to lower demand and reduction of customers' inventories.

	Three Months Ended March 31,		Change 2024 v. 2023	
	2024	2023	Dollar	Percent
	(in thousands)			
Data Center Computing	\$ 41,902	\$ 59,659	\$ (17,757)	(29.8)%

The decrease in Data Center Computing revenue was due to the cyclical downturn in the data center server and storage market and timing of large hyperscale programs at some customers.

	Three Months Ended March 31,		Change 2024 v. 2023	
	2024	2023	Dollar	Percent
	(in thousands)			
Telecom and Networking	\$ 22,252	\$ 48,152	\$ (25,900)	(53.8)%

The decrease in Telecom and Networking revenue was due to a slowing demand environment, reduced capital spend, and inventory rebalancing from our customers following a strong 2023.

Gross Profit and Gross Margin

	Three Months Ended March 31,		Change 2024 v. 2023	
	2024	2023	Dollar	Percent
	(in thousands)			
Gross profit	\$ 112,829	\$ 155,111	\$ (42,282)	(27.3)%
Gross margin	34.5 %	36.5 %		

The decrease in gross profit was largely due to the decline in revenue and higher operating costs based on investments made in 2023. Gross margin percentage declined year over year primarily due to a decline in volume across all markets, which drove lower utilization in the manufacturing operations. This was partially offset by favorable product mix due to the overall revenue decline being weighted towards lower margin products. Additionally, we paid lower premiums for scarce parts compared to previous periods.

Operating Expenses

The following table summarizes our operating expenses (in thousands) and as a percentage of revenue:

	Three Months Ended March 31,		Change 2024 v. 2023	
	2024	2023	Dollar	Percent
	(in thousands)			
Research and development	\$ 49,836	\$ 51,610	\$ (1,774)	(3.4)%
Selling, general, and administrative	55,124	55,358	(234)	(0.4)%
Amortization of intangible assets	6,947	7,062	(115)	(1.6)%
Restructuring, asset impairments, and other charges	245	1,043	800	76.7%
Total operating expenses	\$ 112,152	\$ 115,073	\$ (2,921)	(2.5)%

Research and Development

	Three Months Ended March 31,		Change 2024 v. 2023	
	2024	2023	Dollar	Percent
	(in thousands)			
Research and development	\$ 49,836	\$ 51,610	\$ (1,774)	(3.4)%

The decrease in research and development was primarily driven by \$1.3 million in lower program and material costs. In addition, we had a \$0.4 million decline in compensation costs due to lower headcount and variable compensation, partially offset by higher stock-based compensation expense.

Selling, General and Administrative

	Three Months Ended March 31,		Change 2024 v. 2023	
	2024	2023	Dollar	Percent
	(in thousands)			
Selling, general, and administrative	\$ 55,124	\$ 55,358	\$ (234)	(0.4)%

The decrease in selling, general, and administrative was primarily related to actions taken to control costs, including headcount reduction and lower variable employee compensation, partially offset by higher stock-based compensation cost.

Amortization of Intangibles Assets

	Three Months Ended March 31,		Change 2024 v. 2023	
	2024	2023	Dollar	Percent
	(in thousands)			
Amortization of intangible assets	\$ 6,947	\$ 7,062	\$ (115)	(1.6)%

Amortization expense remained flat as we did not acquire any new intangible assets.

Restructuring, Asset Impairments and Other Charges

	Three Months Ended March 31,		Change 2024 v. 2023	
	2024	2023	Dollar	Percent
	(in thousands)			
Restructuring, asset impairments, and other charges	\$ 245	\$ 1,043	\$ (798)	(76.5)%

The decrease in restructuring, asset impairments, and other charges is primarily driven by timing of our restructuring plan decisions. We have two restructuring plans in process, including the following:

2023 Plan

In 2023, we approved a plan intended to optimize and further consolidate our manufacturing operations and functional support groups as well as a general reduction-in-force to align our expenses to revenue levels (the "2023 Plan"). We expect additional charges of \$1.0 million to \$2.0 million to be incurred in future periods through the second quarter of 2025. We anticipate the 2023 Plan will be substantially completed by the end of 2024, with the final activities concluding in the second quarter of 2025.

2022 Plan

This plan was approved to further improve our operating efficiencies and drive the realization of synergies from our business combinations by consolidating our operations, optimizing our factory footprint, including moving certain production into our higher volume factories, reducing redundancies, and lowering our cost structure. We anticipate the 2022 Plan will be substantially completed by the end of 2024.

For additional information, see *Note 11. Restructuring, Asset Impairments, and Other Charges* in Part I, Item 1 "Unaudited Consolidated Financial Statements."

Interest Income, Interest Expense, and Other Income (Expenses), net

	Three Months Ended March 31,		Change 2024 v. 2023	
	2024	2023	Dollar	Percent
	(in thousands)			
Interest income	\$ 12,645	\$ 3,585	\$ 9,060	252.7 %
Interest expense	\$ (7,127)	\$ (2,730)	\$ (4,397)	161.1 %
Other income (expense), net	\$ 1,379	\$ (1,405)	\$ 2,784	198.1 %

We experienced an increase in interest income on higher cash balances, due in part to proceeds from issuance of the Convertible Notes in the third quarter of 2023, ability to concentrate cash in investment accounts, and higher short term market interest rates.

Interest expense increased due to interest associated with the Convertible Notes and a higher interest rate on the portion of our Term Loan Facility subject to a variable interest rate. The interest rate swap contracts expire on September 10, 2024. After that date, the entire balance of our Term Loan Facility will be subject to a variable interest rate. In addition, should we have future borrowings under our Revolving Facility, those borrowings would be subject to a variable rate.

Other income (expense), net consists primarily of foreign exchange gains and losses, gains and losses on sales of fixed assets, and other miscellaneous items. The increase in income between periods was primarily a result of higher unrealized foreign exchange gains.

See *Note 16. Long-Term Debt* in Part I, Item 1 "Unaudited Consolidated Financial Statements" for information regarding our Convertible Notes.

Income Tax Provision (Benefit)

The following table summarizes tax provision (in thousands) and the effective tax rate for our income from continuing operations:

	Three Months Ended March 31,	
	2024	2023
Income from continuing operations, before income tax	\$ 7,574	\$ 39,488
Income tax provision	\$ 1,787	\$ 7,736
Effective tax rate	23.6 %	19.6 %

Our effective tax rates differ from the U.S. federal statutory rate of 21% for the three months ended March 31, 2024 and 2023, primarily due to the benefit of earnings in foreign jurisdictions which are subject to lower tax rates, as well as tax credits, partially offset by net U.S. tax on foreign operations. The effective tax rate for 2024 was higher than the same periods in 2023 primarily due to unfavorable mix of earnings.

As of January 1, 2024, the Pillar II minimum global effective tax rate of 15% enacted by the Organization for Economic Cooperation and Development ("OECD") was effectuated. More than 140 countries agreed to enact the Pillar II global minimum tax. However, the timing of the implementation for each country varies. To date, we have determined that there was an immaterial global minimum tax liability as a result of Pillar II, as certain tax jurisdictions either will not have Pillar II enacted until after December 31, 2024 or satisfied the safe harbor test to prevent any minimum tax under Pillar II. We continue to monitor the jurisdictions for any changes and include any appropriate minimum tax throughout the year.

Non-GAAP Results

Management uses non-GAAP operating income and non-GAAP earnings per share ("EPS") to evaluate business performance without the impacts of certain non-cash charges and other charges which are not part of our usual operations. We use these non-GAAP measures to assess performance against business objectives, and make business decisions, including developing budgets and forecasting future periods. In addition, management's incentive plans include these non-GAAP measures as criteria for achievements. These non-GAAP measures are not prepared in accordance with U.S. GAAP and may differ from non-GAAP methods of accounting and reporting used by other companies. However, we believe these non-GAAP measures provide additional information that enables readers to evaluate our business from the perspective of management. The presentation of this additional information should not be considered a substitute for results prepared in accordance with U.S. GAAP.

The non-GAAP results presented below exclude the impact of non-cash related charges, such as stock-based compensation, amortization of intangible assets, and long-term unrealized foreign exchange gains and losses. In addition, we exclude discontinued operations and other non-recurring items such as acquisition-related costs, facility expansion and related costs, and restructuring expenses, as they are not indicative of future performance. The tax effect of our non-GAAP adjustments represents the anticipated annual tax rate applied to each non-GAAP adjustment after consideration of their respective book and tax treatments.

Reconciliation of non-GAAP measure

Operating expenses and operating income from continuing operations, excluding certain items (in thousands)	Three Months Ended March 31,	
	2024	2023
Gross profit from continuing operations, as reported	\$ 112,829	\$ 155,111
Adjustments to gross profit:		
Stock-based compensation	829	383
Facility expansion, relocation costs and other	1,308	957
Acquisition-related costs	44	53
Non-GAAP gross profit	115,010	156,504
Non-GAAP gross margin	35.1%	36.8%
Operating expenses from continuing operations, as reported	112,152	115,073
Adjustments:		
Amortization of intangible assets	(6,947)	(7,062)
Stock-based compensation	(10,176)	(6,418)
Acquisition-related costs	(1,266)	(878)
Restructuring, asset impairments, and other charges	(245)	(1,043)
Non-GAAP operating expenses	93,518	99,672
Non-GAAP operating income	\$ 21,492	\$ 56,832
Non-GAAP operating margin	6.6%	13.4%

Reconciliation of non-GAAP measure

Income from continuing operations, excluding certain items (in thousands, except per share amounts)	Three Months Ended March 31,	
	2024	2023
Income from continuing operations, less non-controlling interest, net of income tax	\$ 5,787	\$ 31,752
Adjustments:		
Amortization of intangible assets	6,947	7,062
Acquisition-related costs	1,310	931
Facility expansion, relocation costs, and other	1,308	957
Restructuring, asset impairments, and other charges	245	1,043
Unrealized foreign currency loss (gain)	(1,757)	1,053
Tax effect of non-GAAP adjustments, including certain discrete tax benefits	(622)	(1,121)
Non-GAAP income, net of income tax, excluding stock-based compensation	13,218	41,677
Stock-based compensation, net of tax	8,694	5,304
Non-GAAP income, net of income tax	\$ 21,912	\$ 46,981
Non-GAAP diluted earnings per share	\$ 0.58	\$ 1.24

Reconciliation of non-GAAP measure

Per share earnings excluding certain items	Three Months Ended March 31,	
	2024	2023
Diluted earnings per share from continuing operations, as reported	\$ 0.15	\$ 0.84
Add back:		
Per share impact of non-GAAP adjustments, net of tax	0.43	0.40
Non-GAAP earnings per share	\$ 0.58	\$ 1.24

Liquidity and Capital Resources

Liquidity

Adequate liquidity and cash generation is important to the execution of our strategic initiatives. Our ability to fund our operations, acquisitions, capital expenditures, and product development efforts may depend on our ability to generate cash from operating activities, which is subject to future operating performance, as well as general economic, financial, competitive, legislative, regulatory, and other conditions, some of which may be beyond our control. Our primary sources of liquidity continue to be our available cash, investments, cash generated from operations, and available borrowing capacity under the Revolving Facility (defined in *Note 16. Long-Term Debt* in Part I, Item 1 “Unaudited Consolidated Financial Statements”).

As of March 31, 2024, our cash and cash equivalents totaled \$1,017.8 million, while our available funding under our Revolving Facility was \$200.0 million. Additionally, we generated \$8.0 million of cash flow from continuing operations in the three months ended March 31, 2024. We believe our sources of liquidity will be adequate to meet anticipated debt service, share repurchase programs, and dividends. During the ordinary course of business, we evaluate our cash requirements and, if necessary, adjust our expenditures to reflect the current market conditions and our projected revenue and demand. Our capital expenditures are primarily directed towards manufacturing and operations and can materially influence our available cash for other initiatives.

In addition, we may, depending upon the number or size of acquisitions we pursue, seek additional debt or equity financing from time to time; however, such additional financing may not be available on acceptable terms, if at all.

Debt

On September 12, 2023, we completed a private, unregistered offering of \$575.0 million Convertible Notes and received net proceeds of approximately \$561.1 million after the discount for the initial purchasers' fees. We intend to use the net proceeds to fund future growth, which may include strategic acquisitions, opportunistically repay existing outstanding indebtedness, repurchase our common stock, or general corporate purposes.

The following table summarizes our borrowings (in thousands, except for interest rates).

	March 31, 2024	
	Balance	Interest Rate
Convertible Notes	\$ 575,000	2.50%
Term Loan Facility at fixed interest rate due to interest rate swap	216,344	1.17%
Term Loan Facility at variable interest rate	133,656	6.18%
Total borrowings	<u>\$ 925,000</u>	

The interest rate swap contracts expire on September 10, 2024. After that date, the entire balance of our Term Loan Facility will be subject to a variable interest rate. In addition, should we have future borrowings under our Revolving Facility, those borrowings would be subject to a variable rate.

As of March 31, 2024, we had \$200.0 million in available funding under the Revolving Facility. The Term Loan Facility requires quarterly repayments of \$5.0 million plus accrued interest, with the remaining balance due in September 2026.

In addition to the available capacity on the Revolving Facility, prior to the maturity date of our Credit Agreement, we may request an increase to the financing commitments in either the Term Loan Facility or Revolving Facility by an aggregate amount not to exceed \$115.0 million. Any requested increase is subject to lender approval.

For more information see *Note 16. Long-Term Debt* in Part I, Item 1 “Unaudited Consolidated Financial Statements.” For more information on the interest rate swap that fixes the interest rate for a portion of our Term Loan Facility, see *Note 6. Derivative Financial Instruments* in Part I, Item 1 “Unaudited Consolidated Financial Statements.”

Dividends

During the three months ended March 31, 2024, we paid a quarterly cash dividend of \$0.10 per share, totaling \$3.8 million. We currently anticipate that a cash dividend of \$0.10 per share will continue to be paid on a quarterly basis, although the declaration of any future cash dividend is at the discretion of the Board and will depend on our financial condition, results of operations, capital requirements, business conditions, and other factors.

Cash Flows

A summary of our cash from operating, investing, and financing activities is as follows (in thousands):

	Three Months Ended March 31,	
	2024	2023
Net cash from operating activities from continuing operations	\$ 7,993	\$ 31,880
Net cash used in operating activities from discontinued operations	(710)	(2,069)
Net cash from operating activities	7,283	29,811
Net cash used in investing activities	(18,721)	(16,210)
Net cash used in financing activities	(14,137)	(10,805)
Effect of currency translation on cash and cash equivalents	(1,201)	51
Net change in cash and cash equivalents	(26,776)	2,847
Cash and cash equivalents, beginning of period	1,044,556	458,818
Cash and cash equivalents, end of period	\$ 1,017,780	\$ 461,665

Operating Activities

Net cash from operating activities from continuing operations for the three months ended March 31, 2024 was \$8.0 million, as compared to \$31.9 million for the same period in the prior year. The decrease of \$23.9 million as compared to the same period in the prior year was primarily due to lower net income from continuing operations. Additionally, we had unfavorable decreases in accounts payable, accrued expenses, and other liabilities, as well as an unfavorable increase in inventory. This was partially offset by a favorable decrease in accounts receivable.

Investing Activities

Net cash used in investing activities for the three months ended March 31, 2024 was \$18.7 million, primarily driven by the following:

- \$16.6 million in purchases of property and equipment largely driven by investments in our manufacturing footprint and capacity; and
- \$2.1 million in purchases of investments.

Net cash used in investing for the three months ended March 31, 2023 was \$16.2 million due to purchases of property and equipment largely driven by investments in our manufacturing footprint and capacity.

Financing Activities

Net cash used in financing activities for the three months ended March 31, 2024 was \$14.1 million and included the following:

- \$5.0 million for repayment of long-term debt;
- \$3.8 million for dividend payments; and
- \$5.3 million in net payments related to stock-based award activities.

Net cash used in financing activities for the three months ended March 31, 2023 was \$10.8 million and included the following:

- \$5.0 million for repayment of long-term debt;
- \$3.8 million for dividend payment; and
- \$2.0 million in net payments related to stock-based award activities.

Effect of Currency Translation on Cash

During the three months ended March 31, 2024, foreign currency translation had a minimal impact on cash. See "Foreign Currency Exchange Rate Risk" in Part I, Item 3 of this Form 10-Q for more information.

Critical Accounting Policies and Estimates

The preparation of financial statements and related disclosures in conformity with U.S. GAAP requires us to make judgments, assumptions and estimates that affect the amounts reported in the consolidated financial statements and accompanying notes. *Note 1. Summary of Operations and Significant Accounting Policies and Estimates* to the consolidated financial statements in the 2023 Form 10-K describes the significant accounting policies and methods used in the preparation of our consolidated financial statements. Our critical accounting estimates, discussed in the "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part II, Item 7 of the 2023 Form 10-K, include assessing excess and obsolete inventories, accounting for income taxes, and estimates for the valuation of assets and liabilities acquired in business combinations.

Such accounting policies and estimates require significant judgments and assumptions to be used in the preparation of the consolidated financial statements and actual results could differ materially from the amounts reported based on variability in factors affecting these estimates.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market Risk and Risk Management

In the normal course of business, we have exposure to interest rate risk from our investments and Credit Agreement. We also have exposure to foreign exchange rate risk related to our foreign operations and foreign currency transactions.

See “Risk Factors” set forth in Part I, Item 1A of the 2023 Form 10-K and Part II of this Form 10-Q, for more information about the market risks to which we are exposed. There have been no material changes in our exposure to market risk from December 31, 2023.

Foreign Currency Exchange Rate Risk

We are impacted by changes in foreign currency exchange rates through revenue and purchasing transactions when we sell products and purchase materials in currencies different from the currency in which product and manufacturing costs were incurred. Our reported financial results of operations, including the reported value of our assets and liabilities, are also impacted by changes in foreign currency exchange rates. Assets and liabilities of substantially all our subsidiaries outside the U.S. are translated at period end rates of exchange for each reporting period. Operating results and cash flow statements are translated at average rates of exchange during each reporting period. Although these translation changes have no immediate cash impact, the translation changes may impact future borrowing capacity, and overall value of our net assets.

The functional currencies of our worldwide facilities primarily include the United States Dollar, Euro, South Korean Won, New Taiwan Dollar, Japanese Yen, Pound Sterling, and Chinese Yuan. We are subject to risks associated with revenue and purchasing activities and costs to operate that are denominated in currencies other than our functional currencies, such as the Singapore Dollar, Malaysian Ringgit, Mexican Peso and Philippine Peso. The impact of a change in one or more of these particular exchange rates would be immaterial.

From time to time, we may enter into foreign currency exchange rate contracts to hedge against changes in foreign currency exchange rates on assets and liabilities expected to be settled at a future date, including foreign currency, which may be required for a potential foreign acquisition. Market risk arises from the potential adverse effects on the value of derivative instruments that result from a change in foreign currency exchange rates. We may enter into foreign currency forward contracts to manage the exchange rate risk associated with intercompany debt denominated in nonfunctional currencies. We minimize our market risk applicable to foreign currency exchange rate contracts by establishing and monitoring parameters that limit the types and degree of our derivative contract instruments. We enter into derivative contract instruments for risk management purposes only. We do not enter into or issue derivatives for trading or speculative purposes.

Interest Rate Risk

Our interest rate risk exposure relates primarily to our variable rate Term Loan Facility. As of March 31, 2024 we have interest rate swap agreements in effect that fix the interest rate for \$216.3 million of our Term Loan Facility at 1.17%, while \$133.7 million remains at a floating rate of 6.18%.

The Term Loan Facility and Revolving Credit Facility bear interest, at our option, at a rate based on the Base Rate or SOFR, as defined in the Credit Agreement, plus an applicable margin. The interest rate swap contracts expire on September 10, 2024. After that date, the entire balance of our Term Loan Facility will be subject to a variable interest rate. In addition, should we have future borrowings under our Revolving Facility, those borrowings would be subject to a variable rate.

For more information see *Note 16. Long-Term Debt* in Part I, Item 1 “Unaudited Consolidated Financial Statements.” For more information on the interest rate swap that fixes the interest rate for a portion of our Term Loan Facility, see *Note 6. Derivative Financial Instruments* in Part I, Item 1 “Unaudited Consolidated Financial Statements.”

As of March 31, 2024 with respect to the borrowed portion of our Credit Facility that is subject to a variable interest rate, a hypothetical increase of 100 basis points (1%) in interest rates would have an insignificant impact on our interest expense. A change in interest rates does not have a material impact upon our future earnings and cash flow for fixed rate debt. However, increases in interest rates could impact our ability to refinance existing maturities and acquire additional debt on favorable terms.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We have established disclosure controls and procedures, which are designed to ensure that information required to be disclosed in reports filed or submitted under the Exchange Act is recorded, processed, summarized, and reported, within the time periods specified in the SEC's rules and forms. These disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed in the reports that we file or submit under the Exchange Act is accumulated and communicated to management, including our Principal Executive Officer (Stephen D. Kelley, President and Chief Executive Officer) and Principal Financial Officer (Paul Oldham, Executive Vice President and Chief Financial Officer), as appropriate, to allow timely decisions regarding required disclosures.

As of the end of the period covered by this report, we conducted an evaluation, with the participation of management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of the disclosure controls and procedures pursuant to the Exchange Act Rule 13a-15(b). Based upon this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of March 31, 2024. The conclusions of the Chief Executive Officer and Chief Financial Officer from this evaluation were communicated to the Audit and Finance Committee. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. We intend to continue to review and document our disclosure controls and procedures, including our internal controls over financial reporting, and may from time to time make changes aimed at enhancing their effectiveness and to ensure that our systems evolve with our business.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting that occurred during the quarter covered by this Form 10-Q that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

We are involved in disputes and legal actions arising in the normal course of our business. Although it is not possible to predict the outcome of these matters, we believe that the results of these proceedings will not have a material adverse effect on our financial condition, results of operations, or liquidity.

ITEM 1A. RISK FACTORS

Information concerning our risk factors is contained in Part I, Item 1A, "Risk Factors" in the 2023 Form 10-K. The risks described in the 2023 Form 10-K are not the only risks that we face. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition, or operating results. There have been no material changes to the risk factors previously disclosed in the 2023 Form 10-K.

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

To repurchase shares of our common stock, we periodically enter into stock repurchase agreements, open market transactions, and/or other transactions in accordance applicable federal securities laws. Before repurchasing our shares, we consider the market price of our common stock, the nature of other investment opportunities, available liquidity, cash flows from operations, general business and economic conditions, and other relevant factors.

At March 31, 2024, the remaining amount authorized by the Board of Directors (“the Board”) for future share repurchases was \$199.2 million with no time limitation. There were no share repurchases during the quarter covered by this Form 10-Q.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None

ITEM 4. MINE SAFETY DISCLOSURES

None

ITEM 5. OTHER INFORMATION

During the three months ended March 31, 2024, no director or officer adopted or terminated a “Rule 10b5-1 trading arrangement” or a “Non-Rule 10b5-1 trading arrangement” (as defined in Item 408 of Regulation S-K).

ITEM 6. EXHIBITS

The exhibits listed in the following index are filed as part of this Quarterly Report on Form 10-Q.

Exhibit Number	Description
31.1	<u>Certification of the Chief Executive Officer Pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u>
31.2	<u>Certification of the Chief Financial Officer Pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u>
32.1	<u>Certification of the Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u>
32.2	<u>Certification of the Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u>
101.INS	Inline XBRL Instance Document <i>(The instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document)</i>
101.SCH	Inline XBRL Taxonomy Extension Schema Document.
101.CAL	Inline XBRL Taxonomy Extension Calculation Link base Document.
101.DEF	Inline XBRL Taxonomy Extension Definition Link base Document.
101.LAB	Inline XBRL Taxonomy Extension Label Link base Document.
101.PRE	Inline XBRL Taxonomy Extension Presentation Link base Document.
104	Cover Page Interactive Data File <i>(Formatted in Inline XBRL and contained in Exhibit 101)</i>

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Dated: May 1, 2024

ADVANCED ENERGY INDUSTRIES, INC.

/s/ Paul Oldham

Paul Oldham
Chief Financial Officer and Executive Vice President

/s/ Bernard R. Colpitts, Jr.

Bernard R. Colpitts, Jr.
Chief Accounting Officer and Controller

I, Stephen D. Kelley, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the period ended March 31, 2024 of Advanced Energy Industries, Inc.;
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: May 1, 2024

/s/ Stephen D. Kelley
Stephen D. Kelley
Chief Executive Officer

I, Paul Oldham, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the period ended March 31, 2024 of Advanced Energy Industries, Inc.;
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: May 1, 2024

/s/ Paul Oldham
Paul Oldham
Chief Financial Officer and Executive Vice President

Certification of the Chief Executive Officer
Pursuant to 18 U.S.C. Section 1350,
as Adopted Pursuant to Section 906
of the Sarbanes-Oxley Act of 2002

I hereby certify, pursuant to 18 U.S.C. Section 1350, that the accompanying Quarterly Report on Form 10-Q for the period ended March 31, 2024, of Advanced Energy Industries, Inc., fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in the Quarterly Report on Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of Advanced Energy Industries, Inc.

Date: May 1, 2024

/s/ Stephen D. Kelley
Stephen D. Kelley
Chief Executive Officer

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

Certification of the Chief Financial Officer
Pursuant to 18 U.S.C. Section 1350,
as Adopted Pursuant to Section 906
of the Sarbanes-Oxley Act of 2002

I hereby certify, pursuant to 18 U.S.C. Section 1350, that the accompanying Quarterly Report on Form 10-Q for the period ended March 31, 2024, of Advanced Energy Industries, Inc., fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in the Quarterly Report on Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of Advanced Energy Industries, Inc.

Date: May 1, 2024

/s/ Paul Oldham

Paul Oldham

Chief Financial Officer & Executive Vice President

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.
