MEDICAL PROPERTIES TRUST INC
Form 4
March 21, 2017

FORM 4

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. *See* Instruction 1(b).

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

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

OMB APPROVAL

OMB Number:	3235-0287
Expires:	January 31, 2005
Estimated average burden hours per response...	0.5

(Print or Type Responses)

1. Name and Address of Reporting Person *
SPARKS DANIEL PAUL

(Last) (First) (Middle)

1000 URBAN CENTER DRIVE, SUITE 501

(Street)

BIRMINGHAM, AL 35242

(City) (State) (Zip)

2. Issuer Name **and** Ticker or Trading Symbol
MEDICAL PROPERTIES TRUST INC [MPW]

3. Date of Earliest Transaction (Month/Day/Year)
03/20/2017

4. If Amendment, Date Original Filed(Month/Day/Year)

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

__X__ Director _____ 10% Owner
_____ Officer (give title below) _____ Other (specify below)

6. Individual or Joint/Group Filing(Check Applicable Line)
_X_ Form filed by One Reporting Person
___ Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1.Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock, par value $.001	03/20/2017		A		7,263 (1)	A	$ 0	25,630	D	

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB control number.

SEC 1474 (9-02)

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned
(*e.g.*, puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)		6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Underlying Securities (Instr. 3 and 4)		8. Price of Derivative Security (Instr. 5)	9. Nu Deriv Secur Bene Owne Follo Repo Trans (Instr
				Code	V	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares		

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
SPARKS DANIEL PAUL 1000 URBAN CENTER DRIVE SUITE 501 BIRMINGHAM, AL 35242	X			

Signatures

Emily R. Sawyer, by power of attorney	03/21/2017
**Signature of Reporting Person	Date

Explanation of Responses:

* If the form is filed by more than one reporting person, *see* Instruction 4(b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations. *See* 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

(1) Shares vest ratably at the beginning of each of the 12 calendar quarters beginning April 1, 2017.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure.
Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number. eft;font-size:10pt;">

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Domestic production activity benefit

—

(124
)

(135
)
Tax effect of foreign operations

(22,495
)

(12,081
)

(22,268
)
Tax credits

(969
)

(2,208
)

(3,551
)
Other permanent items, net

385

351

(219
)

$
21,960

$
16,510

$
(11,388
)
Deferred tax assets and liabilities are recognized for the future tax consequences of differences between the carrying amounts of assets and liabilities and their respective tax bases using enacted tax rates in effect for the year in which the differences are expected to be reversed. Significant deferred tax assets and liabilities consist of the following (in thousands):

Years Ended December 31,

	2015	2014
Deferred tax assets		
Stock based compensation	$3,716	$4,029
Net operating loss and tax credit carryforwards	49,374	19,434
Pension obligation	3,662	4,242
Excess and obsolete inventory	3,692	3,308
Deferred revenue	12,423	13,271
Vacation accrual	750	939
Restructuring	83	115
Bad debt reserve	114	341
Employee bonuses and commissions	1,191	128
Unrealized gain/loss	1,506	1,020
Warranty reserve	91	170
Other	899	369
Deferred tax assets	77,501	47,366
Less: Valuation allowance	(37,208)	(2,940)
Net deferred tax assets	40,293	44,426
Deferred tax liabilities		
Depreciation and amortization	3,875	4,666
Foreign other	1,050	555
Other	260	153
Deferred tax liabilities	5,185	5,374
Net deferred tax assets (liabilities)	$35,108	$39,052

As of December 31, 2015, the Company has recorded a valuation allowance on its U.S. domestic deferred tax assets of approximately $1.1 million related to state tax losses. The remaining valuation allowance on deferred tax assets approximates $36.1 million and relates to foreign losses that are both operating and capital in nature. The foreign operating losses are attributable to Germany, the UK, Japan, and India. As of December 31, 2015, there is not sufficient positive evidence to conclude that such

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losses will be recognized. The foreign capital losses are attributable to the UK and may carry forward to offset future capital gains only. The Company has determined that the future utilization of these capital losses is not more likely than not.

As of December 31, 2015, the Company had federal, foreign, and state tax loss carryforwards of approximately $47.4 million, $132.8 million, and $75.2 million, respectively. The federal and state tax loss carryforwards are subject to various limitations under Section 382 of the Internal Revenue Code and applicable state laws. The US federal tax losses will expire from 2028 to 2035. The US state losses will expire from 2018 to 2035. The foreign tax losses consist of approximately $101.4 million of German losses, $23.8 million of UK losses, $4.5 million of Japan losses, and $3.1 million of India losses, and, as noted above, are currently subject to a full valuation allowance. The Germany, UK, and India losses have no expiration date and the Japan losses will begin to expire in 2021.

As of December 31, 2015, the Company has not provided for U.S. income tax or foreign withholding taxes on approximately $255.0 million of undistributed foreign earning because such earnings are considered to be permanently reinvested. The Company believes it is not practicable to calculate the deferred taxes associated with these earnings because of the variability of multiple factors that would need to be assessed at the time of any assumed repatriation. The Company believes, however, that foreign tax credits may be available to reduce federal income taxes in the event of distribution.

We account for uncertain tax positions by applying a minimum recognition threshold to tax positions before recognizing these positions in the financial statements. The reconciliation of our total gross unrecognized tax benefits is as follows (in thousands):

	Years Ended December 31,		
	2015	2014	2013
Balance at beginning of period	$8,001	$5,523	$12,810
Additions based on tax positions taken during a prior period	433	136	1,006
Additions based on tax positions taken during the current period	3,413	3,757	1,495
Reductions related to a lapse of applicable statute of limitations	(1,798)	(1,415)	(9,788)
Balance at end of period	$10,049	$8,001	$5,523

The full $10.0 million of unrecognized tax benefits, if recognized, will impact the Company's effective tax rate. In accordance with our accounting policy, we recognize accrued interest and penalties related to unrecognized tax benefits as a component of tax expense. We had an immaterial amount of accrued interest and penalties at December 31, 2015 and 2014. We do not anticipate a material change to the amount of unrecognized tax positions within the next 12 months.

The Company is currently under examination by the Internal Revenue Service ("IRS") for the 2012 through 2014 tax years. As of December 31, 2015, the IRS has issued no notices of proposed assessment. The Company regularly assesses the likelihood of an adverse outcome resulting from such examinations. As of December 31, 2015, the Company believes the resolution of the current IRS audit will not have a material adverse impact on the Company's financial statements. With few exceptions, the Company is no longer subject to U.S. federal, state and local, or non-U.S. income tax examinations by tax authorities for years before 2012.

NOTE 5. 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 diluted EPS is similar to the computation of basic EPS except that the numerator is increased to exclude charges that would not have been incurred, and the denominator is increased to include the number of additional common shares that would have been outstanding (using the if-converted and treasury stock methods), if securities containing potentially dilutive common shares (stock options and restricted stock units) had been converted to common shares, and if such assumed conversion is dilutive.

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ADVANCED ENERGY INDUSTRIES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following is a reconciliation of the weighted-average shares outstanding used in the calculation of basic and diluted earnings per share for the years ended December 31, 2015, 2014, and 2013 (in thousands, except per share data):

	Years Ended December 31,		
	2015	2014	2013
Income from continuing operations, net of income taxes	$83,482	$69,495	$59,710
Basic weighted-average common shares outstanding	40,746	40,420	39,597
Assumed exercise of dilutive stock options and restricted stock units	331	614	1,070
Diluted weighted-average common shares outstanding	41,077	41,034	40,667
Continuing operations:			
Basic earnings per share	$2.05	$1.72	$1.51
Diluted earnings per share	$2.03	$1.69	$1.47

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

	Years Ended December 31,		
	2015	2014	2013
Stock options	155	91	413
Restricted stock units	1	—	—

Stock Buyback

In May 2014, our Board of Directors authorized a program to repurchase up to $25.0 million of our stock over a twelve-month period. Under this program, during the twelve months ended December 31, 2015, we repurchased and retired 1.4 million shares of our common stock for a total of $25.0 million. We completed the share repurchase program in the second quarter of 2014.

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. Under this program, on November 6, 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. On November 9, 2015, we advanced $50.0 million to the Counterparty. This transaction used $39.6 million and we received 1.4 million shares of our common stock based on then-current market prices of the $50.0 million advanced, representing 79% of the estimated shares to be repurchased under the ASR Agreement. The initial payment was recorded as a reduction to Stockholders' equity in our Consolidated Balance Sheets as of December 31, 2015. The total number of shares repurchased under the ASR Agreement is based on the average of the daily volume-weighted average prices of the common stock during the term of the Agreement, less a discount. At settlement, if the Counterparty pays less than the original amount advanced, they will be required to reimburse us. If the Counterparty pays more than the original advance, we will chose to reimburse the Counterparty with either cash or additional shares. Final settlement of the ASR Agreement is expected to occur in the second quarter of 2016.

All shares repurchased were executed in the open market and no shares were repurchased from related parties. Repurchased shares were retired and assumed the status of authorized and unissued shares.

NOTE 6. MARKETABLE SECURITIES

Our investments with original maturities of more than three months at time of purchase are considered marketable securities available for sale.

Our marketable securities consist of commercial paper and certificates of deposit as follows (in thousands):

	December 31,			
	2015		2014	
	Cost	Fair Value	Cost	Fair Value
Commercial paper	$4,989	$4,995	$—	$—

Certificates of deposit	7,008	6,991	3,083	3,083
Total marketable securities	$11,997	$11,986	$3,083	$3,083

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ADVANCED ENERGY INDUSTRIES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The maturities of our marketable securities available for sale as of December 31, 2015 are as follows:

	Earliest		Latest
Commercial paper	1/21/2016	to	4/28/2016
Certificates of deposit	3/1/2016	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. Our current investments in marketable securities are expected to be liquidated during the next twelve months.

As of December 31, 2015, we do not believe any of the underlying issuers of our marketable securities are at risk of default.

NOTE 7. DERIVATIVE FINANCIAL INSTRUMENTS

We are impacted by changes in foreign currency exchange rates. We manage these risks through the use of derivative financial instruments, primarily forward contracts with banks. During the years ended December 31, 2015, 2014, and 2013 we entered into foreign currency exchange forward contracts to manage the exchange rate risk associated with intercompany debt denominated in nonfunctional currencies. These derivative instruments are not designated as hedges; however, they do offset the fluctuations of our intercompany debt due to foreign exchange rate changes. These forward contracts are typically for one month periods. At December 31, 2015, 2014, and 2013 we had EUR forward contracts. At December 31, 2013 we also had CAD and CHF forward contracts.

The notional amount of foreign currency exchange contracts at December 31, 2015, 2014, and 2013 was $37.2 million, $14.9 million, and $25.0 million, respectively, and the fair value of these contracts was not significant at December 31, 2015, 2014, and 2013. During the years ended December 31, 2015, 2014, and 2013, we recognized a gain of $1.9 million, a gain of $0.1 million and a loss of $0.9 million, respectively, on our foreign currency exchange contracts. These gains and losses were offset by corresponding gains and losses on the related intercompany debt and both are included as a component of other income, net, in our Consolidated Statements of Operations.

NOTE 8. ASSETS AND LIABILITIES MEASURED AT FAIR VALUE

Fair Value Hierarchy

Financial assets and liabilities recorded at fair value in our Consolidated Balance Sheets are categorized based upon a fair value hierarchy established by U.S. GAAP, which prioritizes the inputs used to measure fair value into the following levels:

Level 1:	Quoted market prices in active markets for identical assets or liabilities at the measurement date.
Level 2:	Quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets and liabilities in markets that are not active, or other inputs that are observable and can be corroborated by observable market data.
Level 3:	Inputs reflect management’s best estimates and assumptions of what market participants would use in pricing the asset or liability at the measurement date. The inputs are unobservable in the market and significant to the valuation of the instruments.

A financial instrument’s categorization within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement.

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ADVANCED ENERGY INDUSTRIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Assets and Liabilities Measured at Fair Value on a Recurring Basis

The following tables present information about our financial assets measured at fair value, on a recurring basis, as of December 31, 2015, and December 31, 2014. The fair value hierarchy of the valuation techniques utilized to determine such fair value, is as follows (in thousands):

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

December 31, 2014	Level 1	Level 2	Level 3	Total
Certificates of deposit	$—	$3,083	$—	$3,083
Total marketable securities	$—	$3,083	$—	$3,083

We did not have any Level 3 investments or financial liabilities measured at fair value, on a recurring basis, as of December 31, 2015 and December 31, 2014. There were no transfers in or out of Level 1, 2, or 3 fair value measurements during the year ended December 31, 2015.

NOTE 9. INVENTORIES

For information regarding the valuation of our inventory refer to Note 1. Operations and Summary of Significant Accounting Policies and Estimates.

Our inventories are valued at the lower of cost or market and computed on a first-in, first-out (FIFO) basis. Components of inventories, net of reserves, are as follows (in thousands):

	December 31,	
	2015	2014
Parts and raw materials	$40,578	$28,014
Work in process	5,643	5,645
Finished goods	6,352	12,433
	$52,573	$46,092

NOTE 10. PROPERTY AND EQUIPMENT, NET

Details of property and equipment, net are as follows (in thousands):

	December 31,	
	2015	2014
Buildings and land	$1,623	$1,745
Machinery and equipment	30,479	27,495
Computer and communication equipment	19,744	20,035
Furniture and fixtures	1,319	1,527
Vehicles	215	130
Leasehold improvements	15,173	15,243
Construction in process	15	—
	68,568	66,175
Less: Accumulated depreciation	(58,923)	(56,416)
Total property and equipment, net	$9,645	$9,759

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ADVANCED ENERGY INDUSTRIES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

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

	Years Ended December 31,		
	2015	2014	2013
Depreciation expense	$4,464	$5,463	$6,138

NOTE 11. GOODWILL

The following summarizes the changes in goodwill during the years ended December 31, 2015 and 2014 (in thousands):

	December 31, 2014	Additions	Effect of Currency Translation	December 31, 2015
Consolidated	$43,875	$453	$(1,599)	$42,729

	December 31, 2013	Additions	Effect of Currency Translation	December 31, 2014
Consolidated	$14,212	$32,997	$(3,334)	$43,875

Additions during the year represent the difference between the purchase price paid and the values assigned to identifiable assets acquired and liabilities assumed in purchase accounting, as described in Note 2. Business Acquisitions.

NOTE 12. INTANGIBLE ASSETS

Other intangible assets consisted of the following as of December 31, 2015 (in thousands, except weighted-average useful life):

	Gross Carrying Amount	Effect of Changes in Exchange Rates	Accumulated Amortization	Net Carrying Amount	Weighted-Average Useful Life in Years
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 intangible assets	$48,298	$(4,587)	$(9,570)	$34,141	

Other intangible assets consisted of the following as of December 31, 2014 (in thousands, except weighted-average useful life):

	Gross Carrying Amount	Effect of Changes in Exchange Rates	Accumulated Amortization	Net Carrying Amount	Weighted-Average Useful Life in Years
Technology-based	$14,130	$(928)	$(1,526)	$11,676	12
Customer relationships	31,276	(1,710)	(2,873)	26,693	12
Trademarks and other	2,892	(149)	(801)	1,942	17
Total intangible assets	$48,298	$(2,787)	$(5,200)	$40,311	

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

	Years Ended December 31,		
	2015	2014	2013
Amortization expense	$4,368	$4,998	$850

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ADVANCED ENERGY INDUSTRIES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Estimated amortization expense related to intangibles for each of the five years 2016 through 2020 and thereafter is as follows (in thousands):

Year Ending December 31,	
2016	$4,215
2017	3,990
2018	3,977
2019	3,961
2020	3,332
Thereafter	14,666
	$34,141

NOTE 13. OTHER ACCRUED EXPENSES

As of December 31, 2015 and 2014, Other accrued liabilities was $12.3 million and $11.8 million, respectively. No individual items in Other accrued expenses exceeded 5% of total current liabilities.

NOTE 14. WARRANTIES

Provisions of our sales agreements include product warranties customary to these types of agreements, ranging from 12 months to 24 months following installation for Precision Power products and 3 years to 10 years following installation for our legacy inverter products. Costs related to legacy Inverter new product warranties are reflected in "Loss from discontinued operations, net of income taxes" in our Consolidated Statements of Operations, for all periods presented. Our provision for the estimated cost of warranties is recorded when revenue is recognized. We estimate the anticipated costs of repairing our products under such warranties based on the historical cost of the repairs. The assumptions we use to estimate warranty accruals are reevaluated periodically, in light of actual experience, and when appropriate, the accruals are adjusted. We also offer our legacy inverter customers the option to purchase additional warranty coverage up to 20 years after the base warranty period expires. These warranties, reflected as deferred revenue at time of sale, are included in Continuing operations on our Consolidated Statements of Operations as we will realize revenue in future periods as such warranty costs are incurred.

We establish accruals for warranty issues that are probable to result in future costs. Changes in product warranty accruals are as follows (in thousands):

	Years Ended December 31,		
	2015	2014	2013
Balances at beginning of period	$1,612	$3,187	$2,601
Warranty liabilities acquired	—	260	—
Increases to accruals related to sales during the period	1,071	788	2,849
Warranty expenditures	(1,040)	(2,618)	(2,290)
Effect of changes in exchange rates	(10)	(5)	27
Balances at end of period	$1,633	$1,612	$3,187

NOTE 15. STOCK-BASED COMPENSATION

As of December 31, 2015, we had two active stock-based incentive compensation plans; the 2008 Omnibus Incentive Plan and the Employee Stock Purchase Plan (“ESPP”). All new equity compensation grants are issued under these two plans; however, outstanding awards previously issued under inactive plans will continue to vest and remain exercisable in accordance with the terms of the respective plans. At December 31, 2015, there were 3.4 million shares reserved and 2.5 million shares available for future grant under our stock-based incentive plans.

2008 OMNIBUS INCENTIVE PLAN — The 2008 Omnibus Incentive Plan (the “Plan”) provides officers, directors, key employees, and other persons an opportunity to acquire or increase a direct proprietary interest in our operations and future success. Our Board of Directors currently administers the Plan, and makes all decisions concerning which officers, directors, employees, and other persons are granted awards, how many to grant to each recipient, when awards are granted, how the Plan should be interpreted, whether to amend or terminate the Plan, and whether to delegate administration of the Plan to a committee. In May 2010, our shareholders approved an increase from 3,500,000 to 7,500,000 shares authorized for issuance under the Plan. The Plan provides for the grant of stock options, stock appreciation rights, restricted stock, stock units (including deferred stock units),

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ADVANCED ENERGY INDUSTRIES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

unrestricted stock, and dividend equivalent rights. Any of the awards may be made as performance incentives to reward attainment of annual or long-term performance goals in accordance with the terms of the Plan. Stock options granted under the Plan may be non-qualified stock options or incentive stock options except that stock options granted to outside directors, consultants, or advisers providing services to us shall in all cases be non-qualified stock options. Included in the Plan is our 2012-2014 Long Term Incentive Plan ("2012-2014 LTI Plan") and our 2015 Long Term Incentive Plan ("2015 LTI Plan"). The Plan will terminate on May 7, 2018 unless the administrator terminates the Plan earlier. As of December 31, 2015, 2,120,030 shares of common stock were available for grant under the Plan.

Stock-based Compensation Expense

Non-cash stock-based compensation expense is primarily included in selling, general and administrative expense and was $2.8 million, $3.7 million, and $9.8 million for the years ending December 31, 2015, 2014, and 2013, respectively.

Our stock-based compensation expense is based on the value of the portion of share-based payment awards that are ultimately expected to vest, assuming estimated forfeitures at the time of grant. Estimated forfeiture rates for our stock-based compensation expense applicable to options and RSUs was approximately 18% for the year ended December 31, 2015, 17% for the year ended December 31, 2014, and 16% for the year ended December 31, 2013.

Stock Options

Stock option awards are generally granted with an exercise price equal to the market price of our stock at the date of grant and with either a three or four-year vesting schedule and a term of 10 years, except as noted below.

Under our 2012-2014 LTI Plan, we made grants of performance based options during the first quarter of 2012, which vested in the first quarters of 2013, 2014, and 2015 based on the Company's achievement of return on net assets targets established by our Board of Directors at the beginning of 2012. Under our 2015 LTI Plan, we made grants of time-based options during the first quarter of 2015, which will vest annually over a three-year period. The fair value of options granted during the years ended December 31, 2015, 2014 and 2013 was estimated on the date of grant using the Black-Scholes-Merton option-pricing model using the following assumptions by grant year:

	2015	2014	2013
Fair value assumptions - stock options:			
Risk-free interest rates	1.1% - 1.4%	1.7% - 1.9%	0.74%
Expected dividend yield rates	—%	—%	—%
Expected term	4.3 years	5.3 years	5.6 years
Expected volatility	43%	53%	69%

The risk free interest rate is based on the five-year U.S. Treasury Bill at the time of the grant. Historically, company information is the primary basis for selection of the expected dividend yield. The expected term is based on historical experience. Expected volatility is based on historical volatility of our common stock using daily stock price observations.

The weighted-average fair value of options issued and total intrinsic value of options exercised were (in thousands, except share prices):

	2015	2014	2013
Weighted-average grant date fair value of options	$9.50	$10.80	$10.55
Total intrinsic value of options exercised	$5,203	$13,657	$12,917

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ADVANCED ENERGY INDUSTRIES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Changes in outstanding time based stock options during the year ended December 31, 2015 were as follows (in thousands, except share prices):

	2015		2014		2013	
	Shares	Weighted-Average Exercise Price	Shares	Weighted-Average Exercise Price	Shares	Weighted-Average Exercise Price
Options outstanding at beginning of period	642	$ 14.18	1,573	$ 13.29	4,036	$ 13.61
Options granted	171	26.26	57	18.77	—	—
Options exercised	(229)	13.95	(910)	13.01	(2,055)	13.31
Options forfeited	(38)	14.55	(76)	12.93	(199)	13.01
Options expired	(3)	16.25	(2)	21.97	(209)	19.74
Options outstanding at end of period	543	$ 18.06	642	$ 14.18	1,573	$ 13.29
Options vested during the year	304		180		294	

Changes in outstanding performance based stock options during the year ended December 31, 2015 were as follows (in thousands, except share prices):

	2015		2014		2013	
	Shares	Weighted-Average Exercise Price	Shares	Weighted-Average Exercise Price	Shares	Weighted-Average Exercise Price
Options outstanding at beginning of period	380	$ 12.58	1,239	$ 13.38	1,623	$ 12.65
Options granted	—	—	51	26.53	43	17.80
Options exercised	(137)	11.35	(408)	11.03	(89)	11.02
Options forfeited	—	—	(384)	17.12	(87)	11.02
Options expired	(144)	13.06	(118)	12.12	(251)	11.10
Options outstanding at end of period	99	$ 12.68	380	$ 12.58	1,239	$ 13.38
Options vested during the year	64		364		314	

During each of the three years ended December 31, 2015, 2014 and 2013, the value of shares withheld for taxes from both time-based and performance based option exercises totaled $1.0 million, $1.6 million, and $1.3 million, respectively.

As of December 31, 2015, there was $1.0 million of total unrecognized compensation cost related to stock options granted and outstanding, net of expected forfeitures related to non-vested options, which is expected to be recognized through fiscal year 2017, with a weighted-average remaining vesting period of 2.0 years. Information about our stock options that are outstanding, options that we expect to vest and options that are exercisable at December 31, 2015 were as follows (in thousands except share prices and lives):

Options Expected to Vest:	Number	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Life	Aggregate Intrinsic Value
Options outstanding	642	$ 17.10	6.3 years	$ 7,146
Options expected to vest	606	16.63	6.1 years	7,031
Options exercisable	439	13.53	5.0 years	6,454

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following table summarizes information about the stock options outstanding at December 31, 2015 (in thousands, except share prices and lives):

	Options Outstanding			Options Exercisable	
Range of Exercise Prices	Number Outstanding	Weighted-Average Remaining Contractual Life	Weighted-Average Exercise Price	Number Exercisable	Weighted-Average Exercise Price
$7.69 to $9.51	51	4.7 years	$ 8.98	51	$ 8.98
$11.02 to $11.02	94	6.0 years	11.02	94	11.02
$11.21 to $12.77	69	4.5 years	12.34	69	12.35
$13.70 to $14.21	70	4.4 years	14.00	70	14.00
$14.50 to $15.65	87	4.7 years	14.83	87	14.83
$16.25 to $18.77	82	7.4 years	17.99	44	17.32
$20.19 to $24.31	24	2.9 years	22.69	19	22.29
$25.28 to $25.28	2	8.3 years	25.28	2	25.28
$26.32 to $26.32	160	9.1 years	26.32	—	—
$26.76 to $26.76	3	8.1 years	26.76	3	26.76
$7.69 to $26.76	642	6.3 years	$ 17.10	439	$ 13.53

Restricted Stock Units

The fair value of our RSUs is determined based upon the closing fair market value of our common stock on the grant date. Changes in the unvested time based restricted stock units during the year ended December 31, 2015 were as follows (in thousands):

	2015		2014		2013	
	Shares	Weighted-Average Grant Date Fair Value	Shares	Weighted-Average Grant Date Fair Value	Shares	Weighted-Average Grant Date Fair Value
Balance at beginning of period	115	$ 13.00	230	$ 13.41	442	$ 12.96
RSUs granted	159	26.70	86	21.05	99	17.58
RSUs vested	(86)	14.05	(163)	14.72	(242)	12.99
RSUs forfeited	(14)	12.69	(38)	13.39	(69)	12.88
Balance at end of period	174	$ 24.88	115	$ 13.00	230	$ 13.41

Changes in the unvested performance based restricted stock units during the year ended December 31, 2015 were as follows (in thousands):

	2015		2014		2013	
	Shares	Weighted-Average Grant Date Fair Value	Shares	Weighted-Average Grant Date Fair Value	Shares	Weighted-Average Grant Date Fair Value
Balance at beginning of period	242	$ 13.86	1,344	$ 11.42	1,631	$ 11.15
RSUs granted	62	26.27	59	26.53	50	17.80
RSUs vested	(75)	13.81	—	—	(235)	11.10
RSUs settled in cash	—	—	(418)	12.29	—	—
RSUs forfeited	(169)	14.25	(743)	13.14	(102)	11.02
Balance at end of period	60	$ 26.27	242	$ 13.86	1,344	$ 11.42

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The weighted-average fair value of RSUs issued and total fair value of RSUs converted to shares were (in thousands, except share prices):

	2015	2014	2013
Weighted-average grant date fair value of RSUs	$26.66	$22.87	$17.73
Total fair value of RSUs converted to shares	$3,782	$5,439	$11,032

As of December 31, 2015, there was $2.5 million of total unrecognized compensation cost, net of expected forfeitures related to non-vested RSUs granted, which is expected to be recognized through fiscal 2018, with a weighted-average remaining vesting period of 1.2 years.

Employee Stock Purchase Plan

The ESPP, a stockholder-approved plan, provides for the issuance of rights to purchase up to 1,000,000 shares of common stock. In May 2010, shareholders approved an increase from 500,000 to 1,000,000 shares authorized for sale under our ESPP. Employees below the Vice President level are eligible to participate in the ESPP if employed by us for at least 20 hours per week during at least five months per calendar year. Participating employees may contribute up to the lesser of 15% of their eligible earnings or $5,000 during each plan period. Currently, the plan period is six months. The purchase price of common stock purchased under the ESPP is currently equal to the lower of: 1) 85% of the fair market value of our common stock on the commencement date of each plan period or 2) 85% of the fair market value of our common shares on each plan period purchase date. At December 31, 2015, 338,948 shares remained available for future issuance under the ESPP.

Purchase rights granted under the ESPP are valued using the Black-Scholes-Merton model. As of December 31, 2015, there was $0.1 million of total unrecognized compensation cost related to the ESPP that is expected to be recognized over a remaining period of five months. Total compensation expense was $0.2 million for the year ended December 31, 2015, $0.4 million for the year ended December 31, 2014, and $0.2 million for the year ended December 31, 2013.

The fair value of each purchase right granted under the ESPP was estimated on the date of grant using the Black-Scholes-Merton option pricing model with the following assumptions:

	2015	2014	2013
Risk-free interest rates	0.07% - 0.42%	0.06% - 0.08%	0.07% - 0.10%
Expected dividend yield rates	— %	— %	— %
Expected term	0.5 years	0.5 years	0.5 years
Expected volatility	27.8 %	52.0 %	61.5 %

The risk free interest rate is based on the six month U.S. Treasury Bill at the time of the grant. Historical company information is the primary basis for selection of the expected dividend yield. The expected term is based on historical experience. Expected volatility is based on historical volatility of our common shares using daily stock price observations.

NOTE 16. RETIREMENT PLANS

Defined contribution plans

We have a 401(k) profit sharing and retirement savings plan covering substantially all full-time U.S. employees. Participants may defer up to the maximum amount allowed as determined by law. Participants are immediately vested in their contributions. Profit sharing contributions to the plan, which are discretionary, are approved by the Board of Directors. Vesting in the profit sharing contribution account is based on years of service, with most participants fully vested after four years of credited service.

For the years ended December 31, 2015, 2014, and 2013 our contribution for participants in our 401(k) plan was 50% matching on contributions by employees up to 6% of the employee’s compensation.

During the years ended December 31, 2015, 2014, and 2013 we recognized total defined contribution plan costs of $0.7 million, $0.6 million, and $0.6 million, respectively, in "Selling, general, and administrative" expense on our Consolidated Statements of Operations.

Defined benefit plans
In connection with the HiTek acquisition discussed in Note 2. Business Acquisitions, we acquired the HiTek Power Limited Pension Scheme ("the HiTek Plan"). The HiTek Plan has been closed to new participants and additional accruals since 2006. In

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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 facts and circumstances. An actuarial analysis is used to measure the expense and liability associated with pension benefits. The net amount of the pension liability on our balance sheet recorded in Other long-term liabilities as of December 31, 2015 and December 31, 2014 was $17.8 million and $20.1 million, respectively. Anticipated payments to pensioners covered by the HiTek Plan are expected to be between $1.0 million and $1.5 million for each of the next ten years. We are committed to make annual fixed payments of $1.0 million into the Hitek plan through 2024.

The following table sets forth the components of net periodic pension cost for the year ended December 31, 2015 (in thousands):

	Year Ended December 31, 2015	2014
Interest cost	$1,093	$1,061
Expected return on plan assets	(562)	(532)
Amortization of actuarial gains and losses	373	—
Net periodic pension cost	$904	$529

Assumptions used in the determination of the net periodic pension cost are:

	Year Ended December 31, 2015	2014
Discount Rate	3.9%	3.6%
Expected long-term return on plan assets	4.3%	4.0%

We have derived the expected return on assets of 4.3% per annum from the weighted expected return on each of the major categories of assets.

The status of the HiTek Plan as reflected in "Other long-term liabilities" on our Consolidated Balance Sheets is summarized as follows (in thousands):

	Year Ended December 31, 2015	2014
Projected benefit obligation, beginning of year	$34,475	$—
Acquisition	—	34,816
Interest cost	1,093	1,061
Actuarial (gain) loss	(1,435)	1,672
Benefits paid	(825)	(460)
Translation adjustment	(1,842)	(2,614)
Projected benefit obligation, end of year	$31,466	$34,475
Plan assets, beginning of year	$14,339	$—
Acquisitions	—	12,091
Actual return on plan assets	562	532
Contributions	958	3,084
Benefits paid	(825)	(460)
Actuarial (gain)	(583)	(8)
Translation adjustment	(774)	(900)
Plan assets, end of year	$13,677	$14,339
Funded status of plan	$(17,789)	$(20,136)

Explanation of Responses:

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The fair value of the Company's qualified pension plan assets by category for the year ended December 31, 2015 are as follows (in thousands):

	Level 1	Level 2	Level 3	Total
Multi-Asset Fund	$—	$4,460	$—	$4,460
Diversified Growth Fund	—	4,767	—	4,767
Index-Linked Gilts	—	2,113	—	2,113
Corporate Bonds	—	2,100	—	2,100
Cash	237	—	—	237
Total	$237	$13,440	$—	$13,677

At December 31, 2015 the HiTek Plan assets of $13.7 million were invested in four separate funds including a multi-asset fund (32.6%), a diversified growth fund (34.9%), an Investment grade long term bond fund (15.4%) and an index-linked gilt fund (15.4%). The asset and growth funds aim to generate an ‘equity-like’ return over an economic cycle with significantly reduced volatility relative to equity markets and have scope to use a diverse range of asset classes, including equities, bonds, cash and alternatives, e.g. property, infrastructure, high yield bonds, floating rate debt, private, equity, hedge funds and currency. The bond fund and gilt fund are invested in index-linked gilts and corporate bonds. These investments are intended to provide a degree of protection against changes in the value of the HiTek Plan's liabilities related to changes in long-term expectations for interest rates and inflation expectations, i.e. the protection assets provide a direct hedge against increases in the value of the HiTek Plan's liabilities caused by changes in financial conditions. The current strategy might be expected to generate a return of around 1.7% per annum in excess of the long-term expected return from gilts.

The fair value of the Company's qualified pension plan assets by category for the year ended December 31, 2014 are as follows (in thousands):

	Level 1	Level 2	Level 3	Total
Multi-Asset Fund	$—	$4,685	$—	$4,685
Diversified Growth Fund	—	4,950	—	4,950
Index-Linked Gilts	—	2,248	—	2,248
Corporate Bonds	—	2,238	—	2,238
Cash	218	—	—	218
Total	$218	$14,121	$—	$14,339

NOTE 17. ACCUMULATED OTHER COMPREHENSIVE INCOME

Accumulated other comprehensive income consisted of the following (in thousands):

	Foreign Currency Adjustments	Unrealized Gains (Losses) on Marketable Securities	Total Accumulated Other Comprehensive Income
Balances at December 31, 2014	$10,249	$527	$10,776
Current period other comprehensive income (loss)	(10,228)	(14)	(10,242)
Balances at December 31, 2015	$21	$513	$534

NOTE 18. COMMITMENTS AND CONTINGENCIES

Disputes and Legal Actions

We are involved in disputes and legal actions arising in the normal course of our business. While we currently believe that the amount of any ultimate loss would not be material to our financial position, the outcome of these actions is inherently difficult to predict. In the event of an adverse outcome, the ultimate loss could have a material adverse effect on our financial position or reported results of operations. An unfavorable decision in patent litigation also could require material changes in production processes and products or result in our inability to ship products or components found to have violated third-party

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

patent rights. We accrue loss contingencies in connection with our commitments and contingencies, including litigation, when it is probable that a loss has occurred and the amount of the loss can be reasonably estimated.

German Lawsuit against Jolaos related to Purchase Price Adjustment in Acquisition of Refusol

On April 8, 2013, our subsidiary AEI Holdings GmbH (“AEI Holdings”) acquired all the outstanding shares of Refusol Holding GmbH (“Refusol”) from Jolaos Verwaltungs GmbH ("Jolaos") pursuant to the terms of the SPA. Jolaos is an affiliate of various Prettl entities which are contract manufacturers of certain Refusol three phase string inverters. Under the SPA, the preliminary base price paid for the shares of Refusol was subject to a post-closing balance sheet adjustment based on confirmation of the financial statements of Refusol effective as of the closing date. AEI Holdings and Jolaos were in disagreement on various accounting adjustments to the closing date financial statements of Refusol. After repeated unsuccessful attempts to have Jolaos submit the dispute to an independent German accounting firm as required under the SPA, in December 2013 AEI Holdings petitioned the designated District Court in Stuttgart (Landgericht Stuttgart), Germany to review the dispute. This dispute was settled in the fourth quarter of 2015.

Operating Leases

We have various operating leases for automobiles, equipment, and office and production facilities. Rent expense under operating leases was approximately $5.3 million in 2015, $5.7 million in 2014, and $6.1 million in 2013.

The future minimum rental payments required under non-cancelable operating leases as of December 31, 2015 are as follows (in thousands):

2016	$5,898
2017	3,348
2018	2,398
2019	2,388
2020	2,344
Thereafter	4,547
	$20,923

*Future estimated payments on leases denominated in foreign currency are reflected above based on the estimated spot rate for that currency converted to US Dollars at December 31, 2015 and are subject to change.

Purchase Commitments

We have firm purchase commitments and agreements with various suppliers to ensure the availability of components. The obligation as of December 31, 2015 is approximately $44.2 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.

NOTE 19. RESTRUCTURING COSTS

During the period, we recorded net restructuring expense related to continuing operations of approximately $0.2 million. See Note 3. Discontinued Operations for more information on restructuring related to discontinued operations. This was comprised of $0.3 million related to the current period activity offset by $0.1 million, related to the expiration of obligations associated with the 2013 plan.

In June 2015, we committed to a restructuring plan in relation to the wind-down of our Inverter operations which has been completed as of December 31, 2015. Charges related to this plan that have an effect on continuing operations include strategic headcount reductions, streamlining operational processes and condensing administrative functions to improve efficiencies. This plan was completed in the fourth quarter of 2015.

In April 2014, we committed to a restructuring plan to take advantage of additional cost savings opportunities in connection with our acquisitions and realignment to a single organizational structure based on product line. The plan called for consolidating certain facilities and rebranding of products to allow us to use our resources more efficiently. This plan was completed in the fourth quarter of 2014.

In April 2013, we committed to a restructuring plan to take advantage of additional cost saving opportunities in connection with our acquisition of Refusol. The plan called for consolidating certain facilities, further centralizing our manufacturing and rationalizing certain products to most effectively meet customer needs. All activities under this restructuring plan were completed prior to December 31, 2013.

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The following table summarizes the components of our restructuring costs incurred under the 2015 plan as of December 31, 2015 (in thousands):

	Twelve Months Ended December 31, 2015	Cumulative costs through December 31, 2015
Severance and related costs	$184	$184
Contract settlement costs	73	73
Total restructuring charges	$257	$257

The following table summarizes the components of our restructuring costs incurred under the 2014 plan as of December 31, 2015 (in thousands):

	Twelve Months Ended December 31, 2015	Cumulative costs through December 31, 2015
Severance and related costs	$—	$1,282
Facility closure costs	—	582
Total restructuring charges	$—	$1,864

The following table summarizes the components of our restructuring costs incurred under the 2013 plan as of December 31, 2015 (in thousands):

	Twelve Months Ended December 31, 2015	Cumulative costs through December 31, 2015
Severance and related costs	$—	$2,762
Property and equipment and intangible asset impairments	—	43
Facility closure costs	(59)	1,206
Total restructuring charges	$(59)	$4,011

The following table summarizes our restructuring liabilities under the 2015 plan (in thousands):

	Balances at December 31, 2014	Costs incurred and charged to expense	Cost paid or otherwise settled	Effect of change in exchange rates	Balances at December 31, 2015
Severance and related costs	$—	$184	$(182)	$—	$2
Contract settlement costs	—	73	(69)	—	4
Total restructuring liabilities	$—	$257	$(251)	$—	$6

The following table summarizes our restructuring liabilities under the 2014 plan (in thousands):

	Balances at December 31, 2014	Costs incurred and charged to expense	Cost paid or otherwise settled	Effect of change in exchange rates	Balances at December 31, 2015
Severance and related costs	$825	$—	$(824)	$(1)	$—
Facility closure costs	51	—	(49)	(2)	—
Total restructuring liabilities	$876	$—	$(873)	$(3)	$—

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following table summarizes our restructuring liabilities under the 2013 plan (in thousands):

	Balances at December 31, 2014	Costs incurred and charged to expense	Cost paid or otherwise settled	Effect of change in exchange rates	Balances at December 31, 2015
Severance and related costs	$—	$—	$—	$—	$—
Facility closure costs	84	(59)	(12)	(13)	—
Total restructuring liabilities	$84	$(59)	$(12)	$(13)	$—

NOTE 20. RELATED PARTY TRANSACTIONS

During the years ended December 31, 2015, 2014, and 2013, we engaged in the following transactions with companies related to members of our Board of Directors, as described below (in thousands):

	Years Ended December 31,		
	2015	2014	2013
Sales to related parties	$706	$321	$622
Rent expense to related parties	—	1,850	1,880
Purchases from related parties	40	—	—

Sales - Related Parties

Members of our Board of Directors hold various executive positions and serve as directors at other companies, including companies that are our customers. During the year ended December 31, 2015, we had sales to three such companies as noted above and there was accounts receivable from one such customer totaling $0.1 million at December 31, 2015. During the year ended December 31, 2014 we had sales to four such companies as noted above and there were no aggregate accounts receivable from these customers at December 31, 2014. During the year ended December 31, 2013 we had sales to one such company as noted above and there were no aggregate accounts receivable from this customer at December 31, 2013.

Purchases - Related Parties

During the year ended December 31, 2015, we had purchases from two such companies as noted above and there were no aggregate accounts payable from these vendors at December 31, 2015.

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NOTE 21. GEOGRAPHIC AND SIGNIFICANT CUSTOMER INFORMATION
We have operations in the United States, Europe and Asia. Our disclosure related to sales and long-lived assets by geographic area and information relating to major customers are presented below. Sales attributed to individual countries are based on customer location.

	Years Ended December 31,								
	2015			2014			2013		
Sales to external customers:	(In thousands)								
United States	$268,257	64.7	%	$230,843	62.8	%	$169,362	56.6	%
Canada	195	—	%	347	0.1	%	93	—	%
North America	268,452	64.7	%	231,190	62.9	%	169,455	56.6	%
People's Republic of China	12,687	3.1	%	12,903	3.5	%	27,420	9.2	%
Other Asian countries	61,839	15.0	%	56,938	15.6	%	62,706	20.8	%
Asia	74,526	18.0	%	69,841	19.0	%	90,126	30.1	%
Germany	46,719	11.3	%	43,343	11.8	%	31,651	10.6	%
United Kingdom	25,100	6.1	%	22,670	6.2	%	5,752	1.9	%
Other European countries	14	(0.1	)%	289	—	%	2,397	0.8	%
Europe	71,833	17.3	%	66,302	18.0	%	39,800	13.3	%
Total sales	$414,811	100.0	%	$367,333	100.0	%	$299,381	100.0	%

Sales to Applied Materials Inc., our largest customer, were $123.5 million or 29.8% of total sales for 2015, $109.3 million, or 29.8% of total sales, for 2014 and $96.2 million, or 32.1% of total sales for 2013. Sales to Lam Research were $84.2 million or 20.3% of total sales for 2015, $73.0 million, or 19.9% of total sales, for 2014 and $50.4 million, or 16.8% of total sales for 2013. Our sales to Applied Materials and Lam Research include precision power products used in semiconductor processing and solar, flat panel display, and architectural glass applications. No other customer accounted for 10% or more of our sales during these periods.

	December 31,	
	2015	2014
*Long lived assets:	(In thousands)	
United States	$31,556	$31,711
Asia	3,134	3,456
Europe	51,825	58,778
	$86,515	$93,945

* Long-lived assets include property and equipment, goodwill and other intangible assets.

NOTE 22. CREDIT FACILITY
In October 2012, we, along with two of our wholly-owned subsidiaries, AE Solar Energy, Inc. and Sekidenko, Inc., entered into a Credit Agreement, subsequently amended in November 2012 and August 2013, (the "Credit Agreement") with Wells Fargo Bank, National Association ("Wells Fargo"), as agent for and on behalf of certain lenders (each a "Lender"), which provides for a new secured revolving credit facility of up to $50.0 million (the "Credit Facility"). The Credit Facility provides us with the ability to borrow up to $50.0 million, although the amount of the Credit Facility may be increased by an additional $25.0 million up to a total of $75.0 million subject to receipt of lender commitments and other conditions. Borrowings under the Credit Facility are subject to a borrowing base based upon our domestic accounts receivable and inventory and are available for various corporate purposes, including general working capital, capital expenditures, and certain permitted acquisitions. The Credit Agreement also permits us to issue letters of credit which reduce availability under the Credit Agreement. The maturity date of the Credit Facility is October 12, 2017.

At our election, the loans comprising each borrowing will bear interest at a rate per annum equal to either: (a) a "base rate" plus between one-half (0.5%) and one (1.0%) full percentage point depending on the amount available for additional draws under the Credit Facility ("Base Rate Loan"); or (b) the LIBOR rate then in effect plus between one and one-half (1.5%) and two (2%) percentage points depending on the amount available for additional draws under the Credit Facility. The "base rate" for any

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Base Rate Loan will be the greatest of the federal funds rate plus one-half (0.5%) percentage point; the one-month LIBOR rate plus one (1.0%) percentage point; and Wells Fargo's "prime rate" then in effect. As of December 31, 2015, the rate in effect was 4.0%.

The Credit Agreement requires us to pay certain fees to the Lenders and contains affirmative and negative covenants, which, among other things, require us to deliver to the Lenders specified quarterly and annual financial information, and limit us and our Guarantors (as defined below), subject to various exceptions and thresholds, from, among other things: (i) creating liens on our assets; (ii) merging with other companies or engaging in other extraordinary corporate transactions; (iii) selling certain assets or properties; (iv) entering into transactions with affiliates; (v) making certain types of investments; (vi) changing the nature of our business; and (vii) paying certain distributions or certain other payments to affiliates. Additionally, there are the following financial covenants: (i) during any period in which $12.5 million or less is available to us under the Credit Facility and for sixty (60) days thereafter, the Credit Agreement requires the maintenance of a defined consolidated fixed charge coverage ratio; and (ii) if there is any indebtedness under any issued and outstanding convertible notes, we are required to maintain a specified level of liquidity.

The Credit Agreement requires us to pay certain fees to the Lenders, including a $2,500 collateral management fee for each month that the Credit Facility is in place, and a fee based on the unused amount of the Credit Facility. During the twelve months ended December 31, 2015 and 2014, we expensed $0.5 million and $0.4 million, respectively, in interest and fees related to unused line of credit fees and amortization of debt issuance costs. We did not borrow against the Credit Facility during the twelve months ended December 31, 2015. As of December 31, 2015, we had $9.9 million of availability on our Wells Fargo Credit Facility. During the third quarter of 2015, the lender issued a letter of credit in the amount of $2.0 million related to a customer contract.

Pursuant to a Guaranty and Security Agreement (the "GS Agreement"), borrowings under the Credit Facility are guaranteed by our wholly-owned subsidiaries Aera Corporation and AEI US Subsidiary, Inc., (collectively the " Guarantors"). Under the GS Agreement, we and the Guarantors granted the Lenders a security interest in certain, but not all, of our and the Guarantors' assets.

As part of the acquisition of Refusol described in Note 2. Business Acquisitions, we assumed the outstanding debt of Refusol as of the acquisition date. There were three outstanding loans with banks related to this debt, of which one was repaid and cancelled during the third quarter of 2013.

Refusol, GmbH had an outstanding loan agreement with Commerzbank Aktiengesellschaft ("Commerzbank") for up to 8.0 million Euros ("Commerzbank Loan Agreement"). The agreement allowed Refusol to borrow up to 8.0 million Euros through various types of instruments including an overdraft (revolving) facilities, money market (term) loans, surety loans, or guarantees. There was no maturity date. Borrowings under the revolving credit facility bore interest at 5.32%. Surety and guarantee loans bore interest at 1.5%. The Commerzbank Loan Agreement required the payment of a credit commission of 0.5% of the total loan amount. The agreement contained various covenants including a financial covenant requiring a specified level of equity. This line of credit was repaid and cancelled in the second quarter of 2014.

Refusol, GmbH also had an outstanding loan agreement with Bayerische Landesbank ("Bayern") which allowed it to borrow up to 4.0 million Euros either as overdraft facilities, term loans, or guarantees with repayment occurring one lump sum at the maturity date of the individual transaction with respect to term loans, or maturity of the loan agreement which was July 31, 2013 (the "Bayern Loan Agreement"). The overdraft facility bore interest at 4.5%. Term loans bore interest at the money market rate established by Bayern at the time of the loan plus a margin of 1.9%. Guarantees bore interest at 1.25% and had an issuing fee per guarantee. Loan commitment fees were 0.25% on the unused portion of the total loan amount. The Bayern Loan Agreement contained certain reporting requirements and a financial covenant requiring a specified level of equity.

Upon expiration of this agreement, Refusol, GmbH entered into a new loan agreement with Bayern under which it had the ability to borrow up to 4.0 million Euros (equal to $4.3 million on December 31, 2015) as either bank overdrafts, term loans, guarantees, or letters of credit. The overdraft facility bore interest at 3.9%, guarantees bore a rate of 1.64% and interest on term loans was a fixed rate set for each term loan period based on money market rates. Loan

commitment fees were 0.25%. This line of credit was repaid and cancelled in the third quarter of 2014.
Refusol, Inc., a wholly-owned subsidiary of Refusol, GmbH located in the United States, had a revolving line of credit with Wells Fargo with an aggregate principal amount of $1.5 million and a maturity date of July 1, 2013. Borrowings under the line of credit were secured by all of Refusol, Inc.'s accounts receivable, inventory, and property, plant, and equipment and a letter of credit issued under the Commerzbank Loan Agreement. The line of credit bore interest at either (a) a fluctuating rate per annum one quarter of one percent (0.25%) above the Prime Rate or (b) the LIBOR rate then in effect plus two percent (2.0%). Refusol, Inc. had the option to select the method of interest each month. A commitment fee of 0.125% was payable by Refusol, Inc. on the unused portion of the line of credit. The line of credit contained certain affirmative and negative covenants limiting Refusol, Inc.'s ability to borrow additional funds or guarantee the debt of others. This line of credit was paid down and cancelled on its maturity date of July 1, 2013.

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ADVANCED ENERGY INDUSTRIES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

NOTE 23. SUPPLEMENTAL QUARTERLY FINANCIAL DATA (UNAUDITED)
The following tables present unaudited quarterly results for each of the eight quarters in the period ended December 31, 2015, in thousands. We believe that all necessary adjustments have been included in the amounts stated below to present fairly such quarterly information. Due to the volatility of the industries in which our customers operate, the operating results for any quarter are not necessarily indicative of results for any subsequent period.

	Quarter Ended December 31, 2015	September 30, 2015	June 30, 2015	March 31, 2015
Sales	$86,891	$109,756	$108,654	$109,510
Gross Profit	42,684	58,538	56,549	59,099
Restructuring	(117)	317	—	(2)
Operating income	16,173	30,168	28,779	31,536
Income from continuing operations, net of income taxes	11,490	23,313	23,024	25,655
Income (loss) from discontinued operations, net of income taxes*	24,775	(6,881)	(255,483)	(4,379)
Net income	36,265	16,432	(232,459)	21,276
Earnings per Share:				
Continuing Operations:				
Basic earnings per share	$0.29	$0.57	$0.56	$0.63
Diluted earnings per share	$0.28	$0.56	$0.56	$0.62
Discontinued Operations:				
Basic earnings (loss) per share	$0.62	$(0.17)	$(6.24)	$(0.11)
Diluted earnings (loss) per share	$0.61	$(0.17)	$(6.24)	$(0.11)
Net Income (Loss):				
Basic earnings (loss) per share	$0.90	$0.40	$(5.68)	$0.52
Diluted earnings (loss) per share	$0.89	$0.40	$(5.68)	$0.52

	Quarter Ended December 31, 2014	September 30, 2014	June 30, 2014	March 31, 2014
Sales	$110,163	$91,584	$82,226	$83,360
Gross Profit	56,543	46,130	42,387	42,999
Restructuring	863	560	84	—
Operating income	28,609	20,130	16,000	21,353
Income from continuing operations, net of income taxes	23,312	15,917	13,127	17,139
Loss from discontinued operations, net of income taxes*	(13,993)	(3,615)	(2,481)	(2,424)
Net income	9,319	12,302	10,646	14,715
Earnings per Share:				
Continuing Operations:				
Basic earnings per share	$0.58	$0.40	$0.32	$0.42
Diluted earnings per share	$0.57	$0.39	$0.32	$0.41
Discontinued Operations:				
Basic loss per share	$(0.35)	$(0.09)	$(0.06)	$(0.06)
Diluted loss per share	$(0.35)	$(0.09)	$(0.06)	$(0.06)
Net Income:				

Basic earnings per share	$0.23	$0.31	$0.26	$0.36
Diluted earnings per share	$0.23	$0.30	$0.26	$0.35

*See Note 3. Discontinued Operations.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

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ITEM 9A. 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 (the "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, Executive Vice President & 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 December 31, 2015. 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.

Management’s Annual Report on Internal Control over Financial Reporting

It is management’s responsibility to establish and maintain effective internal control over our financial reporting, which is a process designed under the supervision of our Chief Executive Officer and Chief Financial Officer and effected by our Board of Directors, management, and other personnel. Our internal control over financial reporting is designed to provide reasonable assurance concerning the reliability of our financial reporting and the preparation of our financial statements for external purposes in accordance with generally accepted accounting principles.

Management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our internal control over financial reporting as of December 31, 2015, using the criteria described in Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based upon this evaluation, management concluded that our internal control over financial reporting was effective as of December 31, 2015.

Grant Thornton LLP, an independent registered public accounting firm, has audited our Consolidated Financial Statements included in this Form 10-K, and as part of the audit, has issued a report, included herein, on the effectiveness of our internal control over financial reporting as of December 31, 2015.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting, except as discussed below, that occurred during the fourth quarter of 2015 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Our policy is to implement effective internal controls for all acquisitions within one year of the acquisition date consistent with the rest of the organization. HiTek was acquired in April 2014 and UltraVolt was acquired in August 2014. During the third quarter and fourth quarter prior to the filing of Form 10-K for the period ended December 31,2015, the Company completed its efforts to ensure the existence of controls primarily related to cash disbursements, revenue, inventory procurement, segregation of duties, computer access controls, and computer change management controls.

Limitations on Controls and Procedures

Management has concluded that our disclosure controls and procedures and internal control over financial reporting provide reasonable assurance that the objectives of our control system are met. We do not expect, however, that our disclosure controls and procedures or internal control over financial reporting will prevent or detect all misstatements, errors, or fraud, if any. All control systems, no matter how well designed and implemented, have inherent limitations, and therefore no evaluation can provide absolute assurance that every misstatement, error, or instance of fraud, if any, or risk thereof, has been or will be prevented or detected. The occurrence of a misstatement, error, or fraud, if any, would not necessarily require a conclusion that our controls and procedures are not effective.

ITEM 9B. OTHER INFORMATION

None.

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PART III

In accordance with General Instruction G(3) of Form 10-K, certain information required by this Part III is incorporated by reference to the definitive proxy statement relating to our 2016 Annual Meeting of Stockholders (the "2016 Proxy Statement"), as set forth below. The 2016 Proxy Statement will be filed with the Securities and Exchange Commission within 120 days after the end of our fiscal year.

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

The information set forth in the 2016 Proxy Statement under the headings "Proposal No. 1/ Election of Directors" and "Section 16(a) Beneficial Ownership Reporting Compliance" is incorporated herein by reference. The information under the heading "Executive Officers of the Registrant" in Part I of this Form 10-K is also incorporated herein by reference.

ITEM 11. EXECUTIVE COMPENSATION

The information set forth in the 2016 Proxy Statement under the headings "Executive Compensation" is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information set forth in the 2016 Proxy Statement under the headings "Security Ownership of Certain Beneficial Owners and Management" and "Equity Compensation Plan Information" is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information is set forth in Note 20. Related Party Transactions in ITEM 8 "Financial Statements and Supplementary Data," and in the 2016 Proxy Statement under the caption "Certain Relationships and Related Transactions" is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information set forth in the 2016 Proxy Statement under the caption "Proposal No. 2/Ratification of the Appointment of Grant Thornton LLP as Advanced Energy's Independent Registered Public Accounting Firm for 2016" is incorporated herein by reference.

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PART IV
ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES
(A) Documents filed as part of this Annual Report on Form 10-K are as follows:
1. Financial Statements:
Reports of Grant Thornton LLP
Consolidated Financial Statements:
Balance Sheets at December 31, 2015 and 2014
Statements of Operations for each of the three years in the period ended December 31, 2015
Statements of Comprehensive Income for each of the three years in the period ended December 31, 2015
Statements of Stockholders’ Equity for each of the three years in the period ended December 31, 2015
Statements of Cash Flows for each of the three years in the period ended December 31, 2015
Notes to Consolidated Financial Statements
2. Financial Statement Schedules for each of the three years in the period ended December 31, 2015
NOTE: All schedules have been omitted because they are either not required or the information is included in the financial statements and notes thereto.
(B) Exhibits:

3.1	Restated Certificate of Incorporation, as amended. (1)
3.2	Restated By-laws, as amended. (19)
3.3	Amendment to Bylaws. (3)
3.4	Second Amendment to the By-laws of Advanced Energy Industries, Inc. (21)
3.5	Third Amendment to the By-Laws of Advanced Energy Industries, Inc. (22)
4.1	Form of Specimen Certificate for Common Stock. (2)
10.1	Lease, dated June 12, 1984, amended June 11, 1992, by and between Prospect Park East Partnership and Advanced Energy Industries, Inc., for property located in Fort Collins, Colorado. (2)
10.2	Lease, dated March 14, 1994, as amended, by and between Sharp Point Properties, L.L.C., and Advanced Energy Industries, Inc., for property located in Fort Collins, Colorado. (2)
10.3	Lease, dated May 19, 1995, by and between Sharp Point Properties, L.L.C. and Advanced Energy Industries, Inc., for a building located in Fort Collins, Colorado. (2)
10.4	Lease dated March 20, 2000, by and between Sharp Point Properties, L.L.C. and Advanced Energy Industries, Inc., for a building located in Fort Collins, Colorado. (5)
10.5	Lease Amendment, dated as of April 26, 2010 by and between Sharp Point Properties, LLC and Advanced Energy Industries, Inc., for a building located in Fort Collins, Colorado. (23)
10.6	Lease Amendment, dated as of August 19, 2010, by and between Sharp Point Properties, LLC and Advanced Energy Industries, Inc., for a building located in Fort Collins, Colorado. (25)
10.7	Lease Termination Agreement, dated as of December 28, 2011, by and between Sharp Point Properties, LLC and Advanced Energy Industries, Inc., for buildings located in Fort Collins, Colorado. (27)

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10.8	Lease Agreement, dated as of December 28, 2011, by and between Sharp Point Properties, LLC and Advanced Energy Industries, Inc., for a building located at 1625 Sharp Point Drive, Fort Collins, Colorado. (27)
10.9	Lease Agreement, dated as of December 28, 2011, by and between Sharp Point Properties, LLC and Advanced Energy Industries, Inc., for a building located at 2424 Midpoint Drive, Fort Collins, Colorado. (27)
10.10	Lease dated January 16, 2003, by and between China Great Wall Computer Shenzhen Co., Ltd., Great Wall Limited and Advanced Energy Industries (Shenzhen) Co., Ltd., for a building located in Shenzhen, China. (6)
10.11	Form of Indemnification Agreement. (2)
10.12	Form of Director Indemnification Agreement. (21)
10.13	1995 Stock Option Plan, as amended and restated through February 7, 2001. (7)*
10.14	1995 Non-Employee Directors' Stock Option Plan, as amended and restated through February 7, 2001. (7)*
10.15	2001 Employee Stock Option Plan. (1)*
10.16	2002 Employee Stock Option Plan. (1)*
10.17	2003 Stock Option Plan. (1)*
10.18	Amendment No. 1 to 2003 Stock Option Plan, dated January 31, 2005. (8)*
10.19	Form of Stock Option Agreement pursuant to the 2003 Stock Option Plan. (8)*
10.20	Amended and Restated 2003 Employees' Stock Option Plan. (4)*
10.21	2003 Non-Employee Directors' Stock Option Plan. (1)*
10.22	2003 Non-Employee Directors' Stock Option Plan, as amended and restated. (4)*
10.23	Form of Restricted Stock Unit Award Agreement pursuant to the 2003 Non-Employee Directors' Stock Option Plan, as amended and restated as of February 15, 2006. (9)*
10.24	Form of Restricted Stock Unit Agreement pursuant to the 2003 Non-Employee Directors' Stock Option Plan. (10)*
10.25	Restricted Stock Unit Agreement pursuant to the 2003 Stock Option Plan. (11)*
10.26	Form of Notice of Grant for Restricted Stock Unit. (36)*
10.27	Form of Restricted Stock Unit Agreement. (36)*
10.28	Form of Notice of Grant of Stock Option. (36)*
10.29	Form of Incentive Stock Option Agreement. (36)*

10.30 Form of Non-Qualified Stock Option Agreement. (36)*

10.31 Form of LTI Notice of Grant. (36)*

10.32 Form of LTI Performance Stock Option Agreement pursuant to the 2008 Omnibus Incentive Plan. (36)*

10.33 Form of LTI Performance Stock Unit Agreement pursuant to the 2008 Omnibus Incentive Plan. (36)*

10.34 Non-employee Director Compensation summary. (12)*

10.35 Non-Employee Director Compensation Structure. (17)*

10.36 2012 - 2014 Long-Term Incentive (LTI) Plan. (44)*

10.37 2012 - 2014 Short Term Incentive (STI) Plan, as revised.*

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10.38	2015 Long-Term Incentive (LTI) Plan. (45)*
10.39	2015 Short-Term Incentive (STI) Plan. (45)*
10.40	2016 Long-Term Incentive (LTI) Plan.*
10.41	2016 Short-Term Incentive (STI) Plan.*
10.42	2008 Omnibus Incentive Plan, as amended May 4, 2010. (26)*
10.43	Executive Change in Control Severance Agreement. (13)
10.43.1	Form of Amendment to Executive Change in Control Agreement. (34)
10.44	Retirement Term Sheet relating to Douglas S. Schatz. (14)
10.45	Offer Letter, dated September 28, 2014, by and among Advanced Energy Industries, Inc. and Yuval Wasserman. (39)
10.46	Executive Change in Control Agreement, dated April 28, 2011, by and among Advanced Energy Industries Inc. and Thomas O. McGimpsey. (31)
10.47	Executive Change in Control Agreement, dated September 30, 2014, by and among Advanced Energy Industries, Inc. and Yuval Wasserman. (39)
10.48	Relocation Agreement, dated August 5, 2013, by and among Advanced Energy Industries, Inc. and Yuval Wasserman. (19)
10.49	Executive Separation Agreement and Release of all Claims, dated May 5, 2014, by and between Advanced Energy Industries, Inc. and Gordon Tredger. (37)
10.50	Executive Transition and Separation Agreement, dated May 31, 2014, by and between Advanced Energy Industries, Inc. and Garry Rogerson. (38)
10.51	Executive Transition and Separation Agreement, dated November 17, 2014, by and between Advanced Energy Industries, Inc. and Danny C. Herron. (40)
10.52	Offer Letter to Thomas Liguori dated April 8, 2015. (41)
10.53	Executive Change in Control Agreement, dated May 18, 2015, by and among Advanced Energy Industries, Inc. and Thomas Liguori. (41)
10.54	Global Supply Agreement by and between Advanced Energy Industries, Inc. and Applied Materials Inc. dated August 29, 2005. (16)+
10.55	Shipping Amendment to the Global Supply Agreement by and between Advanced Energy Industries, Inc. and Applied Materials Inc. dated August 29, 2005. (16)+

10.56	Bridge Amendment to the Global Supply Agreement by and between Advanced Energy Industries, Inc. and Applied Materials Inc. dated January 26, 2011. (30)+
10.57	Sale and Purchase Agreement by and among Advanced Energy Industries, Inc., Blitz S13-103 GmbH, Jolaos Verwaltungs GmbH and Prettl Beteiligungs Holdings, GmbH, dated as of April 8, 2013. (35)
10.58	Credit Agreement, dated October 12, 2012, by and among Wells Fargo Bank, National Association, as administrative agent for certain lenders, Advanced Energy Industries, Inc., AE Solar Energy Inc., and Sekidenko, Inc. (33)
10.59	Guaranty and Security Agreement dated October 12, 2012 among Wells Fargo Bank, National Association, Advanced Energy Industries, Inc., AE Solar Energy, Inc., Sekidenko, Inc., AEI US Subsidiary, Inc. and Aera Corporation. (43)
10.60	Amendment No. 1 to Credit Agreement dated November 8, 2012 among Wells Fargo Bank, National Association, Advanced Energy Industries, Inc., AE Solar Energy, Inc., Sekidenko, Inc., AEI US Subsidiary, Inc. and Aera Corporation. (34)
10.61	Wells Fargo Credit Facility Amendment dated September 24, 2015. (42)

Explanation of Responses:

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10.62	Fixed Dollar Accelerated Share Repurchase Transaction, dated November 6, 2015, between Advanced Energy Industries, Inc. and Morgan Stanley & Co. LLC. (43)
14.1	Code of Ethical Conduct, as revised.
21.1	Subsidiaries of Advanced Energy Industries, Inc.
23.1	Consent of Grant Thornton LLP, Independent Registered Public Accounting Firm.
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 Principal 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.
32.2	Certification of the Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
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 Annual Report on Form 10-K for the year ended December 31, 2015, formatted in XBRL (eXtensible Business Reporting Language): (i) the Consolidated Statements of Operations, (ii) the Consolidated Statements of Comprehensive Earnings, (iii) the Consolidated Balance Sheets, (iv) the Consolidated Statements of Cash Flows, (v) the Consolidated Statements of Stockholders' Equity, and (vi) the Notes to the Consolidated Financial Statements.

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(1) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2003 (File No. 000-26966), filed November 4, 2003.

(2) Incorporated by reference to the Registrant's Registration Statement on Form S-1 (File No. 33-97188), filed September 2, 1995.

(3) Incorporated by reference to the Registrant's Current Report on Form 8-K (File No. 000-26966), filed December 5, 2007.

(4) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2007 (File No. 000-26966), filed August 3, 2007.

(5) Incorporated by reference to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2000 (File No. 000-26966), filed March 27, 2001.

(6) Incorporated by reference to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2003 (File No. 000-26966), filed February 24, 2004.

(7) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2001 (File No. 000-26966), filed May 9, 2001.

(8) Incorporated by reference to the Registrant's Current Report on Form 8-K (File No. 000-26966), filed February 3, 2005.

(9) Incorporated by reference to the Registrant's Current Report on Form 8-K (File No. 000-26966), filed May 31, 2006.

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(10) Incorporated by reference to the Registrant’s Quarterly Report on Form 10-Q for the quarter ended June 30, 2006 (File No. 000-26966), filed August 9, 2006.

(11) Incorporated by reference to the Registrant’s Annual Report on Form 10-K for the year ended December 31, 2005 (File No. 000-26966), filed March 28, 2006.

(12) Incorporated by reference to the Registrant’s Current Report on Form 8-K (File No. 000-26966), filed February 1, 2006.

(13) Incorporated by reference to the Registrant’s Annual Report on Form 10-K (File No. 000-26966), filed March 31, 2005.

(14) Incorporated by reference to the Registrant’s Current Report on Form 8-K (File No. 000-26966), filed August 9, 2005.

(15) Incorporated by reference to the Registrant’s Current Report on Form 8-K (File No. 000-26966), filed July 6, 2005.

(16) Incorporated by reference to the Registrant’s Quarterly Report on Form 10-Q for the quarter ended September 30, 2005 (File No. 000-26966), filed November 7, 2005.

(17) Incorporated by reference to the Registrant’s Current Report on Form 8-K (File No. 000-26966), filed July 28, 2006.

(18) Incorporated by reference to the Registrant’s Current Report on Form 8-K (File No. 000-26966), filed April 4, 2008.

(19) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q (File No. 000-26966), filed August 6, 2013.

(20) Incorporated by reference to the Registrant’s Annual Report on Form 10-K for the year ended December 31, 2008 (File No. 000-26966), filed February 27, 2009.

(21) Incorporated by reference to the Registrant’s Current Report on Form 8-K (File No. 000-26966), filed December 14, 2009.

(22) Incorporated by reference to the Registrant’s Current Report on Form 8-K (File No. 000-26966), filed April 23, 2010.

(23) Incorporated by reference to the Registrant’s Current Report on Form 8-K (File No. 000-26966), filed May 7, 2010.

(24) Incorporated by reference to the Registrant’s Current Report on Form 8-K (File No. 000-26966), filed August 16, 2010.

(25) Incorporated by reference to the Registrant’s Current Report on Form 8-K (File No. 000-26966), filed August 20, 2010.

(26) Incorporated by reference to the Registrant's Annual Report on Form 10-K (File No. 000-26966), filed March 2, 2011.

(27) Incorporated by reference to the Registrant's Current Report on Form 8-K (File No. 000-26966), filed December 29, 2011.

(28) Incorporated by reference to the Registrant's Current Report on Form 8-K (File No. 000-26966), filed August 2, 2011.

(29) Incorporated by reference to the Registrant's Current Report on Form 8-K (File No. 000-26966), filed August 4, 2011.

(30) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q (File No. 000-26966), filed May 6, 2011.

(31) Incorporated by reference to the Registrant's Annual Report on Form 10-K (File No. 000-26966) filed March 2, 2012.

(32) Incorporated by reference to the Registrant's Current Report on Form 8-K (File No. 000-26966) filed April 30, 2012.

(33) Incorporated by reference to the Registrant's Current Report on Form 8-K (File No. 000-26966) filed October 15, 2012.

(34)

Incorporated by reference to the Registrant's Annual Report on Form 10-K (File No. 000-26966) filed March 6, 2013.

(35) Incorporated by reference to the Registrant's Current Report on Form 8-K (File No. 000-26966) filed April 11, 2013.

(36) Incorporated by reference to the Registrant's Current Report on Form 8-K (File No. 000-26966) filed May 10, 2013.

(37) Incorporated by reference to the Registrant’s Current Report on Form 8-K (File No. 000-26966) filed May 5, 2014.

(38) Incorporated by reference to the Registrant’s Current Report on Form 8-K (File No. 000-26966) filed June 2, 2014.

(39) Incorporated by reference to the Registrant’s Current Report on Form 8-K (File No. 000-26966) filed October 1, 2014.

(40) Incorporated by reference to the Registrant’s Current Report on Form 8-K (File No. 000-26966) filed November 18, 2014.

(41) Incorporated by reference to the Registrant’s Current Report on Form 8-K (File No. 000-26966) filed April 16, 2015.

(42) Incorporated by reference to the Registrant’s Quarterly Report on Form 10-Q (File No. 000-26966) filed November 5, 2015.

(43) Incorporated by reference to the Registrant’s Current Report on Form 8-K (File No. 000-26966) filed November 6, 2015.

(44) Incorporated by reference to the Registrant's Annual Report on Form 10-K (File No. 000-26966), filed March 6, 2013.

(45) Incorporated by reference to the Registrant’s Quarterly Report on Form 10-Q (File No. 000-26966) filed May 6, 2015.

* Compensation Plan

\+ Confidential treatment has been granted for portions of this agreement.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this Annual Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized.

ADVANCED ENERGY INDUSTRIES, INC.

(Registrant)

/s/ Yuval Wasserman

Yuval Wasserman
Chief Executive Officer
Date: February 25, 2016

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signatures	Title	Date
/s/ Yuval Wasserman Yuval Wasserman	Chief Executive Officer and Director	February 25, 2016
/s/ Thomas Liguori Thomas Liguori	Executive Vice President and Chief Financial Officer	February 25, 2016
/s/ Grant H. Beard Grant H. Beard	Chairman of the Board	February 25, 2016
/s/ Frederick A. Ball Frederick A. Ball	Director	February 25, 2016
/s/ Terry F. Hudgens Terry F. Hudgens	Director	February 25, 2016
/s/ Ronald C. Foster Ronald C. Foster	Director	February 25, 2016
/s/ Edward C. Grady Edward C. Grady	Director	February 25, 2016
/s/ Thomas M. Rohrs Thomas M. Rohrs	Director	February 25, 2016