

ADVANCED ENERGY INDUSTRIES INC  
Form 10-Q  
October 31, 2016  
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UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

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FORM 10-Q

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QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.

For the quarterly period ended September 30, 2016

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)  
1625 Sharp Point Drive, Fort Collins, CO (Address of principal executive offices)  
84-0846841 (I.R.S. Employer Identification No.)  
80525 (Zip Code)

Registrant's telephone number, including area code: (970) 221-4670

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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files). Yes  No

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

Large accelerated filer  Accelerated filer  Non-accelerated filer  Smaller reporting company   
(Do not check if a smaller reporting company)

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

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As of October 28, 2016 there were 39,688,752 shares of the registrant's Common Stock, par value \$0.001 per share, outstanding.

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## PART I FINANCIAL STATEMENTS

## ITEM 1. UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

## ADVANCED ENERGY INDUSTRIES, INC.

## Unaudited Condensed Consolidated Balance Sheets

(In thousands, except per share amounts)

	September 30, 2016	December 31, 2015
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 244,292	\$ 158,443
Marketable securities	5,538	11,986
Accounts receivable, net of allowances of \$1,993 and \$8,739, respectively	69,410	54,959
Inventories	56,025	52,573
Deferred income tax assets	6,044	6,004
Income taxes receivable	7,902	9,040
Other current assets	8,166	7,868
Current assets of discontinued operations	23,491	41,902
Total current assets	420,868	342,775
Deposits and other assets	1,673	1,729
Property and equipment, net	11,988	9,645
Goodwill	43,596	42,729
Intangible assets, net	30,200	34,141
Deferred income tax assets	30,184	30,398
Non-current assets of discontinued operations	163	1,271
<b>TOTAL ASSETS</b>	<b>\$ 538,672</b>	<b>\$ 462,688</b>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable	\$ 37,180	\$ 27,246
Income taxes payable	10,312	13,972
Accrued payroll and employee benefits	10,719	9,175
Customer deposits	6,890	3,319
Other accrued expenses	13,149	13,891
Current liabilities of discontinued operations	17,232	36,481
Total current liabilities	95,482	104,084
Deferred income tax liabilities	1,225	1,181
Uncertain tax positions	4,191	2,086
Long term deferred revenue	40,393	45,584
Other long-term liabilities	17,232	18,871
Non-current liabilities of discontinued operations	25,362	27,302
Total liabilities	183,885	199,108
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; 39,689 and 39,756 issued and outstanding, respectively	40	40
Additional paid-in capital	201,772	195,096
Retained earnings	151,083	67,910
Accumulated other comprehensive income	1,892	534
Total stockholders' equity	354,787	263,580

TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY

\$ 538,672 \$ 462,688

The accompanying notes are an integral part of these Unaudited Condensed Consolidated Financial Statements.

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

	Three Months Ended		Nine Months Ended	
	September 30,		September 30,	
	2016	2015	2016	2015
Sales:				
Product	\$107,650	\$94,238	\$294,695	\$279,270
Services	18,902	15,518	53,666	48,650
Total sales	126,552	109,756	348,361	327,920
Cost of sales:				
Product	49,835	43,770	137,984	129,840
Services	10,594	7,448	28,748	23,894
Total cost of sales	60,429	51,218	166,732	153,734
Gross profit	66,123	58,538	181,629	174,186
Operating expenses:				
Research and development	11,293	10,370	33,324	30,114
Selling, general and administrative	19,421	16,585	56,814	49,976
Amortization of intangible assets	1,048	1,098	3,180	3,298
Restructuring benefit	—	317	—	315
Total operating expenses	31,762	28,370	93,318	83,703
Operating income	34,361	30,168	88,311	90,483
Other income (expense), net	(55	) (722	) 1,138	447
Income from continuing operations before income taxes	34,306	29,446	89,449	90,930
Provision for income taxes	5,268	6,133	12,937	18,938
Income from continuing operations	29,038	23,313	76,512	71,992
Income (loss) from discontinued operations, net of income taxes	1,323	(6,881	) 6,661	(266,743
Net income (loss)	\$30,361	\$16,432	\$83,173	\$(194,751)
Basic weighted-average common shares outstanding	39,681	41,027	39,723	40,905
Diluted weighted-average common shares outstanding	39,967	41,319	40,015	40,905
Earnings (loss) per share:				
Continuing operations:				
Basic earnings per share	\$0.73	\$0.57	\$1.93	\$1.76
Diluted earnings per share	\$0.73	\$0.56	\$1.91	\$1.76
Discontinued operations:				
Basic earnings (loss) per share	\$0.03	\$(0.17	) \$0.17	\$(6.52
Diluted earnings (loss) per share	\$0.03	\$(0.17	) \$0.17	\$(6.52
Net income:				
Basic earnings (loss) per share	\$0.77	\$0.40	\$2.09	\$(4.76
Diluted earnings (loss) per share	\$0.76	\$0.40	\$2.08	\$(4.76

The accompanying notes are an integral part of these Unaudited Condensed Consolidated Financial Statements.

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## ADVANCED ENERGY INDUSTRIES, INC.

## Unaudited Condensed Consolidated Statements of Comprehensive Income (Loss)

(In thousands)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Net income (loss)	\$30,361	\$16,432	\$83,173	\$(194,751)
Other comprehensive income, net of tax:				
Foreign currency translation adjustment	1,125	(2,498 )	1,389	(10,211 )
Unrealized gain (loss) on marketable securities	(17 )	11	(31 )	(613 )
Comprehensive income (loss)	\$31,469	\$13,945	\$84,531	\$(205,575)

The accompanying notes are an integral part of these Unaudited Condensed Consolidated Financial Statements.

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

	Nine Months Ended September 30,	
	2016	2015
<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>		
Net income (loss)	\$83,173	\$(194,751)
Income (loss) from discontinued operations, net of income taxes	6,661	(266,743 )
Income from continuing operations, net of income taxes	76,512	71,992
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Depreciation and amortization	5,938	6,779
Stock-based compensation expense	4,299	1,913
Net (gain) loss on sale or disposal of assets	259	(17 )
Changes in operating assets and liabilities, net of assets acquired:		
Accounts receivable	(13,679 )	11,007
Inventories	(5,261 )	4,636
Other current assets	(696 )	(1,931 )
Accounts payable	10,619	6,933
Other current liabilities and accrued expenses	1,489	(840 )
Income taxes	2,562	9,045
Net cash provided by operating activities from continuing operations	82,042	109,517
Net cash used in operating activities from discontinued operations	(4,538 )	(37,462 )
Net cash provided by operating activities	77,504	72,055
<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>		
Purchases of marketable securities	(745 )	(27,546 )
Proceeds from sale of marketable securities	7,161	15,891
Acquisitions, net of cash acquired	—	(128 )
Purchases of property and equipment	(4,524 )	(3,145 )
Net cash provided by (used in) investing activities from continuing operations	1,892	(14,928 )
Net cash used in investing activities from discontinued operations	—	(46 )
Net cash provided by (used in) investing activities	1,892	(14,974 )
<b>CASH FLOWS FROM FINANCING ACTIVITIES:</b>		
Proceeds from exercise of stock options	1,753	3,503
Excess tax from stock-based compensation deduction	623	586
Other financing activities	(3 )	(3 )
Net cash provided by financing activities from continuing operations	2,373	4,086
Net cash used in financing activities from discontinued operations	(24 )	(14 )
Net cash provided by financing activities	2,349	4,072
Effect of currency translation on cash	(550 )	(2,142 )
Increase in cash and cash equivalents	81,195	59,011
CASH AND CASH EQUIVALENTS, beginning of period	169,720	125,285
CASH AND CASH EQUIVALENTS, end of period	250,915	184,296
Less cash and cash equivalents from discontinued operations	6,623	6,135
CASH AND CASH EQUIVALENTS FROM CONTINUING OPERATIONS, end of period	\$244,292	\$178,161
<b>SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:</b>		
Cash paid for interest	\$173	\$217



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Cash paid for income taxes	\$4,930	\$5,861
Cash received for refunds of income taxes	\$444	\$4,919
Cash held in banks outside the United States of America	\$176,815	\$94,773

The accompanying notes are an integral part of these Unaudited Condensed Consolidated Financial Statements.

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ADVANCED ENERGY INDUSTRIES, INC.

NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(In thousands, except per share data)

NOTE 1. BASIS OF PRESENTATION

Advanced Energy Industries, Inc., a Delaware corporation, and its wholly-owned subsidiaries ("we," "us," "our," "Advanced Energy," or the "Company") design, manufacture, sell, and support power conversion products that transform electrical power into various usable forms. Our products enable manufacturing processes that use thin films for various products, such as semiconductor devices, flat panel displays, solar cells, architectural glass, optical coating and decorative and functional coating for consumer products. We also supply thermal instrumentation products for advanced temperature control in the thin film process for these same markets. Our power control modules provide power control solutions for industrial applications where heat treatment and processing are used such as glass manufacturing, metal fabrication and treatment, and material and chemical processing. Our high voltage power supplies and modules are used in applications such as semiconductor ion implantation, scanning electron microscopy, chemical analysis such as mass spectrometry and various applications using X-ray technology and electron guns for both analytical and processing applications. Our network of global service support centers provides a recurring revenue opportunity as we offer repair services, conversions, upgrades, and refurbishments and sales of used equipment to companies using our products. As of December 31, 2015, we discontinued the production, engineering, and sales of our solar inverter product line. As such, all solar inverter revenues, costs, assets and liabilities are reported in Discontinued Operations for all periods presented herein. See Note 2. Discontinued Operations.

In the opinion of management, the accompanying Unaudited Condensed Consolidated Financial Statements contain all adjustments, consisting of normal, recurring adjustments, necessary to present fairly the financial position of the Company as of September 30, 2016, and the results of our operations and cash flows for the three and nine months ended September 30, 2016 and 2015.

The Unaudited Condensed 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 condensed or omitted pursuant to such rules and regulations. These Unaudited Condensed 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 fiscal year ended December 31, 2015 and other financial information filed with the SEC.

ESTIMATES AND ASSUMPTIONS

The preparation of our Unaudited Condensed 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, and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. We believe that the significant estimates, assumptions, and judgments when accounting for items and matters such as allowances for doubtful accounts, excess and obsolete inventory, warranty reserves, acquisitions, asset valuations, goodwill, asset life, depreciation, amortization, recoverability of assets, impairments, deferred revenue, stock option and restricted stock grants, taxes, and other provisions are reasonable, based upon information available at the time they are made. Actual results may differ from these estimates.

CRITICAL ACCOUNTING POLICIES

Our accounting policies are described in our audited Consolidated Financial Statements and Notes contained in our Annual Report on Form 10-K for the year ended December 31, 2015.

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, is not expected to have a material impact on the Consolidated Financial Statements upon adoption.



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ADVANCED ENERGY INDUSTRIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(in thousands except per share data)

In May 2014, the FASB issued guidance on revenue from contracts with customers, which implements a five step process for how an entity should recognize revenue in order to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. This guidance will be effective for us in the first quarter of 2018. Early application is not permitted. The standard permits the use of either the retrospective or cumulative effect transition method. We are currently evaluating the impact that the adoption will have on our Consolidated Financial Statements and related disclosures. We have not yet selected a transition method nor have we determined the effect of the standard on our ongoing reporting.

In November 2015, the FASB issued guidance requiring entities to present deferred tax assets and liabilities as noncurrent in a classified balance sheet instead of separating into current and noncurrent amounts. This guidance is effective for the first quarter of 2017. Early adoption is permitted for all companies in any interim or annual period. We are not planning on early adoption. Based on our current assessment, we have determined that as of September 30, 2016 and December 31, 2015, the result of adoption would be the reclassification of approximately \$20.3 million and \$20.3 million, respectively, from current assets to non-current assets. Of these amounts, \$14.3 million and \$14.3 million, respectively, would have been reflected in discontinued operations.

In February 2016, the FASB issued guidance which requires organizations that lease assets to recognize on the balance sheet the assets and liabilities for the rights and obligations created by those leases. The new guidance also requires additional disclosures related to leasing transactions. The standard is effective for the first quarter of 2019. We are currently evaluating the impact that the adoption will have on our Consolidated Financial Statements and related disclosures.

In March 2016, the FASB issued guidance requiring a change in the accounting of share-based payments, including the income tax consequences, forfeitures, classifications of awards and classification on the statement of cash flows. This guidance will be effective for us in the first quarter of 2017. Early adoption is permitted for all companies in any interim or annual period. We are currently evaluating the impact that the adoption will have on our Consolidated Financial Statements and related disclosures.

**NOTE 2. DISCONTINUED OPERATIONS**

In December 2015, we completed the wind down of engineering, manufacturing and sales of our solar inverter product line (the "inverter business"). Accordingly, the results of our inverter business has been reflected as "Income (loss) from discontinued operations, net of income taxes" on our Unaudited Condensed Consolidated Statements of Operations for all periods presented herein.

The effect of our sales of extended inverter warranties to our customers continues to be reflected in deferred revenue in our Unaudited Condensed Consolidated Balance Sheets. Deferred revenue for extended inverter warranties and the associated costs of warranty service will be reflected in Sales and Cost of goods sold, respectively, from continuing operations in future periods in our Consolidated Statement of Operations, as the deferred revenue is earned and the associated services are rendered. Extended warranties related to the inverter product line are no longer offered.

The items included in "Income (loss) from discontinued operations, net of income taxes" are as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Sales	\$—	\$21,044	\$—	\$80,789
Cost of sales	3,095	26,545	672	101,915
Total operating (income) expenses (including restructuring)	(1,473 )	15,007	(3,759 )	222,439
Operating income (loss) from discontinued operations	(1,622 )	(20,508 )	3,087	(243,565 )
Other (loss) income	(14 )	(145 )	325	(96 )

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Income (loss) from discontinued operations before income taxes	(1,636 )	(20,653 )	3,412	(243,661 )
(Benefit) provision for income taxes	(2,959 )	(13,772 )	(3,249 )	23,082
Income (loss) from discontinued operations, net of income taxes	\$1,323	\$(6,881 )	\$6,661	\$(266,743)

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ADVANCED ENERGY INDUSTRIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(in thousands except per share data)

Assets and Liabilities of discontinued operations within the Condensed Consolidated Balance Sheets are comprised of the following:

	September 30, 2016	December 31, 2015
Cash and cash equivalents	\$ 6,623	\$ 11,277
Accounts and other receivables, net	2,328	16,331
Inventories	246	—
Deferred income tax assets	14,294	14,294
Current assets of discontinued operations	\$ 23,491	\$ 41,902
Intangibles and other assets, net	\$ 163	\$ 1,271
Non-current assets of discontinued operations	\$ 163	\$ 1,271
Accounts payable and other accrued expenses	\$ 8,259	\$ 19,261
Accrued warranty	8,241	11,852
Accrued restructuring	732	5,368
Current liabilities of discontinued operations	\$ 17,232	\$ 36,481
Accrued warranty	\$ 25,179	\$ 27,124
Other liabilities	183	178
Non-current liabilities of discontinued operations	\$ 25,362	\$ 27,302

During the quarter ended September 30, 2016, we reclassified \$5 million of income tax receivable from Accounts and other receivables, net reflected in discontinued operations to Income tax receivable reflected in continuing operations.

**NOTE 3. INCOME TAXES**

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

	Three Months Ended		Nine Months Ended	
	September 30,		September 30,	
	2016	2015	2016	2015
Income from continuing operations before income taxes	\$34,306	\$29,446	\$89,449	\$90,930
Provision for income taxes	5,268	6,133	12,937	18,938
Effective tax rate	15.4	% 20.8	% 14.5	% 20.8

The effective tax rates for the nine months ended September 30, 2016 and 2015 are lower than the federal statutory rate primarily due to the benefit of the earnings in foreign jurisdictions which are subject to lower tax rates.

Our policy is to classify accrued interest and penalties related to unrecognized tax benefits in our income tax provision. For the three and nine months ended September 30, 2016 and 2015, the amount of interest and penalties accrued related to our unrecognized tax benefits was not significant.

**NOTE 4. EARNINGS PER SHARE**

Basic earnings per share ("EPS") is computed by dividing income available to common stockholders by the weighted-average number of common shares outstanding during the period. The computation of our diluted EPS is similar to the computation of our basic EPS except that the denominator is increased to include the number of additional common shares that would have



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ADVANCED ENERGY INDUSTRIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(in thousands except per share data)

been outstanding (using the if-converted and treasury stock methods), if our outstanding stock options and restricted stock units had been converted to common shares, and if such assumed conversion is dilutive.

The following is a reconciliation of the weighted-average shares outstanding used in the calculation of basic and diluted EPS:

	Three Months Ended September 30, 2016		Nine Months Ended September 30, 2015	
Income from continuing operations, net of income taxes	\$29,038	\$23,313	\$76,512	\$71,992
Basic weighted-average common shares outstanding	39,681	41,027	39,723	40,905
Assumed exercise of dilutive stock options and restricted stock units	286	292	292	—
Diluted weighted-average common shares outstanding	39,967	41,319	40,015	40,905
Continuing operations:				
Basic earnings per share	\$0.73	\$0.57	\$1.93	\$1.76
Diluted earnings per share	\$0.73	\$0.56	\$1.91	\$1.76

The following stock options and restricted stock units were excluded in the computation of diluted earnings per share because they were anti-dilutive:

	Three Months Ended September 30, 2016		Nine Months Ended September 30, 2015	
Stock options	—	172	—	151
Restricted stock units	1	4	1	2

**Stock Buyback**

In September 2015 our Board of Directors authorized a program to repurchase up to \$150.0 million of our stock over a thirty-month period. As of October 28, 2016, we have \$100 million remaining available for the repurchase of shares. In November 2015 we entered into an accelerated stock repurchase arrangement with Morgan Stanley & Co. LLC (the “Counterparty”) pursuant to a Fixed Dollar Accelerated Share Repurchase Transaction (the “ASR Agreement”) to purchase \$50.0 million of shares of our common stock in the open market. In accordance with the ASR Agreement, we paid \$50.0 million at the beginning of the contract and received an initial delivery of 1.4 million shares of our common stock. In April 2016, we received a final delivery of 0.3 million shares of our common stock. A total of 1.7 million shares of our common stock was repurchased under the ASR Agreement at an average price of \$28.99 per share. We retired the shares repurchased under the ASR Agreement and have therefore recognized the \$50.0 million share repurchase as a reduction to Stockholders Equity.

**NOTE 5. MARKETABLE SECURITIES AND ASSETS MEASURED AT FAIR VALUE**

Our investments with original maturities of more than three months at time of purchase and that are intended to be held for no more than 12 months, are considered marketable securities available for sale.

Our marketable securities consist of commercial paper and certificates of deposit as follows:

	September 30, 2016	December 31, 2015
Cost		



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		Fair Value		Fair Value
Commercial paper	\$—	\$—	\$4,989	\$4,995
Certificates of deposit	5,532	5,538	7,008	6,991
Total marketable securities	\$5,532	\$5,538	\$11,997	\$11,986

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ADVANCED ENERGY INDUSTRIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(in thousands except per share data)

The maturities of our marketable securities available for sale as of September 30, 2016 are as follows:

	Earliest	Latest
Certificates of deposit	10/10/2016	to 9/18/2017

The value and liquidity of the marketable securities we hold are affected by market conditions, as well as the ability of the issuers of such securities to make principal and interest payments when due, and the functioning of the markets in which these securities are traded. As of September 30, 2016, we do not believe any of the underlying issuers of our marketable securities are at risk of default.

The following tables present information about our marketable securities measured at fair value, on a recurring basis, as of September 30, 2016 and December 31, 2015. The tables indicate the fair value hierarchy of the valuation techniques utilized to determine fair value. We did not have any financial liabilities measured at fair value, on a recurring basis, as of September 30, 2016 and December 31, 2015.

September 30, 2016	Level 1	Level 2	Level 3	Total
Certificates of deposit	\$—	\$5,538	\$—	\$—
Total marketable securities	\$—	\$5,538	\$—	\$—

December 31, 2015	Level 1	Level 2	Level 3	Total
Commercial paper	\$—	\$4,995	\$—	\$—
Certificates of deposit	—	6,991	—	6,991
Total marketable securities	\$—	\$11,986	\$—	\$—

There were no transfers in or out of Level 1, 2, or 3 fair value measurements during the three and nine months ended September 30, 2016.

NOTE 6. DERIVATIVE FINANCIAL INSTRUMENTS

We are impacted by changes in foreign currency exchange rates. We attempt to mitigate these risks through the use of derivative financial instruments, primarily forward currency exchange rate contracts. During the nine months ended September 30, 2016 and 2015, we entered into currency exchange rate forward contracts to attempt to mitigate the exchange rate risk associated with intercompany debt denominated in nonfunctional currencies. We did not enter into any currency exchange rate forward contracts during the three months ended September 30, 2016 and 2015. These derivative instruments are not designated as hedges for accounting purposes; however, they tend to offset the fluctuations of our intercompany debt due to foreign currency exchange rate changes. These forward contracts are typically for one month periods. We did not have any currency exchange rate contracts outstanding as of September 30, 2016. At December 31, 2015 we had outstanding Euro forward contracts.

During the three and nine months ended September 30, 2016 and 2015 the gains and losses recorded related to the foreign currency exchange contracts are as follows:

	Three Months Ended September 30, 2016	Three Months Ended September 30, 2015	Nine Months Ended September 30, 2016	Nine Months Ended September 30, 2015
Foreign currency gain (loss) from foreign currency exchange contracts	\$ —	\$ —	\$(569)	\$1,887

These gains and losses were offset by corresponding gains and losses on the revaluation of the underlying intercompany debt and both are included as a component of Other income, net, in our Unaudited Condensed Consolidated Statements of Operations.

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ADVANCED ENERGY INDUSTRIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(in thousands except per share data)

## NOTE 7. INVENTORIES

Our inventories are valued at the lower of cost or market and computed on a first-in, first-out (FIFO) basis.

Components of Inventories are as follows:

	September 30, 2016	December 31, 2015
Parts and raw materials	\$ 40,076	\$ 40,578
Work in process	5,964	5,643
Finished goods	9,985	6,352
Inventories	\$ 56,025	\$ 52,573

## NOTE 8. PROPERTY AND EQUIPMENT

Property and equipment are as follows:

	September 30, 2016	December 31, 2015
Buildings and land	\$ 1,732	\$ 1,623
Machinery and equipment	32,578	30,479
Computer and communication equipment	24,086	19,744
Furniture and fixtures	1,367	1,319
Vehicles	342	215
Leasehold improvements	15,545	15,173
Construction in process	265	15
	75,915	68,568
Less: Accumulated depreciation	(63,927 )	(58,923 )
Property and equipment, net	\$ 11,988	\$ 9,645

Depreciation expense, recorded in continuing operations and included in selling, general and administrative expense, is as follows:

	Three Months Ended September 30, 2016	Three Months Ended September 30, 2015	Nine Months Ended September 30, 2016	Nine Months Ended September 30, 2015
Depreciation expense	\$845	\$1,050	\$2,758	\$3,481

## NOTE 9. GOODWILL

The following summarizes the changes in goodwill during the nine months ended September 30, 2016:

	September 30, 2016	Effect of Changes in Exchange Rates	December 31, 2015
Goodwill	\$ 43,596	\$ 867	\$ 42,729



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ADVANCED ENERGY INDUSTRIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(in thousands except per share data)

## NOTE 10. INTANGIBLE ASSETS

Other intangible assets subject to amortization consisted of the following as of September 30, 2016 and December 31, 2015:

	September 30, 2016				Weighted-Average Useful Life in Years
	Gross Carrying in Amount	Effect of Changes in Exchange Rates	Accumulated Amortization	Net Carrying Amount	
Technology-based	\$14,130	\$(1,702)	\$(3,778)	\$8,650	10
Customer relationships	31,276	(3,250)	(7,526)	20,500	12
Trademarks and other	2,892	(389)	(1,453)	1,050	10
Total amortizable intangibles	\$48,298	\$(5,341)	\$(12,757)	\$30,200	
	December 31, 2015				Weighted-Average Useful Life in Years
	Gross Carrying in Amount	Effect of Changes in Exchange Rates	Accumulated Amortization	Net Carrying Amount	
Technology-based	\$14,130	\$(1,535)	\$(2,828)	\$9,767	10
Customer relationships	31,276	(2,805)	(5,550)	22,921	12
Trademarks and other	2,892	(247)	(1,192)	1,453	10
Total amortizable intangibles	\$48,298	\$(4,587)	\$(9,570)	\$34,141	

Amortization expense relating to other intangible assets included in our income from continuing operations is as follows:

	Three Months Ended		Nine Months Ended	
	September 30, 2016	September 30, 2015	September 30, 2016	September 30, 2015
Amortization expense	\$1,048	\$1,098	\$3,180	\$3,298

Amortization expense related to intangibles for each of the five years 2016 (remaining) through 2020 and thereafter is as follows:

Year Ending December 31,	
2016 (remaining)	\$1,022
2017	3,950
2018	3,938
2019	3,920
2020	3,271
Thereafter	14,099
	\$30,200

## NOTE 11. WARRANTIES

Provisions of our sales agreements include customary product warranties, ranging from 12 months to 24 months following installation. The estimated cost of warranties is recorded when revenue is recognized and is based upon historical experience by product, configuration and geographic region.



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ADVANCED ENERGY INDUSTRIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(in thousands except per share data)

We establish accruals for our warranty obligations that are probable to result in future costs. The warranty accrual is included in our Other accrued expenses in our balance sheet. Changes in our product warranty accrual are as follows:

	Three Months Ended September 30, 2016		Nine Months Ended September 30, 2015	
Balances at beginning of period	\$1,933	\$1,476	\$1,633	\$1,612
Increases to accruals related to sales during the period	789	235	1,726	674
Warranty expenditures	(197 )	(240 )	(811 )	(816 )
Effect of changes in currency exchange rates	(8 )	(7 )	(31 )	(6 )
Balances at end of period	\$2,517	\$1,464	\$2,517	\$1,464

## NOTE 12. PENSION LIABILITY

In connection with the HiTek acquisition on April 12, 2014, we acquired the HiTek Power Limited Pension Scheme ("HPLPS"). The HPLPS has been closed to new participants and additional accruals since 2006. In order to measure the expense and related benefit obligation, various assumptions are made including discount rates used to value the obligation, expected return on plan assets used to fund these expenses and estimated future inflation rates. These assumptions are based on historical experience as well as current facts and circumstances. An actuarial analysis is used to measure the expense and liability associated with pension benefits. We have committed to fund our defined benefit obligation of HPLPS in the amount of approximately \$1.0 million per year through 2024.

The net pension liability is included in Other long-term liabilities in our balance sheet as follows:

	September 30, 2016	December 31, 2015
Pension liability	\$ 17,219	\$ 17,789

The components of the net periodic pension expense for the three and nine months ended September 30, 2016 and 2015 were as follows:

	Three Months Ended September 30, 2016		Nine Months Ended September 30, 2015	
Net periodic (benefit) expense:				
Expected return on plan assets	\$(121)	\$(166)	\$(385)	\$(494)
Interest cost	235	332	747	986
Amortization of actuarial gains and losses	80	—	255	—
Net periodic expense	\$194	\$166	\$617	\$492

NOTE 13. STOCK-BASED  
COMPENSATION

We have reserved a total of 3.0 million shares of Advanced Energy's common stock for issuance under the 2008 Omnibus Incentive Plan. The Plan provides for the grant of stock options, stock appreciation rights, restricted stock, stock units (including deferred stock units), unrestricted stock, and dividend equivalent rights. Any of the awards issued under this Plan may be issued as performance based awards to align compensation awards to the attainment of annual or long-term performance goals. As of September 30, 2016, there were 1.9 million shares available for grant under the 2008 Omnibus Incentive Plan.



Stock option awards are granted with an exercise price equal to the market price of our stock at the date of grant and have either a time based vesting schedule of three or four-years, or a performance based vesting schedule based upon achievement

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ADVANCED ENERGY INDUSTRIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(in thousands except per share data)

of organizational performance goals over a three year period, and a term of 10 years. The fair value of each award was estimated on the date of grant using the Black-Scholes-Merton option pricing model.

Restricted stock units (“RSU’s”) are granted with either a time based vesting schedule of three or four-years, or a performance based vesting schedule based upon achievement of organizational performance goals over a three year period. The fair value of each RSU is determined based upon the closing fair market value of our common stock on the grant date.

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. Stock-based compensation for the three and nine months ended September 30, 2016 and 2015 is as follows:

	Three Months Ended September 30, 2016		Nine Months Ended September 30, 2015	
Stock-based compensation expense	\$ 1,301	\$ 733	\$ 4,299	\$ 1,913

A summary of activity for stock option awards during the three and nine months ended September 30, 2016 is as follows:

	Three Months Ended September 30, 2016		Nine Months Ended September 30, 2016	
	Number of Options	Weighted-Average Exercise Price per Share	Number of Options	Weighted-Average Exercise Price per Share
Options outstanding at beginning of period	495	\$ 17.30	642	\$ 17.10
Options granted	—	—	—	—
Options exercised	(12)	13.93	(147)	15.42
Options forfeited	—	—	(12)	26.32
Options outstanding at end of period	483	\$ 17.38	483	\$ 17.38

The assumptions in the following table were used to determine fair value of options granted using the Black-Scholes-Merton option valuation model.

	Three Months Ended September 30, 2016		Nine Months Ended September 30, 2015	
Expected term (years)	n/a	n/a	n/a	4.3 years
Estimated volatility	n/a	n/a	n/a	43.0%
Estimated dividend yield	n/a	n/a	n/a	—%
Risk-free interest rate	n/a	n/a	n/a	1.1% - 1.4%

The expected term represents the period of time the stock options awarded are expected to be outstanding, based upon the historical experience of the plan participants. Expected volatility is based on the historical volatility using daily stock price observations. The estimated dividend yield is based on historical dividend practice and the market value of our common stock. The risk-free rate is based on the U.S. treasury yield curve, for periods within the contractual life of the stock option at the time of award.



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ADVANCED ENERGY INDUSTRIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(in thousands except per share data)

A summary of activity for RSU awards for the three and nine months ended September 30, 2016 is as follows:

	Three Months Ended September 30, 2016		Nine Months Ended September 30, 2016	
	Average Number of Options	Weighted Grant Date Fair Value	Average Number of Options	Weighted Grant Date Fair Value
Balance at beginning of period	353	\$ 28.97	233	\$ 26.10
RSUs granted	5	44.26	292	30.00
RSUs vested	(1 )	22.46	(151)	26.03
RSUs forfeited	(1 )	24.98	(18 )	28.09
Balance at end of period	356	\$ 29.23	356	\$ 29.23

## NOTE 14. COMMITMENTS AND CONTINGENCIES

We have firm purchase commitments and agreements with various suppliers to ensure the availability of components. The obligation as of September 30, 2016 is approximately \$54.4 million. Our policy with respect to all purchase commitments is to record losses, if any, when they are probable and reasonably estimable. We continuously monitor these commitments for exposure to potential losses and will record a provision for losses when it is deemed necessary. We are involved in disputes and legal actions arising in the normal course of our business. There have been no material developments in legal proceedings in which we are involved during the three and nine months ended September 30, 2016.

## NOTE 15. RELATED PARTY TRANSACTIONS

Members of our Board of Directors hold various executive positions and serve as directors at other companies, including companies that are our customers. Sales to our related party customers for the three and nine months ended September 30, 2016 and 2015 are as follows:

	Three Months Ended September 30, 2016		Nine Months Ended September 30, 2015	
Sales to related parties	\$ 673	\$ 56	\$ 896	\$ 367
Number of related party customers	2	1	3	2

Our accounts receivable balance from related party customers with outstanding balances as of September 30, 2016 and December 31, 2015 is as follows:

	September 30, 2016	December 31, 2015
Accounts receivable from related parties	\$ 282	\$ 83
Number of related party customers	2	1



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ADVANCED ENERGY INDUSTRIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(in thousands except per share data)

## NOTE 16. SIGNIFICANT CUSTOMER INFORMATION

The following tables summarize sales, and percentages of sales, by customers which individually accounted for 10% or more of sales for the three and nine months ended September 30, 2016 and 2015:

	Three Months Ended September 30,			
	2016	% of Total Sales	2015	% of Total Sales
Applied Materials, Inc.	\$45,806	36.2%	\$33,566	30.6%
LAM Research	24,305	19.2%	21,640	19.7%

	Nine Months Ended September 30,			
	2016	% of Total Sales	2015	% of Total Sales
Applied Materials, Inc.	\$118,364	34.0%	\$97,551	29.7%
LAM Research	73,319	21.0%	66,557	20.3%

The following table summarize the accounts receivable balances, and percentages of the total accounts receivables, for customers which individually accounted for 10% or more of accounts receivables as of September 30, 2016 and December 31, 2015:

	September 30, 2016		December 31, 2015	
Applied Materials, Inc.	\$29,377	42.3%	\$17,147	31.2%
LAM Research	10,026	14.4%	7,321	13.3%

Our sales to Applied Materials, Inc. and LAM Research include precision power products used in semiconductor processing and solar and flat panel display. No other customer accounted for 10% or more of our sales or accounts receivable balances during these periods.

## NOTE 17. CREDIT FACILITIES

On September 9, 2016, Advanced Energy Industries, Inc., along with three of its wholly-owned subsidiaries, AE Solar Energy, Inc., Sekidenko, Inc., and UltraVolt, Inc. terminated its Credit Agreement with Wells Fargo Bank, National Association ("Wells Fargo") which provided for a secured revolving credit facility of up to \$50.0 million (the "Credit Facility"), subject to a borrowing base calculation as discussed in our Annual Report on Form 10-K for the year ended December 31, 2015. Management determined that the Credit Facility was no longer needed and therefore is not cost beneficial to the Company. We expensed \$0.3 million in interest, unused line of credit fees and amortization of debt issuance costs during each of the nine months ended September 30, 2016 and 2015. We did not borrow against the Credit Facility during the nine months ended September 30, 2016.

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

## Special Note on Forward-Looking Statements

The following discussion 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. 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 or circumstances will continue. The inclusion of words such as "anticipate," "expect,"

"estimate," "can," "may," "might," "continue," "enables," "plan," "intend," "should," "could," "would," "likely," "potential," or "believe," as well as statements that events or circumstances "will" occur or continue, indicate forward-looking statements. Forward-looking statements involve risks and uncertainties, which are difficult to predict and many of which are beyond our control. Therefore, actual results could differ materially and adversely from those expressed in any forward-looking statements. Neither we nor any other person assumes responsibility for the accuracy and completeness of such forward-looking statements and readers are cautioned not to place undue reliance on forward-looking statements.

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For additional information regarding factors that may affect our actual financial condition, results of operations and accuracy of our forward-looking statements, see the information under the caption "Risk Factors" in Part II, Item 1A of this Quarterly Report on Form 10-Q and, in our Annual Report on Form 10-K for the year ended December 31, 2015. We undertake no obligation to revise or update any forward-looking statements for any reason.

**BUSINESS OVERVIEW**

We design, manufacture, sell and support precision power products that transform electrical power into various usable forms. Our power conversion products refine, modify and control the raw electrical power from a utility and convert it into power that is predictable, repeatable and customizable. Our products enable thin film manufacturing processes such as plasma enhanced chemical and physical deposition and etch for various semiconductor and industrial products, industrial thermal applications for material and chemical processes, and specialty power for critical industrial applications. We also supply thermal instrumentation products for advanced temperature control in these markets. Our network of global service support centers provides local repair and field service capability in key regions as well as provides upgrades and refurbishment services, and sales of used equipment to businesses that use our products. The markets we serve include:

Semiconductor capital equipment market - Customers in the semiconductor capital equipment market incorporate our products into equipment that make integrated circuits. Our power conversion systems provide the energy to enable thin film processes, such as deposition and etch, and high voltage applications such as ion implant, wafer inspection and metrology.

Our thermal instrumentation products measure the temperature of the processed substrate or the process chamber. Our remote plasma sources deliver ionized gases for reactive chemical processes used in cleaning, surface treatment, and gas abatement. Precise control over the energy delivered to plasma-based processes enables the production of integrated circuits with reduced feature sizes and increased speed and performance.

- Industrial power capital market - Our industrial power capital market is comprised of products for Thin Films Industrial Power and Specialty Power applications.

Thin Films Industrial Power applications include glass coating, glass manufacturing, flat panel displays, solar cell manufacturing, and similar thin film manufacturing, including data storage, hard and optical coating.

Specialty Power applications include power control modules for metal fabrication and treatment, and material and chemical processing. Our high voltage industrial applications include scanning electron microscopy, medical equipment, and instrumentation applications such as x-ray and mass spectroscopy, as well as general electron gun sources for scientific and industrial applications.

The analysis presented below is organized to provide the information we believe will be helpful for understanding our historical performance and relevant trends going forward. This discussion should be read in conjunction with our Unaudited Condensed 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 in accordance with U.S. GAAP. A reconciliation of the non-GAAP measures to U.S. GAAP is provided below.



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## Results of Continuing Operations

The following table sets forth certain data, and the percentage of sales each item reflects, derived from our Unaudited Condensed Consolidated Statements of Operations for the periods indicated:

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2016		2015		2016		2015	
Sales	\$126,552	100.0 %	\$109,756	100.0 %	\$348,361	100.0 %	\$327,920	100.0 %
Gross profit	66,123	52.2	58,538	53.3	181,629	52.1	174,186	53.1
Operating expenses	31,762	25.1	28,370	25.8	93,318	26.8	83,703	25.5
Operating income from continuing operations	34,361	27.1	30,168	27.5	88,311	25.3	90,483	27.6
Other income (expense), net	(55 )	—	(722 )	(0.7 )	1,138	0.3	447	0.1
Income from continuing operations before income taxes	34,306	27.1	29,446	26.8	89,449	25.6	90,930	27.7
Provision for income taxes	5,268	4.2	6,133	5.6	12,937	3.7	18,938	5.8
Income from continuing operations, net of income taxes	\$29,038	22.9 %	\$23,313	21.2 %	\$76,512	21.9 %	\$71,992	21.9 %

## SALES

The following tables set forth sales, and percentage of sales, by product group for the three and nine months ended September 30, 2016 and 2015:

	Three Months Ended September 30,					
	2016	% of Total Sales	2015	% of Total Sales	Increase/ (Decrease)	Percent Change
Semiconductor capital equipment market	\$81,157	64.1 %	\$72,859	66.4 %	\$ 8,298	11.4 %
Industrial power capital markets	26,493	20.9	21,378	19.5	5,115	23.9
Global service	18,902	15.0	15,519	14.1	3,383	21.8
Total sales	\$126,552	100.0 %	\$109,756	100.0 %	\$ 16,796	15.3 %
	Nine Months Ended September 30,					
	2016	% of Total Sales	2015	% of Total Sales	Increase/ (Decrease)	Percent Change
Semiconductor capital equipment market	\$229,486	65.9 %	\$216,247	65.9 %	\$ 13,239	6.1 %
Industrial power capital markets	65,209	18.7	63,022	19.2	2,187	3.5
Global service	53,666	15.4	48,651	14.9	5,015	10.3
Total sales	\$348,361	100.0 %	\$327,920	100.0 %	\$ 20,441	6.2 %

## Total Sales

Sales increased \$16.8 million, or 15.3%, to \$126.6 million for the three months ended September 30, 2016 from \$109.8 million for the three months ended September 30, 2015. Sales for the nine months ended September 30, 2016 increased \$20.4 million, or 6.2%, to \$348.4 million from \$327.9 million for the nine months ended September 30, 2015.

Sales in the semiconductor market increased \$8.3 million, or 11.4% for the three months ending September 30, 2016 as compared to the same period in 2015. Semiconductor market sales for the nine months ended September 30, 2015 increased \$13.2 million or 6.1% as compared to the same period in 2015. Our growth in the semiconductor market has been fueled by our leadership

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in etch applications, specifically related to advanced memory and transition to 3DNAND, along with advances in logic technology. Sales growth in each of the periods is driven primarily by recent program wins which have moved into production and delivery.

Sales in the industrial power capital equipment markets increased \$5.1 million, or 23.9% for the three months ended September 30, 2016 as compared to the same period in 2015 primarily from flat panel display applications. For the nine months ended September 30, 2016 sales increased \$2.2 million or 3.5% as compared to the same period in 2015. The industrial markets we serve include solar panel, flat panel display, power control modules, data storage, architectural glass, high voltage and other industrial manufacturing markets. Our customers in these markets are primarily global and regional original equipment manufacturers.

Global service sales increased \$3.4 million, or 21.8%, for the three months ended September 30, 2016 as compared to the same period in 2015. Global service sales for the nine months ending September 30, 2016 increased \$5.0 million, or 10.3% as compared to the same period in 2015. Increased global service sales in both periods was due to share gains and growth in the installed base.

**Backlog**

Our backlog was \$56.4 million at September 30, 2016 as compared to \$43.7 million at December 31, 2015. Backlog remains strong primarily due to increased demand in the semiconductor market.

**GROSS PROFIT**

For the three months ended September 30, 2016, gross profit was \$66.1 million, or 52.2% of sales as compared to gross profit of \$58.5 million, or 53.3% of sales, for the same period in 2015. Gross profit for the nine months ended September 30, 2016 was \$181.6 million, or 52.1% of sales, as compared to gross profit of \$174.2 million, or 53.1% of sales, for the same period in 2015. The increase in gross profit for both periods is attributable to increased volume as the semiconductor capital equipment market remains strong. The decrease in gross profit as a percentage of sales for both periods is attributable to product mix.

**OPERATING EXPENSE**

Operating expenses increased \$3.4 million to \$31.8 million, or 25.1% of sales, for the three months ending September 30, 2016 from \$28.4 million, or 25.8% of sales for the same period in 2015. Operating expenses increased \$9.6 million to \$93.3 million, or 26.8% of sales, for the nine months ended September 30, 2016 from \$83.7 million or 25.5% of sales for the same period in 2015.

The following table summarizes our operating expenses as a percentage of sales for the periods indicated:

	Three Months Ended September 30, 2016		2015		Nine Months Ended September 30, 2016		2015	
Research and development	\$11,293	8.9 %	\$10,370	9.4 %	\$33,324	9.6 %	\$30,114	9.2 %
Selling, general, and administrative	19,421	15.4	16,585	15.1	56,814	16.3	49,976	15.2
Amortization of intangible assets	1,048	0.8	1,098	1.0	3,180	0.9	3,298	1.0
Restructuring charges	—	—	317	0.3	—	—	315	0.1
Total operating expenses	\$31,762	25.1 %	\$28,370	25.8 %	\$93,318	26.8 %	\$83,703	25.5 %

**Research and Development**

We perform research and development of products for new or emerging applications, technological changes to provide higher performance, lower cost, or other attributes that we may expect to advance our customers' products. We believe that continued development of technological applications, as well as enhancements to existing products to support customer requirements, are critical for us to compete in the markets we serve. Accordingly, we devote significant personnel and financial resources to the development of new products and the enhancement of existing products, and we expect these investments to continue.

Research and development expenses increased \$0.9 million to \$11.3 million, or 8.9% of sales, for the three months ended September 30, 2016 from \$10.4 million, or 9.4% of sales, for the same period in 2015. Research and development expenses increased \$3.2 million to \$33.3 million, or 9.6% of sales, for the nine months ended September 30, 2016 from \$30.1 million, or



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9.2% of sales, for the same period in 2015. The increase in research and development expense is due to our investment in new programs to maintain and increase our technological leadership.

**Selling, General and Administrative**

Our selling expenses support domestic and international sales and marketing activities that include personnel, trade shows, advertising, third-party sales representative commissions, and other selling and marketing activities. Our general and administrative expenses support our worldwide corporate, legal, tax, financial, governance, administrative, information systems, and human resource functions in addition to our general management, including acquisition-related activities.

Selling, general and administrative expenses increased \$2.8 million to \$19.4 million, or 15.4% of sales for the three months ended September 30, 2016 from \$16.6 million, or 15.1% of sales, in the same period in 2015. Selling, general and administrative expenses increased \$6.8 million to \$56.8 million, or 16.3% of sales, for the nine months ended September 30, 2016 from \$50.0 million, or 15.2% of sales in the same period in 2015. The increase in both periods is primarily driven by higher sales expense as we expand our sales management and marketing team to support our growth diversification and geographical expansion plans, as well as, higher stock-based compensation expense, professional fees and costs associated with acquisition opportunities.

**Other Income (Expense), net**

Other income (expense), net consists primarily of interest income and expense, foreign exchange gains and losses, gains and losses on sales of fixed assets, and other miscellaneous items. Other income (expense), net was a loss of \$0.1 million for the three months ended September 30, 2016, as compared to a loss of \$0.7 million for the same period in 2015. Other income (expense), net was a gain of \$1.1 and \$0.4 million for the nine months ended September 30, 2016 and 2015, respectively. The increase in gain for the three months ended September 30, 2016 as compared to the same period in 2015 is primarily due to the fluctuation in foreign exchange rates and our assets in different countries.

**Provision for Income Taxes**

We recorded an income tax provision for the three and nine months ended September 30, 2016 of \$5.3 million and \$12.9 million, respectively, compared to \$6.1 million and \$18.9 million for the three and nine months ended September 30, 2015, respectively. Effective tax rates are 15.4% and 14.5% for the three and nine months ended September 30, 2016, respectively, and 20.8% and 20.8% for the three and nine months ended September 30, 2015, respectively.

The effective tax rates for the three and nine months ended September 30, 2016 and 2015 are lower than the federal statutory rate primarily due to the benefit of the earnings in foreign jurisdictions which are subject to lower tax rates. Our future effective income tax rate depends on various factors, such as changes in tax laws, regulations, accounting principles, or interpretations thereof and the geographic composition of our pre-tax income. We carefully monitor these factors and adjust our effective income tax rate accordingly.

**Results of Discontinued Operations**

We completed the wind down of our inverter engineering, manufacturing and sales product line in December 2015. Accordingly, the inverter product line is presented as a discontinued operation for all periods presented herein. Extended warranties previously sold for the inverter product line are reflected in deferred revenue from continuing operations on our Unaudited Condensed Consolidated Balance Sheets and will be reflected in continuing operations in future periods as the deferred revenue is earned and the associated services are rendered.

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Income (loss) from discontinued operations, net of income taxes are as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Sales	\$—	\$21,044	\$—	\$80,789
Cost of sales	3,095	26,545	672	101,915
Total operating (income) expenses (including restructuring)	(1,473 )	15,007	(3,759 )	222,439
Operating income (loss) from discontinued operations	(1,622 )	(20,508 )	3,087	(243,565 )
Other (loss) income	(14 )	(145 )	325	(96 )
Income (loss) from discontinued operations before income taxes	(1,636 )	(20,653 )	3,412	(243,661 )
(Benefit) provision for income taxes	(2,959 )	(13,772 )	(3,249 )	23,082
Income (loss) from discontinued operations, net of income taxes	\$1,323	\$(6,881 )	\$6,661	\$(266,743)

Operating income (loss) from discontinued operations for the three and nine months ending September 30, 2016 reflects the recovery of accounts receivable previously reserved for product warranties.

**Non-GAAP Results**

Management uses non-GAAP operating income and non-GAAP 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, 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 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 the amortization of intangible assets, stock-based compensation, and restructuring charges, as well as acquisition-related costs and other nonrecurring costs, 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	Three Months Ended		Nine Months Ended	
	September 30, 2016	2015	September 30, 2016	2015
Gross Profit from continuing operations, as reported	\$66,123	\$58,538	\$181,629	\$174,186
Operating expenses from continuing operations, as reported	31,762	28,370	93,318	83,703
Adjustments:				
Restructuring charges	—	(317 )	—	(314 )
Stock-based compensation	(1,301 )	(733 )	(4,299 )	(1,913 )
Amortization of intangible assets	(1,048 )	(1,098 )	(3,180 )	(3,298 )
Non-GAAP operating expenses from continuing operations	29,413	26,222	85,839	78,178
Non-GAAP operating income from continuing operations	\$36,710	\$32,316	\$95,790	\$96,008
	29.0 %	29.4 %	27.5 %	29.3 %

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Reconciliation of Non-GAAP measure - income from continuing operations, excluding certain items	Three Months Ended		Nine Months Ended	
	September 30, 2016	September 30, 2015	September 30, 2016	September 30, 2015
Income from continuing operations, net of income taxes, as reported	\$29,038	\$23,313	\$76,512	\$71,992
Adjustments				
Restructuring charges	—	317	—	314
Stock-based compensation	1,301	733	4,299	1,913
Amortization of intangible assets	1,048	1,098	3,180	3,298
Tax effect of non-GAAP adjustments	(608 )	(512 )	(1,973 )	(1,184 )
Non-GAAP income from continuing operations, net of income taxes	\$30,779	\$24,949	\$82,018	\$76,333
Non-GAAP diluted earning per share	\$0.77	\$0.60	\$2.05	\$1.87

## Impact of Inflation

In recent years, inflation has not had a significant impact on our operations. However, we continuously monitor operating price increases, particularly in connection with the supply of component parts used in our manufacturing process. To the extent permitted by competition, we pass increased costs on to our customers by increasing sales prices over time. From time to time, we may also receive pressure from customers to decrease sales prices due to reductions in the cost structure of our products from cost improvement initiatives and decreases in component part prices.

## Liquidity and Capital Resources

## LIQUIDITY

We believe that 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 are our available cash, investments, and cash generated from current operations.

At September 30, 2016, we had \$249.8 million in cash, cash equivalents, and marketable securities. We believe that our current and available cash levels, as well as our cash flows from future operations, will be adequate to meet anticipated working capital needs, levels of capital expenditures, and contractual obligations for the next twelve months. We may seek additional financing from time to time.

In September 2015 our Board of Directors authorized a program to repurchase up to \$150.0 million of our stock over a thirty-month period. As of October 28, 2016, we have \$100 million remaining available for the repurchase of shares. In November 2015 we entered into an accelerated stock repurchase arrangement with Morgan Stanley & Co. LLC (the "Counterparty") pursuant to a Fixed Dollar Accelerated Share Repurchase Transaction (the "ASR Agreement") to purchase \$50.0 million of shares of our common stock in the open market. In accordance with the ASR Agreement, we paid \$50.0 million at the beginning of the contract and received an initial delivery of 1.4 million shares of our common stock. In April 2016, we received a final delivery of 0.3 million shares of our common stock. A total of 1.7 million shares of our common stock was repurchased under the ASR Agreement at an average price of \$28.99 per share.

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## CASH FLOWS

A summary of our cash provided by and (used in) operating, investing and financing activities is as follows:

	Nine Months Ended September 30,	
	2016	2015
Net cash provided by operating activities from continuing operations	\$82,042	\$109,517
Net cash (used in) operating activities from discontinued operations	(4,538 )	(37,462 )
Net cash provided by operating activities	77,504	72,055
Net cash provided by (used in) investing activities from continuing operations	1,892	(14,928 )
Net cash used in investing activities from discontinued operations	—	(46 )
Net cash provided by (used in) investing activities	1,892	(14,974 )
Net cash provided by financing activities from continuing operations	2,373	4,086
Net cash (used in) financing activities from discontinued operations	(24 )	(14 )
Net cash provided by financing activities	2,349	4,072
Effect of currency translation on cash	(550 )	(2,142 )
Increase in cash and cash equivalents	81,195	59,011
CASH AND CASH EQUIVALENTS, beginning of period	169,720	125,285
CASH AND CASH EQUIVALENTS FROM CONTINUING OPERATIONS, end of period	250,915	184,296
Less cash and cash equivalents from discontinued operations	6,623	6,135
CASH AND CASH EQUIVALENTS FROM CONTINUING OPERATIONS, end of period	\$244,292	\$178,161

## 2016 CASH FLOWS COMPARED TO 2015

## Net cash provided by operating activities

Net cash provided by operating activities from continuing operations for the nine months ended September 30, 2016 was \$77.5 million, compared to \$72.1 million for the same period in 2015. The increase of \$5.4 million in net cash flows from operating activities is the result a \$27.5 million decrease in cash flow produced by continuing operations off set by a \$32.9 million decrease in cash used by the discontinued operations. The \$27.5 million decrease in cash flows produced by continuing operations was largely caused by the usage of working capital including an increase to accounts receivable, accounts payable and inventory. The reduction of cash used by discontinued operations was due to decreased operating activities as the Company continues to wind down the inverter business.

## Net cash provided by (used in) investing activities

Net cash provided by (used in) investing activities for the nine months ended September 30, 2016 was \$1.9 million, an increase of \$16.9 million from \$(15.0) million used in the same period in 2015. The increase in cash provided by investing activities was primarily driven by reduced purchases of marketable securities, coupled with the maturity of marketable securities during the nine months ended September 30, 2016.

## Net cash provided by financing activities

Net cash provided by financing activities in the nine months ended September 30, 2016 was \$2.3 million, a \$1.7 million decrease from the cash provided by financing activities of \$4.1 million in the same period of 2015 and was primarily due to the decrease in proceeds from stock option exercises.

## Effect of currency translation on cash

During the nine months ended September 30, 2016, currency translation had a \$0.6 million unfavorable impact compared to a \$2.1 million unfavorable impact of in the same period of 2015. Our foreign operations primarily sell product and incur expenses in the related local currency. Exchange rate fluctuations could require us to increase prices to foreign customers, which could result

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in lower net sales by us to such customers. Alternatively, if we do not adjust the prices for our products in response to unfavorable currency fluctuations, our results of operations could be adversely impacted. The functional currencies of our worldwide operations include U.S. dollar ("USD"), Canadian Dollar ("CAD"), Swiss Franc ("CHF"), Chinese Yuan ("CNY"), Euro ("EUR"), Pound Sterling ("GBP"), Indian Rupee ("INR"), Japanese Yen ("JPY"), South Korean Won ("KRW"), and New Taiwan Dollar ("TWD"). Our purchasing and sales activities are primarily denominated in USD, CNY, EUR, and JPY. The change in these key currency rates during the nine months ended September 30, 2016 and 2015 are as follows:

		Nine Months Ended September 30,	
From	To	2016	2015
CAD	USD	5.3	% (13.0)%
CHF	USD	3.5	2.0
CNY	USD	(2.6 )	(2.4 )
EUR	USD	3.3	(7.6 )
GBP	USD	(12.0)	(2.9 )
INR	USD	(0.7 )	(3.7 )
JPY	USD	18.8	(0.1 )
KRW	USD	6.8	(7.7 )
TWD	USD	4.9	(4.2 )

**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 Condensed Consolidated Financial Statements and accompanying notes. Note 1. Operation and Summary of Significant Accounting Policies and Estimates to the Consolidated Financial Statements in our Annual Report on Form 10-K for the year ended December 31, 2015 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 our Annual Report on Form 10-K for the year ended December 31, 2015, include estimates for allowances for doubtful accounts, determining useful lives for depreciation and amortization, the valuation of assets and liabilities acquired in business combinations, assessing the need for impairment charges for identifiable intangible assets and goodwill, establishing warranty reserves, accounting for income taxes, and assessing excess and obsolete inventories. Such accounting policies and estimates require significant judgments and assumptions to be used in the preparation of the Condensed Consolidated Financial Statements and actual results could differ materially from the amounts reported based on variability in factors affecting these estimates.

Our management discusses the development and selection of our critical accounting policies and estimates with the Audit Committee of our Board of Directors at least annually. Our management also internally discusses the adoption of new accounting policies or changes to existing policies at interim dates, as it deems necessary or appropriate.

**ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK****Interest Rate Risk**

Our market risk exposure relates to changes in interest rates in our investment portfolio and credit facility. We generally place our investments with high-credit quality issuers and by policy are averse to principal loss and seek to protect and preserve our invested funds by limiting default risk, market risk, and reinvestment risk.

As of September 30, 2016, our investments consisted of certificates of deposit, with maturities of less than 2 years (see Note 5. Marketable Securities and Assets Measured at Fair Value in ITEM 1 "Unaudited Condensed Consolidated Financial Statements"). As a measurement of the sensitivity of our portfolio and assuming that our investment portfolio balances remain constant, a hypothetical decrease of one percentage point in interest rates would decrease annual pre-tax earnings by approximately \$0.1 million.



As of September 9, 2016 we terminated our Credit Facility with Wells Fargo. As such, we had no debt outstanding as of September 30, 2016 (see Note 17. Credit Facilities in ITEM 1 "Unaudited Condensed Consolidated Financial Statements") that would be subject to change in interest rates.

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### Foreign Currency Exchange Rate Risk

We are impacted by changes in foreign currency exchange rates through sales 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 purchasing and sales activities are primarily denominated in the USD, EUR, JPY, and CNY. As these currencies fluctuate against each other, and other currencies, we are exposed to foreign currency exchange rate risk on sales, purchasing transactions and labor.

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 many of 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 weighted-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.

From time to time, we enter into foreign currency exchange rate contracts with banks to hedge against changes in foreign currency exchange rates on assets and liabilities expected to be settled at a future date. 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 attempt to mitigate 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.

Currency exchange rates vary daily and often one currency strengthens against the USD while another currency weakens. Because of the complex interrelationship of the worldwide supply chains and distribution channels, it is difficult to quantify the impact of a change in one or more particular exchange rates.

See the "Risk Factors" set forth in Part I, Item 1A of our Annual Report on Form 10-K and Part II, Item 1A 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, 2015.

## 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 Securities Exchange Act of 1934 ("Act") is recorded, processed, summarized, and reported, within the time periods specified in the Securities and Exchange Commission'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 Act is accumulated and communicated to management, including our Principal Executive Officer (Yuval Wasserman, Chief Executive Officer) and Principal Financial Officer (Thomas Liguori, 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, the Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of September 30, 2016. The conclusions of the Chief Executive Officer and Chief Financial Officer from this evaluation were communicated to the Audit Committee. We intend to continue to review and document our disclosure controls and procedures, including our internal controls and procedures for 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 fiscal quarter covered by this Form 10-Q that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.



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PART II OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

We are involved in disputes and legal actions arising in the normal course of our business.

There have been no material developments in legal proceedings in which we are involved during the nine months ended September 30, 2016. For a description of previously reported legal proceedings refer to Part I, Item 3, "Legal Proceedings" of our Annual Report on Form 10-K for the year ended December 31, 2015.

ITEM 1A. RISK FACTORS

Our business, financial condition, operating results and cash flows can be impacted by a number of factors, including, but not limited to those set forth below, any of which could cause our results to be adversely impacted and could result in a decline in the value or loss of an investment in our common stock. Other factors may also exist that we cannot anticipate or that we currently do not consider to be significant based on information that is currently available. These risks and uncertainties have the potential to materially affect our business, financial condition, results of operations, cash flows and future results. Such risks and uncertainties may also impact the accuracy of forward-looking statements included in this Form 10-Q and other reports we file with the Securities and Exchange Commission.

We generally have no long-term contracts with our customers requiring them to purchase any specified quantities from us.

Our sales are primarily made on a purchase order basis, and we generally have no long-term purchase commitments from our customers, which is typical in the industries we serve. As a result, we are limited in our ability to predict the level of future sales or commitments from our current customers, which may diminish our ability to allocate labor, materials, and equipment in the manufacturing process effectively. In addition, we may purchase inventory in anticipation of sales that do not materialize, resulting in excess and obsolete inventory write-offs.

The industries in which we compete are subject to volatile and unpredictable cycles.

As a supplier to the global semiconductor, flat panel display, solar, industrial and related industries, we are subject to business cycles, the timing, length, and volatility of which can be difficult to predict. These industries historically have been cyclical due to sudden changes in customers' manufacturing capacity requirements and spending, which depend in part on capacity utilization, demand for customers' products, inventory levels relative to demand, and access to affordable capital. These changes have affected the timing and amounts of customers' purchases and investments in technology, and continue to affect our orders, net sales, operating expenses, and net income. In addition, we may not be able to respond adequately or quickly to the declines in demand by reducing our costs. We may be required to record significant reserves for excess and obsolete inventory as demand for our products changes.

To meet rapidly changing demand in each of the industries we serve, we must effectively manage our resources and production capacity. During periods of decreasing demand for our products, we must be able to appropriately align our cost structure with prevailing market conditions, effectively manage our supply chain, and motivate and retain key employees. During periods of increasing demand, we must have sufficient manufacturing capacity and inventory to fulfill customer orders, effectively manage our supply chain, and attract, retain, and motivate a sufficient number of qualified individuals. If we are not able to timely and appropriately adapt to changes in our business environment or to accurately assess where we are positioned within a business cycle, our business, financial condition, or results of operations may be materially and adversely affected.

Market pressures and increased low-cost competition may reduce or eliminate our profitability.

Our customers continually exert pressure on us to reduce our prices and extend payment terms. Given the nature of our customer base and the highly competitive markets in which we compete, we may be required to reduce our prices or extend payment terms to remain competitive. We have recently seen pricing pressure from our largest customers due in part to low-cost competition and market consolidation. As a result of the competitive markets we serve, from time to time we may enter into long term pricing agreements with our largest customers that results in reduced product pricing. Such reduced product pricing may result in product margin declines unless we are successful in reducing our product costs ahead of such price reductions. We believe some of our Asian competitors benefit from local governmental funding incentives and purchasing preferences from end-user customers in their respective countries. Moreover, in order to be successful in the current competitive environment, we are required to accelerate our investment in research & development to meet time-to-market, performance and technology adoption cycle needs of

our customers simply in order to compete for design wins, and if successful, receive potential purchase orders. Given such up-front investments we have to make and the competitive nature of our markets, we may not be able to reduce our expenses in an amount

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sufficient to offset potential margin declines or loss of business, and may not be able to meet customer product time-line expectations. The potential decrease in cash flow could materially and adversely impact our financial condition.

A significant portion of our sales and accounts receivable are concentrated among a few customers.

Our 10 largest customers account for 65.6% of our sales for the nine months ended September 30, 2016 and 61.2% and 59.7% of our sales for the years ended December 31, 2015 and 2014, respectively. Our sales to Applied Materials, Inc. account for 34.0% of our sales for the nine months ended September 30, 2016 and 29.8% and 29.8% of our sales for the years ended December 31, 2015 and 2014, respectively, and had accounts receivable balance of \$29.4 million and \$17.1 million as of September 30, 2016 and December 31, 2015, respectively. Our sales to LAM Research account for 21.0% of our sales for the nine months ended September 30, 2016 and 20.3% and 19.9% of our sales for the year ended December 31, 2015 and 2014, respectively, and had accounts receivable balance of \$10.0 million and \$7.3 million as of September 30, 2016 and December 31, 2015, respectively. A significant decline in sales from any or all of these customers, or the Company's inability to collect on these sales, could materially and adversely impact our business, results of operations and financial condition.

Our competitive position could be weakened if we are unable to convince end users to specify that our products be used in the equipment sold by our customers.

The end users in our markets may direct equipment manufacturers to use a specified supplier's product in their equipment at a particular facility. This occurs with frequency because our products are critical in manufacturing process control for thin-film applications. Our success, therefore, depends in part on our ability to have end users specify that our products be used at their facilities. In addition, we may encounter difficulties in changing established relationships of competitors that already have a large installed base of products within such facilities.

We must achieve design wins to retain our existing customers and to obtain new customers, although design wins achieved do not necessarily result in substantial sales.

The constantly changing nature of technology in the markets we serve causes equipment manufacturers to continually design new systems. We must work with these manufacturers early in their design cycles to modify our equipment or design new equipment to meet the requirements of their new systems. Manufacturers typically choose one or two vendors to provide the components for use with the early system shipments. Selection as one of these vendors is called a design win. It is critical that we achieve these design wins in order to retain existing customers and to obtain new customers.

We believe that equipment manufacturers often select their suppliers based on factors including long-term relationships and end user demand. Accordingly, we may have difficulty achieving design wins from equipment manufacturers who are not currently our customers. In addition, we must compete for design wins for new systems and products of our existing customers, including those with whom we have had long-term relationships. Our efforts to achieve design wins are time consuming, expensive, and may not be successful. If we are not successful in achieving design wins, or if we do achieve design wins but our customers' systems that utilize our products are not successful, our business, financial condition, and results of operations could be materially and adversely impacted. Once a manufacturer chooses a component for use in a particular product, it is likely to retain that component for the life of that product. Our sales and growth could experience material and prolonged adverse effects if we fail to achieve design wins. However, design wins do not always result in substantial sales, as sales of our products are dependent upon our customers' sales of their products.

Changes in tax laws, tax rates, or mix of earnings in tax jurisdictions in which we do business, could impact our future tax liabilities and related corporate profitability

We are subject to income taxes in the U.S. (federal and state) and numerous foreign jurisdictions. Tax laws, regulations, and administrative practices in various jurisdictions may be subject to significant change due to economic, political, and other conditions, and significant judgment is required in evaluating and estimating our provision and accruals for these taxes. There are many transactions that occur during the ordinary course of business for which the ultimate tax determination is uncertain. Our effective tax rates could be adversely affected by earnings being lower than anticipated in jurisdictions where we have lower statutory rates and higher than anticipated in jurisdictions where we have higher statutory rates, losses incurred in jurisdictions for which we are not able to realize the related tax

benefit, changes in foreign currency exchange rates, entry into new businesses and geographies and changes to our existing businesses, acquisitions (including integrations) and investments, changes in our deferred tax assets and liabilities and their valuation, and changes in the relevant tax, accounting, and other laws, regulations, administrative practices, principles, and interpretations, including fundamental changes to the tax laws applicable to corporate multinationals. The U.S., many countries in the European Union, and a number of other countries are actively considering changes in this regard.

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For example, on Oct. 5, 2015, the Organisation for Economic Co-operation and Development (OECD) issued the final report on all 15 Base Erosion and Profit Shifting “BEPS” Action Plans. According to the OECD, the current rules have created opportunities for Base Erosion and Profit Shifting, and suggest new rules whereby profits are taxed where economic activities take place and value is created. OECD comments include new or reinforced international standards as well as concrete measures to help countries tackle BEPS. Among the highlights of the OECD Final Reports are the new transfer pricing approach and reinforced international standards on tax treaties, the setting of minimum standards on harmful tax practices, treaty abuse, country-by-country reporting and dispute resolution, action items requiring national legislation particularly in hybrid mismatches and interest restriction, and analytical reports with recommendations concerning digital economy and multilateral instruments. If countries in which we operate adopt the OECD recommendations as outlined in the BEPS Action Plans, it is uncertain to what extent the changes could impact the Company.

Our legacy inverter products may suffer higher than anticipated damage or warranty claims.

Our legacy inverter products (of which we discontinued the manufacture, engineering, and sale in December 2015 and which are reflected as Discontinued Operations in this filing) contain components that may contain errors or defects and were sold with original product warranties ranging from one to ten years with an option to purchase additional warranty coverage for up to 20 years. If any of our products are defective or fail because of their design, we might be required to repair, redesign or recall those products, pay damages (including liquidated damages) or warranty claims, and we could suffer significant harm to our reputation. We accrue a warranty reserve for estimated costs to provide warranty services including the cost of technical support, product repairs, and product replacement for units that cannot be repaired. Our estimate of costs to fulfill our warranty obligations is based on historical experience and expectation of future conditions. To the extent we experience increased warranty claim activity or increased costs associated with servicing those claims, our warranty accrual will increase, resulting in additional expenses in the line “Income (loss) from discontinued operations, net of tax” on our Consolidated Statement of Operations in future periods. We plan to continue supporting inverter customers with service maintenance and repair operations. This includes performing service to fulfill obligations under existing service maintenance contracts. There is no certainty that these can be performed profitably and could be adversely affected by higher than anticipated product failure rates, loss of critical service technician skills, an inability to obtain service parts, customer demands and disputes and cost of repair parts, among other factors. See Note 2. Discontinued Operations in Part I, Item 1 “Unaudited Condensed Consolidated Financial Statements” contained herein.

Our products may suffer from defects or errors leading to damage or warranty claims.

Our products use complex system designs and components that may contain errors or defects, particularly when we incorporate new technology into our products or release new versions. If any of our products are defective or fail because of their design, we might be required to repair, redesign or recall those products, pay damages (including liquidated damages) or warranty claims, and we could suffer significant harm to our reputation. We accrue a warranty reserve for estimated costs to provide warranty services including the cost of technical support, product repairs, and product replacement for units that cannot be repaired. Our estimate of costs to fulfill our warranty obligations is based on historical experience and expectation of future conditions. To the extent we experience increased warranty claim activity or increased costs associated with servicing those claims, our warranty accrual will increase, resulting in decreased gross profit. In recent years, we have experienced increased warranty costs for our legacy inverter product lines, which is reflected in discontinued operations. See Note 2. Discontinued Operations in Part I, Item 1 “Unaudited Condensed Consolidated Financial Statements” contained herein.

Deterioration of demand for our inverter services could negatively impact our business.

Our business may be adversely affected by changes in national or global demand for our inverter service repair capabilities. Any such changes could adversely affect the carrying amount of our inverter service inventories, thereby negatively affecting our financial results from Continuing Operations.

We maintain significant amounts of cash in international locations.

Given the global nature of our business, we have both domestic and international concentrations of cash and investments. The value of our cash, cash equivalents, and marketable securities can be negatively affected by liquidity, credit deterioration, financial results, economic risk, political risk, sovereign risk or other factors. As a



result, we could incur a significant impairment of our cash, cash equivalents, and marketable securities, which could materially adversely affect our financial condition and results of operations.

Difficulties with our enterprise resource planning (“ERP”) system and other parts of our global information technology system could harm our business and results of operation.

Like many multinational corporations, we maintain a global information technology system, including software products licensed from third parties. Any system, network or Internet failures, misuse by system users, the hacking into or disruption caused

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by unauthorized access or loss of license rights could disrupt our ability to timely and accurately manufacture and ship products or to report our financial information in compliance with the timelines mandated by the SEC. Any such failure, misuse, hacking, disruptions or loss would likely cause a diversion of management's attention from the underlying business and could harm our operations. In addition, a significant failure of our global information technology system could adversely affect our ability to complete an evaluation of our internal controls and attestation activities pursuant to Section 404 of the Sarbanes-Oxley Act of 2002.

If our network security measures are breached and unauthorized access is obtained to a customer's data or our data or our information technology systems, we may incur significant legal and financial exposure and liabilities.

As part of our day-to-day business, we store our data and certain data about our customers in our global information technology system. While our system is designed with access security, unauthorized access to our data, including any regarding our customers, could expose us to a risk of loss of this information, loss of business, litigation and possible liability. These security measures may be breached by intentional misconduct by computer hackers, as a result of third-party action, employee error, malfeasance or otherwise. Additionally, third parties may attempt to fraudulently induce employees or customers into disclosing sensitive information such as user names, passwords or other information in order to gain access to our customers' data or our data, including our intellectual property and other confidential business information, or our information technology systems. Because the techniques used to obtain unauthorized access, or to sabotage systems, change frequently and generally are not recognized until launched against a target, we may be unable to anticipate these techniques or to implement adequate preventative measures. Any security breach could result in a loss of confidence by our customers, damage our reputation, disrupt our business, lead to legal liability and negatively impact our future sales.

We conduct manufacturing at only a few sites and our sites are not generally interchangeable.

Our power products for the semiconductor industry are manufactured in Shenzhen, PRC. Our high voltage products are manufactured in Ronkonkoma, New York, Littlehampton, United Kingdom and Shenzhen, PRC. Our thermal instrumentation products that are used in the semiconductor industry are manufactured in Vancouver, Washington. Each facility is under operating lease and interruptions in operations could be caused by early termination of existing leases by landlords or failure by landlords to renew existing leases upon expiration, including the possibility that suitable operating locations may not be available in proximity to existing facilities which could result in labor or supply chain risks. For instance, our Shenzhen, PRC manufacturing facility currently has a lease which expires in July 2017 that we are actively working on and expect to extend. Each facility manufactures different products, and therefore, is not interchangeable. Natural or other uncontrollable occurrences at any of our manufacturing facilities could significantly reduce our productivity at such site and could prevent us from meeting our customers' requirements in a timely manner, or at all. Our losses from any such occurrence could significantly affect our operations and results of operations for a prolonged period of time.

Our restructuring and other cost-reduction efforts in prior years have included transitioning manufacturing operations to our facility in Shenzhen from other manufacturing facilities, such as Fort Collins, Colorado and Littlehampton, United Kingdom, which renders us increasingly reliant upon our Shenzhen facility. A disruption in manufacturing at our Shenzhen facility, from whatever cause, could have a significantly adverse effect on our ability to fulfill customer orders, our ability to maintain customer relationships, our costs to manufacture our products and, as a result, our results of operations and financial condition.

Our results of operations could be affected by natural disasters and other events in the locations in which we or our customers or suppliers operate.

We have manufacturing and other operations in locations subject to natural occurrences such as severe weather and geological events including earthquakes or tsunamis that could disrupt operations. In addition, our suppliers and customers also have operations in such locations. A natural disaster, fire, explosion, or other event that results in a prolonged disruption to our operations, or the operations of our customers or suppliers, may materially adversely affect our business, results of operations, or financial condition.

Our operations in the People's Republic of China are subject to significant political and economic uncertainties over which we have little or no control and we may be unable to alter our business practice in time to avoid reductions in revenues.

A significant portion of our operations outside the United States are located in the PRC, which exposes us to risks, such as exchange controls and currency restrictions, changes in local economic conditions, changes in customs regulations, changes in tax policies, changes in PRC laws and regulations, possible expropriation or other PRC government actions, and unsettled political conditions including potential changes in U.S. policy regarding overseas manufacturing. These factors may have a material adverse effect on our operations, business, results of operations, and financial condition. Please see "We are exposed to risks associated with worldwide financial markets and the global economy" risk factor below.

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The PRC's economy differs from the economies of most developed countries in many respects, including with respect to the amount of government involvement, level of development, rate of growth, control of foreign exchange and allocation of resources. While the economy of the PRC has experienced significant growth in the past 20 years, growth has been uneven across different regions and amongst various economic sectors of the PRC. The PRC government has implemented various measures to encourage economic development and guide the allocation of resources. Strikes by workers and picketing in front of the factory gates of certain companies in Shenzhen have caused unrest among some workers seeking higher wages, which could impact our manufacturing facility in Shenzhen. While some of the government's measures may benefit the overall economy of the PRC, they may have a negative effect on us. For example, our financial condition and results of operations may be materially and adversely affected by government control over capital investments or changes in tax regulations that are applicable to us as well as work stoppages.

We transitioned a significant amount of our supply base to Asian suppliers.

We transitioned the purchasing of a substantial portion of components for our thin film products to Asian suppliers to lower our materials costs and shipping expenses. These components might require us to incur higher than anticipated testing or repair costs, which would have an adverse effect on our operating results. Customers who have strict and extensive qualification requirements might not accept our products if these lower-cost components do not meet their requirements. A delay or refusal by our customers to accept such products, as well as an inability of our suppliers to meet our purchasing requirements, might require us to purchase higher-priced components from our existing suppliers or might cause us to lose sales to these customers, either of which could lead to decreased revenue and gross margins and have an adverse effect on our results of operations.

Our evolving manufacturing footprint may increase our risk.

The nature of our manufacturing is evolving as we continue to grow by acquisition. Historically, our principal manufacturing location was in China; however, we have also added specialized manufacturing at our Littlehampton, United Kingdom and Ronkonkoma, New York facilities. From time to time we may migrate manufacturing of specific products between facilities or to third party manufacturers. If we do not successfully coordinate the timely manufacturing and distribution of our products during this time, we may have insufficient supply of products to meet customer demand, we could lose sales, we may experience a build-up in inventory, or we may incur additional costs. Raw material, part, component, and subassembly shortages, exacerbated by our dependence on sole and limited source suppliers, could affect our ability to manufacture products and systems and could delay our shipments.

Our business depends on our ability to manufacture products that meet the rapidly changing demands of our customers. Our ability to timely manufacture our products depends in part on the timely delivery of raw materials, parts, components, and subassemblies from suppliers. We rely on sole and limited source suppliers for some of our raw materials, parts, components, and subassemblies that are critical to the manufacturing of our products.

This reliance involves several risks, including the following:

- the inability to obtain an adequate supply of required parts, components, or subassemblies;
- supply shortages, if a sole or limited source provider ceases operations;
- the need to fund the operating losses of a sole or limited source provider;
- reduced control over pricing and timing of delivery of raw materials and parts, components, or subassemblies;
- the need to qualify alternative suppliers;
- suppliers that may provide parts, components or subassemblies that are defective, contain counterfeit goods or are otherwise misrepresented to us in terms of form, fit or function; and
- the inability of our suppliers to develop technologically advanced products to support our growth and development of new products.

Qualifying alternative suppliers could be time consuming and lead to delays in, or prevention of delivery of products to our customers, as well as increased costs. If we are unable to qualify additional suppliers and manage relationships with our existing and future suppliers successfully, if our suppliers experience financial difficulties including bankruptcy, or if our suppliers cannot meet our performance or quality specifications or timing requirements, we may experience shortages, delays, or increased costs of raw materials, parts, components, or subassemblies. This in turn could limit or prevent our ability to manufacture and ship our products, which could materially and adversely affect

our relationships with our current and prospective customers and our business, financial condition, and results of operations. From time to time, our sole or limited source suppliers have given us notice that

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they are ending supply of critical parts, components, and subassemblies that are required for us to deliver product. In those cases, we have been required to make last time purchases of such supplies in advance of product demand from our customers. If we cannot qualify alternative suppliers before these end-of-life supplies are utilized in our products or legacy inverter warranty operations, we may be unable to deliver further product or legacy inverter warranty service to our customers. To mitigate the risk of not having a supply of critical parts, components, and subassemblies for our products, we proactively make additional purchases which we believe addresses such risk.

Our orders of raw materials, parts, components, and subassemblies are based on demand forecasts.

We place orders with many of our suppliers based on our customers' quarterly forecasts and our annual forecasts. These forecasts are based on our customers' and our expectations as to demand for our products. As the quarter and the year progress, such demand can change rapidly or we may realize that our customers' expectations were overly optimistic or pessimistic, especially when industry or general economic conditions change. Orders with our suppliers cannot always be amended in response. In addition, in order to assure availability of certain components or to obtain priority pricing, we have entered into contracts with some of our suppliers that require us to purchase a specified amount of components and subassemblies each quarter, even if we are not able to use such components or subassemblies. Moreover, we have obligations to some of our customers to hold a minimum amount of finished goods in inventory, in order to fulfill just in time orders, regardless of whether the customers expect to place such orders. We currently have firm purchase commitments and agreements with various suppliers to ensure the availability of components. See Note 14. Commitments and Contingencies in Part I, Item 1 "Unaudited Condensed Consolidated Financial Statements" contained herein. in our Unaudited Condensed Consolidated Financial Statements contained herein for more information on our commitments. If demand for our products does not continue at current levels, we might not be able to use all of the components that we are required to purchase under these commitments and agreements, and our reserves for excess and obsolete inventory may increase, which could have a material adverse effect on our results of operations. If demand for our products exceeds our customers' and our forecasts, we may not be able to timely obtain sufficient raw materials, parts, components, or subassemblies, on favorable terms or at all, to fulfill the excess demand.

We are exposed to risks associated with worldwide financial markets and the global economy.

Our business depends on the expansion of manufacturing capacity in our end markets and the installation base for the products we sell. In the past, severe tightening of credit markets, turmoil in the financial markets, and a weakening global economy have contributed to slowdowns in the industries in which we operate. Some of our key markets depend largely on consumer spending. Economic uncertainty, such as that recently experienced in the PRC, exacerbates negative trends in consumer spending and may cause our customers to push out, cancel, or refrain from placing equipment orders.

Difficulties in obtaining capital and uncertain market conditions may also lead to a reduction of our sales and greater instances of nonpayment. These conditions may similarly affect our key suppliers, which could affect their ability to deliver parts and result in delays for our products. Further, these conditions and uncertainty about future economic conditions could make it challenging for us to forecast our operating results and evaluate the risks that may affect our business, financial condition, and results of operations. As discussed in "Our orders of raw materials, parts, components, and subassemblies are based on demand forecasts," a significant percentage of our expenses are relatively fixed and based, in part, on expectations of future net sales. If a sudden decrease in demand for our products from one or more customers were to occur, the inability to adjust spending quickly enough to compensate for any shortfall would magnify the adverse impact of a shortfall in net sales on our results of operations. Conversely, if market conditions were to unexpectedly recover and demand for our products were to increase suddenly, we might not be able to respond quickly enough, which could have a negative impact on our results of operations and customer relations. If we are unable to adjust our business strategy successfully for some of our product lines to reflect the increasing price sensitivity on the part of our customers, our business and financial condition could be harmed.

Our business strategy for many of our product lines has been focused on product performance and technology innovation to provide enhanced efficiencies and productivity. As a result of recent economic conditions and changes in various markets that we serve, our customers have experienced significant cost pressures. We have observed increased price sensitivity on the part of our customers. If competition against any of our product lines should come to

focus solely on price rather than on product performance and technology innovation, we will need to adjust our business strategy and product offerings accordingly, and if we are unable to do so, our business, financial condition, and results of operations could be materially and adversely affected.

The markets we operate in are highly competitive.

We face substantial competition, primarily from established companies, some of which have greater financial, marketing, and technical resources than we do. We expect our competitors will continue to develop new products in direct competition with ours, improve the design and performance of their products, and introduce new products with enhanced performance characteristics. In order to remain competitive, we must improve and expand our products and product offerings. In addition, we may need to

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maintain a high level of investment in research and development and expand our sales and marketing efforts, particularly outside of the United States. We might not be able to make the technological advances and investments necessary to remain competitive. If we were unable to improve and expand our products and product offerings, our business, financial condition, and results of operations could be materially and adversely affected.

We are highly dependent on our intellectual property.

Our success depends significantly on our proprietary technology. We attempt to protect our intellectual property rights through patents and non-disclosure agreements; however, we might not be able to protect our technology, and competitors might be able to develop similar technology independently. In addition, the laws of some foreign countries might not afford our intellectual property the same protections as do the laws of the United States. Our intellectual property is not protected by patents in several countries in which we do business, and we have limited patent protection in other countries, including the PRC. The cost of applying for patents in foreign countries and translating the applications into foreign languages requires us to select carefully the inventions for which we apply for patent protection and the countries in which we seek such protection. Generally, our efforts to obtain international patents have been concentrated in the European Union and certain industrialized countries in Asia, including Korea, Japan, and Taiwan. If we are unable to protect our intellectual property successfully, our business, financial condition, and results of operations could be materially and adversely affected.

The PRC commercial law is relatively undeveloped compared to the commercial law in the United States. Limited protection of intellectual property is available under PRC law. Consequently, manufacturing our products in the PRC may subject us to an increased risk that unauthorized parties may attempt to copy our products or otherwise obtain or use our intellectual property. We cannot give assurance that we will be able to protect our intellectual property rights effectively or have adequate legal recourse in the event that we encounter infringements of our intellectual property in the PRC.

We have historically made acquisitions and divestitures. However, we may not find suitable acquisition candidates in the future and we may not be able to successfully integrate and manage acquired businesses. In either an acquisition or a divestiture, we may be required to make fundamental changes in our ERP, business processes and tools which could disrupt our core business and harm our financial condition.

In the past, we have made strategic acquisitions of other corporations and entities, as well as asset purchases, and we continue to evaluate potential strategic acquisitions of complementary companies, products, and technologies. We have also divested businesses. In the future, we could:

- issue stock that would dilute our current stockholders' percentage ownership;
- pay cash that would decrease our working capital;
- incur debt;
- assume liabilities; or
- incur expenses related to impairment of goodwill and amortization.

Acquisitions and divestitures also involve numerous risks, including:

- problems combining or separating the acquired/divested operations, systems, technologies, or products;
- an inability to realize expected sales forecasts, operating efficiencies or product integration benefits;
- difficulties in coordinating and integrating geographically separated personnel, organizations, systems, and facilities;
- difficulties integrating business cultures;
- unanticipated costs or liabilities;
- diversion of management's attention from our core business;
- adverse effects on existing business relationships with suppliers and customers;
- potential loss of key employees, particularly those of purchased organizations;
- incurring unforeseen obligations or liabilities in connection with either acquisitions or divestitures; and
- the failure to complete acquisitions even after signing definitive agreements which, among other things, would result in the expensing of potentially significant professional fees and other charges in the period in which the acquisition or negotiations are terminated.





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We cannot assure you that we will be able to successfully identify appropriate acquisition candidates, to integrate any businesses, products, technologies, or personnel that we might acquire in the future or achieve the anticipated benefits of such transactions, which may harm our business.

Activities necessary to integrate acquisitions may result in costs in excess of current expectations or be less successful than anticipated.

In 2014 we acquired PCM, HiTek, and UltraVolt, and we may acquire other businesses in the future. The success of such transactions will depend on, among other things, our ability to integrate assets and personnel acquired in these transactions and to apply our internal controls process to these acquired businesses. The integration of acquisitions may require significant attention from our management, and the diversion of management's attention and resources could have a material adverse effect on our ability to manage our business. Furthermore, we may not realize the degree or timing of benefits we anticipated when we first entered into the acquisition transaction. If actual integration costs are higher than amounts originally anticipated, if we are unable to integrate the assets and personnel acquired in an acquisition as anticipated, or if we are unable to fully benefit from anticipated synergies, our business, financial condition, results of operations, and cash flows could be materially adversely affected.

Return on investments or interest rate declines on plan investments could result in additional unfunded pension obligations for the HiTek Power pension plan.

We currently have unfunded obligations in the HiTek Power pension plan. The extent of future contributions to the pension plan depends heavily on market factors such as the discount rate used to calculate our future obligations and the actual return on plan assets which enable future payments. We estimate future contributions to the plan using assumptions with respect to these and other items. While we are obligated to contribute \$1.0 million per year through 2024 and our management believes that these assumptions are appropriate, changes to those assumptions could have a significant effect on future contributions. Additionally, a material deterioration in the funded status of the plan could increase pension expenses and reduce our profitability. See Note 12. Pension Liability in Part I, Item 1 "Unaudited Condensed Consolidated Financial Statements" contained herein.

We must continually design and introduce new products into the markets we serve to respond to competition and rapid technological changes.

We operate in a highly competitive environment where innovation is critical, our future success depends on many factors, including the effective commercialization and customer acceptance of our products and services. The development, introduction and support of a broadening set of products is critical to our continued success. Our results of operations could be adversely affected if we do not continue to develop new products, improve and develop new applications for existing products, and differentiate our products from those of competitors resulting in their adoption by customers.

We are subject to risks inherent in international operations.

Sales to our customers outside the United States were approximately 32.9% and 34.8% of our total sales for the nine months ended September 30, 2016 and 2015, respectively. The recent acquisitions of the power controls modules, and high voltage product lines have increased our presence in international locations. India is becoming a focus of possible expansion for sales, research and development, and manufacturing. Our success producing goods internationally and competing in international markets is subject to our ability to manage various risks and difficulties, including, but not limited to:

- our ability to effectively manage our employees at remote locations who are operating in different business environments from the United States;
- our ability to develop and maintain relationships with suppliers and other local businesses;
- compliance with product safety requirements and standards that are different from those of the United States;
- variations and changes in laws applicable to our operations in different jurisdictions, including enforceability of intellectual property and contract rights;
- trade restrictions, political instability, disruptions in financial markets, and deterioration of economic conditions;
- customs regulations and the import and export of goods (including customs audits in various countries that occur from time to time);
- the ability to provide sufficient levels of technical support in different locations;

our ability to obtain business licenses that may be needed in international locations to support expanded operations;

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timely collecting accounts receivable from foreign customers including \$14.5 million in accounts receivable from foreign customers as of September 30, 2016; and

• changes in tariffs, taxes, and foreign currency exchange rates.

Our profitability and ability to implement our business strategies, maintain market share and compete successfully in international markets will be compromised if we are unable to manage these and other international risks successfully.

Globalization of sales increases risk of compliance with policy.

We operate in an increasingly complex sales environment around the world which places greater importance on our global control environment and imposes additional oversight risk. Such increased complexity could adversely affect our operating results by increasing compliance costs in the near-term and by increasing the risk of control failures in the event of non-compliance.

Unfavorable currency exchange rate fluctuations may lead to lower operating margins, or may cause us to raise prices, which could result in reduced sales.

Currency exchange rate fluctuations could have an adverse effect on our sales and results of operations and we could experience losses with respect to forward exchange contracts into which we may enter. Unfavorable currency fluctuations could require us to increase prices to foreign customers, which could result in lower net sales by us to such customers. Alternatively, if we do not adjust the prices for our products in response to unfavorable currency fluctuations, our results of operations could be materially and adversely affected. In addition, most sales made by our foreign subsidiaries are denominated in the currency of the country in which these products are sold and the currency in which they receive payment for such sales could be less valuable at the time of receipt as a result of exchange rate fluctuations. Given recent acquisitions in Europe, our exposure to fluctuations in the value of the Euro is becoming more significant. From time to time, we enter into forward exchange contracts and local currency purchased options to reduce currency exposure arising from intercompany sales of inventory. However, we cannot be certain that our efforts will be adequate to protect us against significant currency fluctuations or that such efforts will not expose us to additional exchange rate risks, which could materially and adversely affect our results of operations.

On June 23, 2016, the United Kingdom (U.K.) held a referendum in which voters approved an exit from the E.U., commonly referred to as “Brexit”. As a result of the referendum, it is expected that the British government will begin negotiating the terms of the U.K.’s future relationship with the E.U. Although it is unknown what those terms will be, it is possible that there will be greater restrictions on imports and exports between the U.K. and E.U. countries and increased regulatory complexities. These changes may adversely affect our sales, operations and financial results. In particular, our operations in the U.K. may be adversely affected by extreme fluctuations in the UK exchange rates. Moreover, the imposition of any import restrictions and duties levied on our UK products as imported for E.U. customers may make our products more expensive for such customers and less competitive from a pricing perspective. Changes in the value of the Chinese yuan could impact the cost of our operation in Shenzhen, PRC and our sales growth in our PRC markets.

The PRC government is continually pressured by its trading partners to allow its currency to float in a manner similar to other major currencies. In August 2015, China’s currency devalued by a cumulative 4.4% against the U.S. dollar, making Chinese exports cheaper and imports into China more expensive by that amount. However, the devaluation negatively impacts U.S. businesses that trade with China because it puts them at a cost disadvantage. Any change in the value of the Chinese yuan may impact our ability to control the cost of our products in the world market. Specifically, the decision by the PRC government to allow the yuan to begin to float against the United States dollar could significantly increase the labor and other costs incurred in the operation of our Shenzhen facility and the cost of raw materials, parts, components, and subassemblies that we source in the PRC, thereby having a material and adverse effect on our financial condition and results of operations.

We have been, and in the future may again be, involved in litigation. Litigation is costly and could result in further restrictions on our ability to conduct business or make use of market relationships we have developed, or an inability to prevent others from using technology.

Litigation may be necessary to enforce our commercial or property rights, to defend ourselves against claimed violations of such rights, or to protect our interests in regulatory, tax, customs, commercial, and other disputes or similar matters. Litigation often requires a substantial amount of our management's time and attention, as well as

financial and other resources, including:

- substantial costs in the form of legal fees, fines, and royalty payments;
- restrictions on our ability to sell certain products or in certain markets;
- an inability to prevent others from using technology we have developed; and

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• need to redesign products or seek alternative marketing strategies.

Any of these events could have a significant adverse effect on our business, financial condition, and results of operations.

Funds associated with our marketable securities that we have traditionally held as short-term investments may not be liquid or readily available.

In the past, certain of our investments have been affected by external market conditions that impacted the liquidity of the investment. We do not currently have investments with reduced liquidity, but external market conditions that we cannot anticipate or mitigate may impact the liquidity of our marketable securities. Any changes in the liquidity associated with these investments may require us to borrow funds at terms that are not favorable or repatriate cash from international locations at a significant cost. We cannot be certain that we will be able to borrow funds or continue to repatriate cash on favorable terms, or at all. If we are unable to do so, our available cash may be reduced until those investments can be liquidated. The lack of available cash may prevent us from taking advantage of business opportunities that arise and may prevent us from executing some of our business plans, either of which could cause our business, financial condition or results of operations to be materially and adversely affected.

Our intangible assets may become impaired.

We currently have \$43.6 million of goodwill and \$30.2 million in intangible assets at September 30, 2016. We periodically review the estimated useful lives of our goodwill and identifiable intangible assets, taking into consideration any events or circumstances that might result in either a diminished fair value, or for intangible assets, a revised useful life. The events and circumstances include significant changes in the business climate, legal factors, operating performance indicators, and competition. Any impairment or revised useful life could have a material and adverse effect on our financial position and results of operations, and could harm the trading price of our common stock.

We are subject to numerous governmental regulations.

We are subject to federal, state, local and foreign regulations, including environmental regulations and regulations relating to the design and operation of our products and control systems and regulations governing the import, export and customs duties related to our products. We might incur significant costs as we seek to ensure that our products meet safety and emissions standards, many of which vary across the states and countries in which our products are used. In the past, we have invested significant resources to redesign our products to comply with these directives. Compliance with future regulations, directives, and standards could require us to modify or redesign some products, make capital expenditures, or incur substantial costs. Also, we may incur significant costs in complying with the myriad of different import, export and customs regulations as we seek to sell our products internationally. If we do not comply with current or future regulations, directives, and standards:

- we could be subject to fines and penalties;
- our production or shipments could be suspended; and
- we could be prohibited from offering particular products in specified markets.

If we were unable to comply with current or future regulations, directives and standards, our business, financial condition and results of operations could be materially and adversely affected.

Increased governmental action on income tax regulations could negatively impact our business.

International governments have heightened their review and scrutiny of multinational businesses like ours which could increase our compliance costs and future tax liability to those governments. As governments continue to look for ways to increase their revenue streams they could increase audits of companies to accelerate the recovery of monies perceived as owed to them under current or past regulations. Such an increase in audit activity could have a negative impact on companies which operate internationally, as we do.

Recently enacted financial reform legislation will result in new laws and regulations that may increase our costs of operations.

The Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act") requires various federal agencies to adopt a broad range of new implementing rules and regulations, and to prepare numerous studies and reports for Congress. On August 22, 2012, under the Dodd-Frank Act, the SEC adopted new requirements for companies that use certain minerals and metals, known as conflict minerals, in their products, whether or not these

products are manufactured by third parties. These requirements require companies to perform due diligence, disclose and report whether or not such minerals originate from the Democratic Republic of Congo and adjoining countries. We have to perform sufficient due diligence to determine whether such minerals are used in the manufacture of our products. However, the implementation of these new requirements could adversely affect the sourcing, availability and pricing of such minerals if they are found to be used in the manufacture of our products. In

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addition, we incur costs to comply with the disclosure requirements, including costs related to determining the source of any of the relevant minerals and metals used in our products. Since our supply chain is complex, we may not be able to sufficiently verify the origins for these minerals and metals used in our products through the due diligence procedures that we implement, which may harm our reputation. In such event, we may also face difficulties in satisfying customers who require that all of the components of our products are certified as conflict mineral free. Changes in the US Political environment could negatively impact our business.

The upcoming Presidential and congressional elections in the United States could result in significant changes, or uncertainty, in governmental policies, regulatory environments and many other factors and conditions, some of which could adversely impact our global operations in the near and long term, including but not limited to changes to existing trade agreements, import and export regulations, tariffs and customs duties, income tax regulations and other broader market impacts that would create volatility in the markets we operate in and exchange rates. To the extent that the results of the upcoming election cycle have a negative impact on our markets, it may materially and adversely impact our business, results of operations and financial condition in the periods to come.

The market price of our common stock has fluctuated and may continue to fluctuate for reasons over which we have no control.

The stock market has from time to time experienced, and is likely to continue to experience, extreme price and volume fluctuations. Prices of securities of technology companies have been especially volatile and have often fluctuated for reasons that are unrelated to their operating performance. In the past, companies that have experienced volatility in the market price of their stock have been the subject of securities class action litigation. If we were the subject of securities class action litigation, it could result in substantial costs and a diversion of management's attention and resources.

Our operating results are subject to fluctuations, and if we fail to meet the expectations of securities analysts or investors, our share price may decrease significantly.

Our annual and quarterly results may vary significantly depending on various factors, many of which are beyond our control. Because our operating expenses are based on anticipated revenue levels, our sales cycle for development work is relatively long, and a high percentage of our expenses are fixed for the short term, a small variation in the timing of recognition of revenue can cause significant variations in operating results from period to period. If our earnings do not meet the expectations of securities analysts or investors, the price of our stock could decline.

The loss of any of our key personnel could significantly harm our results of operations and competitive position.

Our success depends to a significant degree upon the continuing contributions of our key management, technical, marketing, and sales employees. There can be no assurance that we will be successful in retaining our key employees or that we can attract or retain additional skilled personnel as required. Failure to retain or attract key personnel could significantly harm our results of operations and competitive position. We must develop our personnel to provide succession plans capable of maintaining continuity in the midst of the inevitable unpredictability of personnel retention. While we have plans for key management succession and long-term compensation plans designed to retain our senior employees, if our succession plans do not operate effectively, our business could be adversely affected.

Deterioration of economic conditions could negatively impact our business.

Our business may be adversely affected by changes in national or global economic conditions, including inflation, interest rates, availability of capital markets, consumer spending rates, energy availability and costs (including fuel surcharges) and the effects of governmental initiatives to manage economic conditions. Any such changes could adversely affect the demand for our products both in domestic and export markets, or the cost and availability of our needed raw materials and packaging materials, thereby negatively affecting our financial results.

A disruption in credit and other financial markets and deterioration of national and global economic conditions, could, among other things:

- negatively impact global demand for our products, which could result in a reduction of sales, operating income and cash flows;
- make it more difficult or costly for us to obtain financing for our operations or investments or to refinance our debt in the future;
-



cause our lenders to depart from prior credit industry practice and make more difficult or expensive the granting of any technical or other waivers under our debt agreements to the extent we may seek them in the future;

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decrease the value of our investments; and  
impair the financial viability of our insurers.

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

Sales of Unregistered Securities

None.

Issuer Purchases of Equity Securities

None.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

None.

ITEM 5. OTHER INFORMATION

None.

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ITEM 6. EXHIBITS

- 31.1 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.
- 31.2 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.
- 32.1 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.
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- 101.INS XBRL Instance Document
- 101.SCH XBRL Taxonomy Extension Schema Document
- 101.CAL XBRL Taxonomy Extension Calculation Linkbase Document
- 101.DEF XBRL Taxonomy Extension Definition Linkbase Document
- 101.LAB XBRL Taxonomy Extension Label Linkbase Document
- 101.PRE XBRL Taxonomy Extension Presentation Linkbase Document

Attached as Exhibit 101 to this report are the following materials from Advanced Energy, Inc.'s Quarterly Report on Form 10-Q for the quarter ended September 30, 2016, formatted in XBRL (eXtensible Business Reporting Language): (i) the Condensed Consolidated Statements of Earnings, (ii) the Condensed Consolidated Statements of Comprehensive Earnings, (iii) the Condensed Consolidated Balance Sheets, (iv) the Condensed Consolidated Statements of Cash Flows, (v) the Condensed Consolidated Statements of Stockholders' Equity, and (vi) the Notes to the Condensed Consolidated Financial Statements.

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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.

ADVANCED ENERGY INDUSTRIES, INC.

Dated: October 31, 2016 /s/ Thomas Liguori

Thomas Liguori

Executive Vice President & Chief Financial Officer

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