FIRST SOLAR, INC.
Form 10-Q
November 03, 2016
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UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-Q

(Mark one)
[x] 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: 001-33156

First Solar, Inc.
(Exact name of registrant as specified in its charter)

Delaware	20-4623678
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

350 West Washington Street, Suite 600
Tempe, Arizona 85281
(Address of principal executive offices, including zip code)
(602) 414-9300
(Registrant's telephone number, including area code)

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 [x] 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 [x] 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.

Large accelerated filer [x]	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 [x]

As of October 28, 2016, 103,913,066 shares of the registrant's common stock, $0.001 par value per share, were outstanding.

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FIRST SOLAR, INC. AND SUBSIDIARIES

FORM 10-Q FOR THE QUARTERLY PERIOD ENDED SEPTEMBER 30, 2016

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PART I. FINANCIAL INFORMATION

Item 1. Condensed Consolidated Financial Statements (Unaudited)

FIRST SOLAR, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except per share amounts)
(Unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Net sales	$688,029	$1,271,245	$2,470,894	$2,636,671
Cost of sales	501,749	786,880	1,830,504	1,948,842
Gross profit	186,280	484,365	640,390	687,829
Operating expenses:				
Research and development	32,173	29,630	95,291	93,865
Selling, general and administrative	60,345	53,716	191,624	192,305
Production start-up	752	3,198	807	16,818
Restructuring and asset impairments	4,314	—	89,846	—
Total operating expenses	97,584	86,544	377,568	302,988
Operating income	88,696	397,821	262,822	384,841
Foreign currency loss, net	(2,296)	(1,803)	(8,259)	(4,981)
Interest income	5,894	5,322	18,829	16,444
Interest expense, net	(5,563)	(1,775)	(17,356)	(2,795)
Other income (expense), net	6,419	(1,678)	48,725	(3,729)
Income before taxes and equity in earnings of unconsolidated affiliates	93,150	397,887	304,761	389,780
Income tax benefit (expense)	50,522	(48,454)	7,711	(9,134)
Equity in earnings of unconsolidated affiliates, net of tax	10,474	(115)	25,647	1,640
Net income	$154,146	$349,318	$338,119	$382,286
Net income per share:				
Basic	$1.49	$3.46	$3.30	$3.80
Diluted	$1.49	$3.41	$3.28	$3.75
Weighted-average number of shares used in per share calculations:				
Basic	103,339	100,906	102,496	100,713
Diluted	103,733	102,299	103,062	101,845

See accompanying notes to these condensed consolidated financial statements.

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FIRST SOLAR, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In thousands)
(Unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Net income	$154,146	$349,318	$338,119	$382,286
Other comprehensive (loss) income, net of tax:				
Foreign currency translation adjustments	1,418	(1,103)	4,635	(14,001)
Unrealized (loss) gain on marketable securities and restricted investments	(7,917)	17,944	27,679	(4,409)
Unrealized (loss) gain on derivative instruments	(276)	(1,338)	2,070	(3,239)
Other comprehensive (loss) income, net of tax	(6,775)	15,503	34,384	(21,649)
Comprehensive income	$147,371	$364,821	$372,503	$360,637

See accompanying notes to these condensed consolidated financial statements.

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FIRST SOLAR, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED BALANCE SHEETS
(In thousands, except share data)
(Unaudited)

	September 30, 2016	December 31, 2015
ASSETS		
Current assets:		
Cash and cash equivalents	$ 1,414,219	$ 1,126,826
Marketable securities	675,985	703,454
Accounts receivable trade, net	323,049	500,629
Accounts receivable, unbilled and retainage	245,782	59,171
Inventories	369,086	380,424
Balance of systems parts	77,942	136,889
Deferred project costs	94,549	187,940
Notes receivable, affiliate	—	1,276
Prepaid expenses and other current assets	264,806	248,977
Total current assets	3,465,418	3,345,586
Property, plant and equipment, net	1,266,337	1,284,136
PV solar power systems, net	487,246	93,741
Project assets and deferred project costs	1,312,081	1,111,137
Deferred tax assets, net	347,081	357,693
Restricted cash and investments	409,640	333,878
Investments in unconsolidated affiliates and joint ventures	448,963	399,805
Goodwill	78,888	84,985
Other intangibles, net	72,386	110,002
Inventories	102,162	107,759
Notes receivable, affiliates	20,313	17,887
Other assets	77,145	69,722
Total assets	$ 8,087,660	$ 7,316,331
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 201,835	$ 337,668
Income taxes payable	10,486	1,330
Accrued expenses	328,969	409,452
Current portion of long-term debt	626,026	38,090
Billings in excess of costs and estimated earnings	80,830	87,942
Payments and billings for deferred project costs	103,337	28,580
Other current liabilities	55,841	57,738
Total current liabilities	1,407,324	960,800
Accrued solar module collection and recycling liability	169,679	163,407
Long-term debt	161,131	251,325
Other liabilities	403,767	392,312
Total liabilities	2,141,901	1,767,844
Commitments and contingencies		
Stockholders' equity:		
Common stock, $0.001 par value per share; 500,000,000 shares authorized; 103,912,069 and 101,766,797 shares issued and outstanding at September 30, 2016 and December	104	102

31, 2015, respectively		
Additional paid-in capital	2,767,562	2,742,795
Accumulated earnings	3,128,229	2,790,110
Accumulated other comprehensive income	49,864	15,480
Total stockholders’ equity	5,945,759	5,548,487
Total liabilities and stockholders’ equity	$ 8,087,660	$ 7,316,331

See accompanying notes to these condensed consolidated financial statements.

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FIRST SOLAR, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)
(Unaudited)

	Nine Months Ended September 30,	
	2016	2015
Cash flows from operating activities:		
Net income	$338,119	$382,286
Adjustments to reconcile net income to cash used in operating activities:		
Depreciation, amortization and accretion	172,221	193,923
Impairment of long-lived assets, intangible assets and goodwill	85,251	8,307
Share-based compensation	24,467	33,146
Equity in earnings of unconsolidated affiliates, net of tax	(25,647)	(1,640)
Remeasurement of monetary assets and liabilities	(4,054)	(10,341)
Deferred income taxes	(5,399)	(7,050)
Excess tax benefits from share-based compensation arrangements	(18,169)	(23,333)
Gain on sales of marketable securities and restricted investments	(38,101)	—
Other, net	2,481	473
Changes in operating assets and liabilities:		
Accounts receivable, trade, unbilled and retainage	(22,791)	(351,320)
Prepaid expenses and other current assets	(47,300)	(37,282)
Inventories and balance of systems parts	75,308	147,271
Project assets and deferred project costs	(469,988)	(642,835)
Other assets	(11,234)	(2,299)
Accounts payable	(143,663)	108,742
Income taxes payable	(14,798)	(19,169)
Accrued expenses and other liabilities	(2,812)	(113,905)
Accrued solar module collection and recycling liability	5,536	(78,990)
Net cash used in operating activities	(100,573)	(414,016)
Cash flows from investing activities:		
Purchases of property, plant and equipment	(175,868)	(139,270)
Purchases of marketable securities and restricted investments	(422,607)	(429,352)
Proceeds from sales and maturities of marketable securities and restricted investments	448,354	313,359
Distributions received from equity method investments	1,502	238,980
Investments in notes receivable, affiliates	(4,760)	(53,199)
Payments received on notes receivable, affiliate	1,089	57,866
Change in restricted cash	44,171	21,360
Other investing activities	(11,484)	(12,149)
Net cash used in investing activities	(119,603)	(2,405)
Cash flows from financing activities:		
Proceeds from borrowings under revolving credit facility	550,000	—
Repayment of long-term debt	(86,250)	(42,332)
Proceeds from borrowings under long-term debt, net of discounts and issuance costs	23,361	138,639
Repayment of sale-leaseback financing	(4,294)	(2,708)
Proceeds from sale-leaseback financing	—	44,718
Excess tax benefits from share-based compensation arrangements	18,169	23,333
Contingent consideration payments and other financing activities	(159)	(19,155)

Net cash provided by financing activities	500,827	142,495
Effect of exchange rate changes on cash and cash equivalents	6,742	(18,425)
Net increase (decrease) in cash and cash equivalents	287,393	(292,351)
Cash and cash equivalents, beginning of the period	1,126,826	1,482,054
Cash and cash equivalents, end of the period	$1,414,219	$1,189,703
Supplemental disclosure of noncash investing and financing activities:		
Equity interests retained from the partial sale of project assets	$(3,304)	$270,799
Property, plant and equipment acquisitions funded by liabilities	$29,341	$24,266
Acquisitions currently or previously funded by liabilities and contingent consideration	$23,942	$11,367

See accompanying notes to these condensed consolidated financial statements.

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FIRST SOLAR, INC. AND SUBSIDIARIES

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

1. Basis of Presentation

The accompanying unaudited condensed consolidated financial statements of First Solar, Inc. and its subsidiaries have been prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP") for interim financial information and pursuant to the instructions to Form 10-Q and Article 10 of Regulation S-X of the Securities and Exchange Commission (the "SEC"). Accordingly, these interim financial statements do not include all of the information and footnotes required by U.S. GAAP for annual financial statements. In the opinion of First Solar management, all adjustments (consisting only of normal recurring adjustments) considered necessary for a fair statement have been included. Operating results for the three and nine months ended September 30, 2016 are not necessarily indicative of the results that may be expected for the year ending December 31, 2016 or for any other period. The condensed consolidated balance sheet at December 31, 2015 has been derived from the audited consolidated financial statements at that date, but does not include all of the information and footnotes required by U.S. GAAP for complete financial statements. These interim financial statements and notes should be read in conjunction with the audited financial statements and notes thereto for the year ended December 31, 2015 included in our Annual Report on Form 10-K, which has been filed with the SEC.

Certain prior year balances have been reclassified to conform to the current year presentation. Such reclassifications did not have a material effect on the interim financial statements.

Unless expressly stated or the context otherwise requires, the terms "the Company," "we," "our," "us," and "First Solar" refer t
First Solar, Inc. and its subsidiaries.

2. Summary of Significant Accounting Policies

Use of Estimates. The preparation of condensed consolidated financial statements in conformity with U.S. GAAP requires us to make estimates and assumptions that affect the amounts reported in our condensed consolidated financial statements and the accompanying notes. On an ongoing basis, we evaluate our estimates, including those related to percentage-of-completion revenue recognition, inventory valuation, recoverability of project assets and photovoltaic ("PV") solar power systems, estimates of future cash flows from and the economic useful lives of long-lived assets, asset retirement obligations, certain accrued liabilities, income taxes and tax valuation allowances, reportable segment allocations, product warranties and manufacturing excursions, solar module collection and recycling liabilities, and applying the acquisition method of accounting for business combinations and goodwill. Despite our intention to establish accurate estimates and reasonable assumptions, actual results could differ materially from these estimates and assumptions.

Revenue Recognition – Systems Business. We recognize revenue for arrangements entered into by our systems business generally using two revenue recognition models, following the guidance in either Accounting Standards Codification ("ASC") 605-35, Construction-Type and Production-Type Contracts, or ASC 360-20, Real Estate Sales, for arrangements which include land or land rights.

Systems business sales arrangements in which we construct a PV solar power system for a specific customer on land that is controlled by the customer, and has not been previously controlled by First Solar, are accounted for under ASC 605-35. For such sales arrangements, we use the percentage-of-completion method, as described further below, using actual costs incurred over total estimated costs to develop and construct the system (including module costs) as our

standard accounting policy.

Systems business sales arrangements in which we convey control of land or land rights as part of the transaction are accounted for under ASC 360-20. Accordingly, we use one of the following revenue recognition methods, based upon an evaluation of the substance and form of the terms and conditions of such real estate sales:

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(i) We apply the percentage-of-completion method, as further described below, to certain real estate sales arrangements in which we convey control of land or land rights when a sale has been consummated, we have transferred the usual risks and rewards of ownership to the buyer, the initial and continuing investment criteria have been met, we have the ability to estimate our costs and progress toward completion, and all other revenue recognition criteria have been met. When evaluating whether the usual risks and rewards of ownership have transferred to the buyer, we consider whether we have or may be contingently required to have any prohibited forms of continuing involvement with the project pursuant to ASC 360-20. The initial and continuing investment requirements, which demonstrate a buyer's commitment to honor its obligations for the sales arrangement, can typically be met through the receipt of cash or an irrevocable letter of credit from a highly creditworthy lending institution.

(ii) Depending on whether the initial and continuing investment requirements have been met and whether collectability from the buyer is reasonably assured, we may align our revenue recognition and release of project assets or deferred project costs to cost of sales with the receipt of payment from the buyer if the sale has been consummated and we have transferred the usual risks and rewards of ownership to the buyer.

For any systems business sales arrangements containing multiple deliverables not required to be accounted for under ASC 605-35 (long-term construction contracts) or ASC 360-20 (real estate sales), we analyze each activity within the sales arrangement to adhere to the separation guidelines of ASC 605-25 for multiple-element arrangements. We allocate revenue for any transactions involving multiple elements to each unit of accounting based on its relative selling price and recognize revenue for each unit of accounting when all revenue recognition criteria for a unit of accounting have been met.

Revenue Recognition – Percentage-of-Completion. In applying the percentage-of-completion method, we use the actual costs incurred relative to the total estimated costs (including module costs) in order to determine the progress towards completion and calculate the corresponding amount of revenue and profit to recognize. Costs incurred include solar modules, direct materials, labor, subcontractor costs, and those indirect costs related to contract performance, such as indirect labor and supplies. We recognize solar module and direct material costs as incurred when such items have been installed in a system. When contracts specify that title to solar modules and direct materials transfers to the customer before installation has been performed, we will not recognize revenue or the associated costs until those materials are installed and have met all other revenue recognition requirements. We consider solar modules and direct materials to be installed when they are permanently placed or affixed to a PV solar power system as required by engineering designs. Solar modules manufactured and owned by us that will be used in our systems remain within inventory until such modules are installed in a system.

The percentage-of-completion method of revenue recognition requires us to make estimates of net contract revenues and costs to complete our projects. In making such estimates, management judgments are required to evaluate significant assumptions including the amount of net contract revenues, the cost of materials and labor, expected labor productivity, the impact of potential variances in schedule completion, and the impact of any penalties, claims, change orders, or performance incentives.

If estimated total costs on any contract are greater than the net contract revenues, we recognize the entire estimated loss in the period the loss becomes known. The cumulative effect of the revisions to estimates related to net contract revenues and costs to complete contracts, including penalties, claims, change orders, performance incentives, anticipated losses, and others are recorded in the period in which the revisions to estimates are identified and the amounts can be reasonably estimated. The effect of the changes on future periods are recognized as if the revised estimates had been used since revenue was initially recognized under the contract. Such revisions could occur in any reporting period, and the effects may be material depending on the size of the contracts or the changes in estimates.

Revenue Recognition – Operations and Maintenance. Our operations and maintenance ("O&M") revenue is billed and recognized as services are performed. Costs of these revenues are expensed in the period in which they are incurred.

Revenue Recognition – Components Business. Our components business sells solar modules directly to third-party solar power system integrators and operators. We recognize revenue for module sales when persuasive evidence of an arrangement exists, delivery of the modules has occurred and title and risk of loss have passed to the customer, the sales price is fixed or determinable, and the collectability of the resulting receivable is reasonably assured. Under this policy, we record a trade receivable for the selling price of our module and reduce inventory for the cost of goods sold when delivery occurs in accordance with the terms of the sales contract. Our customers typically do not have extended payment terms or rights of return for our products.

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Ventures and Variable Interest Entities. In the normal course of business we establish wholly owned project companies which may be considered variable interest entities ("VIEs"). We consolidate wholly owned VIEs when we are considered the primary beneficiary of such entities. Additionally, we have, and may in the future form, joint venture type arrangements, including partnerships and partially owned limited liability companies or similar legal structures, with one or more third parties primarily to develop, construct, own, and/or sell solar power projects. These types of ventures are core to our business and long-term strategy related to providing PV solar generation solutions using our modules to key geographic markets. We analyze all of our ventures and classify them into two groups: (i) ventures that must be consolidated because they are either not VIEs and we hold a majority voting interest, or because they are VIEs and we are the primary beneficiary and (ii) ventures that do not need to be consolidated and are accounted for under either the cost or equity method of accounting because they are either not VIEs and we hold a minority voting interest, or because they are VIEs and we are not the primary beneficiary.

Ventures are considered VIEs if (i) the total equity investment at risk is not sufficient to permit the entity to finance its activities without additional subordinated financial support; (ii) as a group, the holders of the equity investment at risk lack the ability to make certain decisions, the obligation to absorb expected losses, or the right to receive expected residual returns; or (iii) an equity investor has voting rights that are disproportionate to its economic interest and substantially all of the entity's activities are conducted on behalf of that investor. Our venture agreements typically require us to fund some form of capital for the development and construction of a project, depending upon the opportunity and the market in which our ventures are located.

We are considered the primary beneficiary of and are required to consolidate a VIE if we have the power to direct the activities that most significantly impact the VIE's economic performance and the obligation to absorb losses or the right to receive benefits of the VIE that could potentially be significant to the entity. If we determine that we do not have the power to direct the activities that most significantly impact the entity, then we are not the primary beneficiary of the VIE.

Cost and Equity Method Investments. We account for our unconsolidated ventures using either the cost or equity method of accounting depending upon whether we have the ability to exercise significant influence over the venture. As part of this evaluation, we consider our participating and protective rights in the venture as well as its legal form. We use the cost method of accounting for our investments when we do not have the ability to significantly influence the operations or financial activities of the investee. We record our cost method investments at their historical cost and subsequently record any distributions received from the net accumulated earnings of such investments as income. Distributions received from our cost method investments in excess of their earnings are considered returns of investment and are recorded as reductions in the cost of the investments. We use the equity method of accounting for our investments when we have the ability to significantly influence, but not control, the operations or financial activities of the investee. We record our equity method investments at cost and subsequently adjust their carrying amount each period for our share of the earnings or losses of the investee and other adjustments required by the equity method of accounting. Distributions received from our equity method investments are recorded as reductions in the carrying value of such investments and are classified on the condensed consolidated statements of cash flows pursuant to the cumulative earnings approach. Under this approach, distributions received are considered returns on investment and are classified as cash inflows from operating activities unless our cumulative distributions received, less distributions received in prior periods that were determined to be returns of investment, exceed our cumulative equity in earnings recognized from the investment. When such an excess occurs, the current period distributions up to this excess are considered returns of investment and are classified as cash inflows from investing activities.

We monitor our investments, which are included in "Investments in unconsolidated affiliates and joint ventures" in the accompanying condensed consolidated balance sheets, for impairment and record reductions in their carrying values if the carrying amount of an investment exceeds its fair value. An impairment charge is recorded when such impairment is deemed to be other-than-temporary. To determine whether an impairment is other-than-temporary, we consider our

ability and intent to hold the investment until the carrying amount is fully recovered. Circumstances that indicate an other-than-temporary impairment may have occurred include factors such as decreases in quoted market prices or declines in the operations of the investee. The evaluation of an investment for potential impairment requires us to exercise significant judgment and to make certain assumptions. The use of different judgments and assumptions could result in different conclusions. We recorded no impairment losses related to our cost and equity method investments during the three and nine months ended September 30, 2016 and 2015.

See Note 2. “Summary of Significant Accounting Policies” to our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2015 for a more complete summary of our significant accounting policies.

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3. Recent Accounting Pronouncements

In May 2014, the FASB issued ASU 2014-09, Revenue from Contracts with Customers (Topic 606), to clarify the principles of recognizing revenue and create common revenue recognition guidance between U.S. GAAP and International Financial Reporting Standards. Under ASU 2014-09, revenue is recognized when a customer obtains control of promised goods or services and is recognized at an amount that reflects the consideration expected to be received in exchange for such goods or services. In addition, ASU 2014-09 requires disclosure of the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers.

An entity has the option to apply the provisions of ASU 2014-09 either retrospectively to each prior reporting period presented (the "full retrospective method") or retrospectively with the cumulative effect of initially applying this standard recognized at the date of initial application. ASU 2014-09 is effective for fiscal years and interim periods within those years beginning after December 15, 2017, and early adoption is permitted for periods beginning after December 15, 2016. We expect to adopt ASU 2014-09 in the first quarter of 2017 using the full retrospective method. However, our ability to early adopt using the full retrospective method is subject to the completion of our analysis of certain matters, including sales arrangements accounted for as partial sales of real estate, and obtaining the information necessary to restate prior periods.

We expect this adoption to primarily affect our systems business sales arrangements currently accounted for under ASC 360-20, which requires us to evaluate whether such arrangements have any forms of continuing involvement that may affect the revenue or profit recognition of the transactions, including arrangements with prohibited forms of continuing involvement requiring us to reduce the potential profit on a project sale by our maximum exposure to loss. We anticipate that ASU 2014-09, which supersedes the real estate sales guidance under ASC 360-20, will require us to recognize revenue and profit from our systems business sales arrangements earlier and in a more linear fashion than our historical practice under ASC 360-20, including the estimation of certain profits that would otherwise have been deferred. We expect revenue recognition for our other sales arrangements, including sales of solar modules and operation and maintenance services, to remain materially consistent.

In February 2015, the FASB issued ASU 2015-02, Consolidation (Topic 810) – Amendments to the Consolidation Analysis. ASU 2015-02 modifies existing consolidation guidance related to (i) limited partnerships and similar legal entities, (ii) the evaluation of variable interests for fees paid to decision makers or service providers, (iii) the effect of fee arrangements and related parties on the primary beneficiary determination, and (iv) certain investment funds. These changes are expected to limit the number of consolidation models and place more emphasis on risk of loss when determining a controlling financial interest. The adoption of ASU 2015-02 in the first quarter of 2016 did not have a significant impact on our consolidated financial statements and associated disclosures.

In January 2016, the FASB issued ASU 2016-01, Financial Instruments – Overall (Subtopic 825-10) – Recognition and Measurement of Financial Assets and Financial Liabilities. ASU 2016-01 changes how entities measure certain equity investments and present changes in the fair value of financial liabilities measured under the fair value option that are attributable to their own credit. The guidance also changes certain disclosure requirements and other aspects of current U.S. GAAP. ASU 2016-01 is effective for fiscal years and interim periods within those years beginning after December 15, 2017, and early adoption is permitted for certain provisions of the guidance. We are currently evaluating the impact ASU 2016-01 will have on our consolidated financial statements and associated disclosures.

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842), to increase transparency and comparability among organizations by recognizing a right-of-use asset and a lease liability on the balance sheet for all leases with terms longer than 12 months. Leases will be classified as either operating or financing, with such classification affecting the pattern of expense recognition in the income statement. ASU 2016-02 is effective for fiscal years and interim periods within those years beginning after December 15, 2018, and early adoption is permitted. We are

currently evaluating the impact ASU 2016-02 will have on our consolidated financial statements and associated disclosures.

In March 2016, the FASB issued ASU 2016-09, Compensation – Stock Compensation (Topic 718) – Improvements to Employee Share-Based Payment Accounting. ASU 2016-09 simplifies several aspects of the accounting for share-based payment transactions, including income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. ASU 2016-09 is effective for fiscal years and interim periods within those years beginning after December 15, 2016, and early adoption is permitted. We are currently evaluating the impact ASU 2016-09 will have on our consolidated financial statements and associated disclosures.

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In June 2016, the FASB issued ASU 2016-13, Financial Instruments – Credit Losses (Topic 326), to provide financial statement users with more useful information about expected credit losses. ASU 2016-13 also changes how entities measure credit losses on financial instruments and the timing of when such losses are recorded. ASU 2016-13 is effective for fiscal years and interim periods within those years beginning after December 15, 2019, and early adoption is permitted for periods beginning after December 15, 2018. We are currently evaluating the impact ASU 2016-13 will have on our consolidated financial statements and associated disclosures.

In August 2016, the FASB issued ASU 2016-15, Statement of Cash Flows (Topic 230) – Classification of Certain Cash Receipts and Cash Payments. ASU 2016-15 clarifies the classification of certain cash receipts and cash payments in the statement of cash flows with the objective of reducing the existing diversity in practice related to such classifications. As a result of the adoption of ASU 2016-15 in the third quarter of 2016, we will continue to classify distributions received from our equity method investments pursuant to the cumulative earnings approach. See Note 2. "Summary of Significant Accounting Policies" to our condensed consolidated financial statements for additional information on this policy.

In October 2016, the FASB issued ASU 2016-16, Income Taxes (Topic 230) – Intra-Entity Transfers of Assets Other Than Inventory. ASU 2016-16 requires the recognition of income tax consequences of intra-entity transfers of assets, other than inventory, when the transfer occurs. Two common examples of assets included in the scope of ASU 2016-16 are intellectual property and long-lived assets. ASU 2016-16 is effective for fiscal years and interim periods within those years beginning after December 15, 2017, and early adoption is permitted in annual reporting periods for which financial statements (interim or annual) have not been issued. We are currently evaluating the impact ASU 2016-16 will have on our consolidated financial statements and associated disclosures.

4. Restructuring and Asset Impairments

In June 2016, our executive management elected to reallocate our crystalline silicon module production capacity to support next generation cadmium telluride ("CdTe") module offerings. As a result, we ended production of our crystalline silicon modules to focus on our core CdTe module technology and utility-scale PV solar power systems. The majority of our crystalline silicon module manufacturing associates are expected to be redeployed in other manufacturing operations.

In connection with these restructuring activities, we incurred charges of $84.6 million during the three months ended June 30, 2016, which included (i) $35.5 million of impairment charges related to certain crystalline silicon module manufacturing equipment considered abandoned for accounting purposes; (ii) $35.8 million of impairment charges for developed technology intangible assets associated with our crystalline silicon module technology; (iii) $6.1 million of goodwill impairment charges from the disposal of our crystalline silicon components reporting unit; and (iv) $7.2 million of miscellaneous charges related to certain contract manufacturing agreements and the write-off of operating supplies. During the three months ended September 30, 2016, we incurred additional charges of $1.4 million for contract manufacturing agreements and long-lived asset impairments. All amounts associated with these charges related to our components segment and were classified as "Restructuring and asset impairments" on our condensed consolidated statements of operations. We expect to incur up to $5.0 million of additional charges related to the end of our crystalline silicon module production as we complete these restructuring activities during the remainder of 2016.

During the three and nine months ended September 30, 2016, we also incurred charges of $2.9 million and $3.8 million, respectively, for severance benefits to terminated employees and certain other actions associated with restructuring activities unrelated to the end of our crystalline silicon module production.

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5. Cash, Cash Equivalents, and Marketable Securities

Cash, cash equivalents, and marketable securities consisted of the following at September 30, 2016 and December 31, 2015 (in thousands):

	September 30, 2016	December 31, 2015
Cash and cash equivalents:		
Cash	$ 1,414,219	$ 1,126,496
Cash equivalents:		
Money market funds	—	330
Total cash and cash equivalents	1,414,219	1,126,826
Marketable securities:		
Foreign debt	635,985	663,454
Time deposits	40,000	40,000
Total marketable securities	675,985	703,454
Total cash, cash equivalents, and marketable securities	$ 2,090,204	$ 1,830,280

We classify our marketable securities as available-for-sale. Accordingly, we record them at fair value and account for the net unrealized gains and losses as part of “Accumulated other comprehensive income” until realized. We record realized gains and losses on the sale of our marketable securities in “Other income (expense), net” computed using the specific identification method. During the three and nine months ended September 30, 2016, we realized gains of $0.3 million on the sale of our marketable securities. During the three and nine months ended September 30, 2015, we realized no gains or losses on the sale of our marketable securities. See Note 9. “Fair Value Measurements” to our condensed consolidated financial statements for information about the fair value of our marketable securities.

As of September 30, 2016, we identified three investments totaling $51.4 million that had been in a loss position for a period of time greater than 12 months with unrealized losses of less than $0.1 million. As of December 31, 2015, we identified two investments totaling $31.5 million that had been in a loss position for a period of time greater than 12 months with unrealized losses of less than $0.1 million. The unrealized losses were primarily due to increases in interest rates relative to rates at the time of purchase. Based on the underlying credit quality of the investments, we do not intend to sell these securities prior to the recovery of our cost basis. Therefore, we did not consider these securities to be other-than-temporarily impaired. All of our available-for-sale marketable securities are subject to a periodic impairment review. We did not identify any of our marketable securities as other-than-temporarily impaired as of September 30, 2016 and December 31, 2015.

The following tables summarize the unrealized gains and losses related to our available-for-sale marketable securities, by major security type, as of September 30, 2016 and December 31, 2015 (in thousands):

	As of September 30, 2016			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Foreign debt	$636,179	$ 770	$ 964	$635,985
Time deposits	40,000	—	—	40,000
Total	$676,179	$ 770	$ 964	$675,985

	As of December 31, 2015			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Foreign debt	$665,900	$ 9	$ 2,455	$663,454

Time deposits	40,000	—	—	40,000
Total	$705,900	$ 9	$ 2,455	$703,454

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The contractual maturities of our marketable securities as of September 30, 2016 and December 31, 2015 were as follows (in thousands):

	As of September 30, 2016			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
One year or less	$300,421	$ 9	$ 212	$300,218
One year to two years	148,578	203	94	148,687
Two years to three years	227,180	558	658	227,080
Total	$676,179	$ 770	$ 964	$675,985

	As of December 31, 2015			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
One year or less	$290,377	$ 9	$ 406	$289,980
One year to two years	228,492	—	1,183	227,309
Two years to three years	187,031	—	866	186,165
Total	$705,900	$ 9	$ 2,455	$703,454

The net unrealized losses of $0.2 million and $2.4 million on our marketable securities as of September 30, 2016 and December 31, 2015, respectively, were primarily the result of changes in interest rates relative to rates at the time of purchase. Our investment policy requires marketable securities to be highly rated and limits the security types, issuer concentration, and duration to maturity of our marketable securities portfolio.

The following tables show gross unrealized losses and estimated fair values for those marketable securities that were in an unrealized loss position as of September 30, 2016 and December 31, 2015, aggregated by major security type and the length of time the marketable securities have been in a continuous loss position (in thousands):

	As of September 30, 2016					
	In Loss Position for Less Than 12 Months		In Loss Position for 12 Months or Greater		Total	
	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses
Foreign debt	$318,445	$ 875	$51,405	$ 89	$369,850	$ 964
Total	$318,445	$ 875	$51,405	$ 89	$369,850	$ 964

	As of December 31, 2015					
	In Loss Position for Less Than 12 Months		In Loss Position for 12 Months or Greater		Total	
	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses
Foreign debt	$629,033	$ 2,386	$31,491	$ 69	$660,524	$ 2,455
Total	$629,033	$ 2,386	$31,491	$ 69	$660,524	$ 2,455

6. Restricted Cash and Investments

Restricted cash and investments consisted of the following at September 30, 2016 and December 31, 2015 (in thousands):

	September 30, 2016	December 31, 2015
Restricted cash	$ 3,022	$ 7,764
Restricted investments	406,618	326,114
Total restricted cash and investments (1)	$ 409,640	$ 333,878

(1) There was an additional $33.4 million and $72.5 million of restricted cash included within prepaid expenses and other current assets at September 30, 2016 and December 31, 2015, respectively.

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At September 30, 2016, our restricted cash consisted of deposits held by various banks to secure certain of our letters of credit and deposits designated for the construction of systems projects and payment of amounts related to project construction credit facilities. Restricted cash for our letters of credit is classified as current or noncurrent based on the maturity date of the corresponding letter of credit. See Note 13. "Commitments and Contingencies" to our condensed consolidated financial statements for further discussion relating to letters of credit. Restricted cash for project construction and financing is classified as current or noncurrent based on the projected use of the restricted funds.

At September 30, 2016 and December 31, 2015, our restricted investments consisted of long-term marketable securities that were held in custodial accounts to fund the estimated future costs of collecting and recycling modules covered under our solar module collection and recycling program. We classify our restricted investments as available-for-sale. Accordingly, we record them at fair value and account for the net unrealized gains and losses as a part of "Accumulated other comprehensive income" until realized. We record realized gains and losses on the sale of our restricted investments in "Other income (expense), net" computed using the specific identification method. During the three months ended September 30, 2016, we realized no gains on the sale of our restricted investments. During the nine months ended September 30, 2016, we realized gains of $37.8 million on the sale of certain restricted investments as part of an effort to align the currencies of the investments with those of the corresponding collection and recycling liabilities. Restricted investments are classified as noncurrent as the underlying accrued solar module collection and recycling liabilities are also noncurrent in nature. See Note 9. "Fair Value Measurements" to our condensed consolidated financial statements for information about the fair value of our restricted investments.

As necessary, we fund any incremental amounts for our estimated collection and recycling obligations within 90 days of the end of each year. We determine the funding requirement, if any, based on estimated costs of collecting and recycling covered modules, estimated rates of return on our restricted investments, and an estimated solar module life of 25 years less amounts already funded in prior years. No incremental funding was required in 2016 for covered module sales in 2015. To ensure that these funds will be available in the future regardless of any potential adverse changes in our financial condition (even in the case of our own insolvency), we have established a trust under which estimated funds are put into custodial accounts with an established and reputable bank, for which First Solar, Inc. ("FSI"), First Solar Malaysia Sdn. Bhd. ("FS Malaysia"), and First Solar Manufacturing GmbH are grantors. Only the trustee can distribute funds from the custodial accounts, and these funds cannot be accessed for any purpose other than to cover qualified costs of module collection and recycling, either by us or a third party performing the required collection and recycling services. Investments in these custodial accounts must meet certain investment quality criteria comparable to highly rated government or agency bonds. We closely monitor our exposure to European markets and maintain holdings primarily consisting of German and French sovereign debt securities that are not currently at risk of default.

The following tables summarize the unrealized gains and losses related to our restricted investments, by major security type, as of September 30, 2016 and December 31, 2015 (in thousands):

	As of September 30, 2016			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Foreign government obligations	$119,103	$ 88,412	$ —	$207,515
U.S. government obligations	171,204	27,899	—	199,103
Total	$290,307	$ 116,311	$ —	$406,618

	As of December 31, 2015			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Foreign government obligations	$177,507	$ 75,670	$ —	$253,177

U.S. government obligations	61,228	11,709	—	72,937
Total	$238,735	$ 87,379	$ —	$326,114

As of September 30, 2016 , the contractual maturities of our restricted investments were between 11 years and 20 years. As of December 31, 2015, the contractual maturities of our restricted investments were between 12 years and 21 years.

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7. Consolidated Balance Sheet Details

Accounts receivable trade, net

Accounts receivable trade, net consisted of the following at September 30, 2016 and December 31, 2015 (in thousands):

	September 30, 2016	December 31, 2015
Accounts receivable trade, gross	$ 323,049	$ 500,631
Allowance for doubtful accounts	—	(2)
Accounts receivable trade, net	$ 323,049	$ 500,629

At September 30, 2016 and December 31, 2015, $43.7 million and $21.5 million, respectively, of our accounts receivable trade, net were secured by letters of credit, bank guarantees, or other forms of financial security issued by creditworthy financial institutions.

Accounts receivable, unbilled and retainage

Accounts receivable, unbilled and retainage consisted of the following at September 30, 2016 and December 31, 2015 (in thousands):

	September 30, 2016	December 31, 2015
Accounts receivable, unbilled	$ 224,219	$ 40,205
Retainage	21,563	18,966
Accounts receivable, unbilled and retainage	$ 245,782	$ 59,171

Accounts receivable, unbilled represents revenue that has been recognized in advance of billing the customer, which is common for long-term construction contracts. For example, we recognize revenue from contracts for the construction and sale of PV solar power systems, which include the sale of such assets over the construction period using applicable accounting methods. One such method is the percentage-of-completion method, which recognizes revenue and gross profit as work is performed based on the relationship between actual costs incurred compared to the total estimated costs for the contract. Under this accounting method, revenue could be recognized under applicable revenue recognition criteria in advance of billing the customer, resulting in an amount recorded to "Accounts receivable, unbilled and retainage." Once we meet the billing criteria under a construction contract, we bill our customer accordingly and reclassify the "Accounts receivable, unbilled and retainage" to "Accounts receivable trade, net." Billing requirements vary by contract but are generally structured around completion of certain construction milestones. Retainage refers to the portion of the contract price earned by us for work performed, but held for payment by our customer as a form of security until we reach certain construction milestones. Retainage included within "Accounts receivable, unbilled and retainage" is expected to be billed and collected within the next 12 months.

Inventories

Inventories consisted of the following at September 30, 2016 and December 31, 2015 (in thousands):

	September 30, 2016	December 31, 2015
Raw materials	$ 155,591	$ 159,078
Work in process	22,916	19,736
Finished goods	292,741	309,369
Inventories	$ 471,248	$ 488,183

Inventories – current	$ 369,086	$ 380,424
Inventories – noncurrent (1)	$ 102,162	$ 107,759

(1) As needed, we may purchase a critical raw material that is used in our core production process in quantities that exceed anticipated consumption within our normal operating cycle (which is 12 months). We classify such raw materials that we do not expect to consume within our normal operating cycle as noncurrent.

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Balance of systems parts

Balance of systems parts were $77.9 million and $136.9 million as of September 30, 2016 and December 31, 2015, respectively, and represented mounting, electrical, and other construction parts purchased for PV solar power systems to be constructed or currently under construction, which we held title to and were not yet installed in a system. Such construction parts included items such as posts, tilt brackets, tables, harnesses, combiner boxes, inverters, cables, tracker equipment, and other parts we may purchase or assemble for the systems we construct. We carry these parts at the lower of cost or net realizable value, with such value being based primarily on recoverability through installation in a system or recoverability through a sales agreement. Balance of systems parts do not include any solar modules that we manufacture.

Prepaid expenses and other current assets

Prepaid expenses and other current assets consisted of the following at September 30, 2016 and December 31, 2015 (in thousands):

	September 30, 2016	December 31, 2015
Value added tax receivables	$ 69,423	$ 51,473
Prepaid expenses	60,223	74,990
Derivative instruments	472	2,691
Restricted cash	33,440	72,526
Other current assets	101,248	47,297
Prepaid expenses and other current assets	$ 264,806	$ 248,977

Property, plant and equipment, net

Property, plant and equipment, net consisted of the following at September 30, 2016 and December 31, 2015 (in thousands):

	September 30, 2016	December 31, 2015
Land	$ 8,752	$ 12,063
Buildings and improvements	411,990	410,898
Machinery and equipment	1,829,887	1,824,717
Office equipment and furniture	153,871	144,773
Leasehold improvements	56,988	50,546
Construction in progress	148,923	37,734
Stored assets (1)	138,667	138,954
Property, plant and equipment, gross	2,749,078	2,619,685
Less: accumulated depreciation	(1,482,741)	(1,335,549)
Property, plant and equipment, net	$ 1,266,337	$ 1,284,136

(1) Consists of machinery and equipment ("stored assets") that were originally purchased for installation in our previously planned manufacturing capacity expansions. We intend to install and place the stored assets in service when such assets are required or beneficial to our existing installed manufacturing capacity or when market demand supports additional or market-specific manufacturing capacity. During the nine months ended September 30, 2016, we transferred $0.3 million of stored assets to our manufacturing facility in Perrysburg, Ohio for use in the production of solar modules. As the remaining stored assets are neither in the condition nor location to produce modules as intended, we will not begin depreciation until such assets are placed in service. We ceased the capitalization of interest on our stored assets once they were physically received from the related machinery

and equipment vendors.

We evaluate our property, plant, and equipment, including our stored assets, for impairment under a held and used impairment model whenever events or changes in business circumstances arise that may indicate that the carrying amount of the assets may not be recoverable. Such events and changes include consideration of technological obsolescence, significant changes in the manner of use of the assets, and expectations that the assets may be sold or otherwise disposed of before the end of their useful lives. As of September 30, 2016, the recoverability of the property, plant, and equipment of our components segment was based on the continued use of our current module technologies. However, it is reasonably possible that the continued use of such technologies may be affected by potential near-term changes to our module technology development plans, which if adopted may result in

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certain manufacturing equipment and stored assets being sold or otherwise disposed of before the end of their previously estimated useful lives, which in turn could result in a decrease in the value, and possible impairment, of such manufacturing equipment and stored assets. Accordingly, any such changes to our technology development plans could be material to our condensed consolidated financial statements and have a significant adverse impact on our results of operations.

Depreciation of property, plant and equipment was $51.6 million and $158.6 million for the three and nine months ended September 30, 2016, respectively, and $61.3 million and $185.4 million for the three and nine months ended September 30, 2015, respectively.

PV solar power systems, net

PV solar power systems, net consisted of the following at September 30, 2016 and December 31, 2015 (in thousands):

	September 30, 2016	December 31, 2015
PV solar power systems, gross	$ 498,332	$ 97,991
Accumulated depreciation	(11,086)	(4,250)
PV solar power systems, net	$ 487,246	$ 93,741

During the nine months ended September 30, 2016, we placed $399.3 million of projects in service, including certain projects in Chile and India. Depreciation of PV solar power systems was $4.4 million and $6.8 million for the three and nine months ended September 30, 2016, respectively, and $0.6 million and $1.8 million for the three and nine months ended September 30, 2015, respectively.

Capitalized interest

The cost of constructing facilities, equipment, and project assets includes interest costs incurred during the assets' construction period. The components of interest expense and capitalized interest were as follows during the three and nine months ended September 30, 2016 and 2015 (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Interest cost incurred	$(5,998)	$(5,697)	$(20,365)	$(13,923)
Interest cost capitalized – property, plant and equipment	314	290	1,381	1,152
Interest cost capitalized – project assets	121	3,632	1,628	9,976
Interest expense, net	$(5,563)	$(1,775)	$(17,356)	$(2,795)

Project assets and deferred project costs

Project assets primarily consist of costs related to solar power projects in various stages of development that are capitalized prior to entering into a definitive sales agreement for the projects, including projects that may have begun commercial operation under power purchase agreements ("PPAs") and are actively marketed and intended to be sold. These project related costs include costs for land, development, and construction of a PV solar power system. Development costs may include legal, consulting, permitting, transmission upgrade, interconnection, and other similar costs. Once we enter into a definitive sales agreement, we reclassify project assets to deferred project costs on our condensed consolidated balance sheets until the sale is completed and we have met all of the criteria to recognize the sale as revenue, which is typically subject to real estate revenue recognition requirements. We expense project assets and deferred project costs to cost of sales after each respective project is sold to a customer and all revenue

recognition criteria have been met (matching the expensing of costs to the underlying revenue recognition method). In addition, we present all expenditures related to the development and construction of project assets or deferred project costs, whether fully or partially owned, as a component of cash flows from operating activities. We classify project assets as noncurrent due to the nature of solar power projects (long-lived assets) and the time required to complete all activities to develop, construct, and sell projects, which is typically longer than 12 months.

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Deferred project costs represent (i) costs that we capitalize as project assets for arrangements that we account for as real estate transactions after we have entered into a definitive sales arrangement, but before the sale is completed or before we have met all criteria to recognize the sale as revenue, (ii) recoverable pre-contract costs that we capitalize for arrangements accounted for as long-term construction contracts prior to entering into a definitive sales agreement, or (iii) costs that we capitalize for arrangements accounted for as long-term construction contracts after we have signed a definitive sales agreement, but before all revenue recognition criteria have been met. We classify deferred project costs as current if completion of the sale and the meeting of all revenue recognition criteria are expected within the next 12 months.

If a project is completed and begins commercial operation prior to entering into or the closing of a sales arrangement, the completed project will remain in project assets or deferred project costs until the earliest of the closing of the sale of such project, our decision to temporarily hold such project, or one year from the project's commercial operations date. Any income generated by a project while it remains within project assets or deferred project costs is accounted for as a reduction to our basis in the project, which at the time of sale and meeting all revenue recognition criteria will be recorded within cost of sales.

Project assets and deferred project costs consisted of the following at September 30, 2016 and December 31, 2015 (in thousands):

	September 30, 2016	December 31, 2015
Project assets – development costs, including project acquisition and land costs	$ 407,107	$ 436,375
Project assets – construction costs	866,174	674,762
Project assets	1,273,281	1,111,137
Deferred project costs – current	94,549	187,940
Deferred project costs – noncurrent	38,800	—
Deferred project costs	133,349	187,940
Total project assets and deferred project costs	$ 1,406,630	$ 1,299,077

Other assets

Other assets consisted of the following at September 30, 2016 and December 31, 2015 (in thousands):

	September 30, 2016	December 31, 2015
Notes receivable (1)	$ 7,851	$ 12,648
Income taxes receivable	4,231	4,071
Deferred rent	32,832	23,317
Other	32,231	29,686
Other assets	$ 77,145	$ 69,722

(1) In April 2009, we entered into a credit facility agreement with a solar power project entity of one of our customers for an available amount of €17.5 million to provide financing for a PV solar power system. The credit facility replaced a bridge loan that we had made to this entity. The credit facility bears interest at 8.0% per annum payable quarterly with the full amount due in December 2026. As of September 30, 2016 and December 31, 2015, the balance on the credit facility was €7.0 million ($7.9 million and $7.6 million, respectively, at the balance sheet dates). In February 2014, we entered into a convertible loan agreement with a strategic entity for an available amount of up to $5.0 million. As of December 31, 2015, the balance outstanding on the convertible loan was $5.0 million, which we converted into an equity interest in the entity in January 2016.

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Goodwill

Goodwill, summarized by relevant reporting unit, consisted of the following as of September 30, 2016 and December 31, 2015 (in thousands):

	December 31, 2015	Acquisitions (Impairments)	September 30, 2016
CdTe components	$ 403,420	$ —	$ 403,420
Crystalline silicon components	6,097	—	6,097
Systems	68,833	—	68,833
Accumulated impairment losses	(393,365)	(6,097)	(399,462)
Total	$ 84,985	$ (6,097)	$ 78,888

Goodwill represents the excess of the purchase price of acquired businesses over the estimated fair value assigned to the individual assets acquired and liabilities assumed. We do not amortize goodwill, but instead are required to test goodwill for impairment at least annually. If necessary, we would record any impairment in accordance with ASC 350, Intangibles – Goodwill and Other. We perform impairment tests between scheduled annual tests in the fourth quarter if facts and circumstances indicate that it is more likely than not that the fair value of a reporting unit that has goodwill is less than its carrying value. During the three months ended June 30, 2016, we impaired $6.1 million of goodwill associated with our crystalline silicon components reporting unit as a result of the decision to end the related manufacturing operations. See Note 4. "Restructuring and Asset Impairments" to our condensed consolidated financial statements for further discussion relating to these restructuring activities.

Other intangibles, net

Other intangibles, net consisted of intangible assets acquired as part of our General Electric and TetraSun acquisitions, certain power purchase agreements acquired after the associated PV solar power systems were placed in service, and our internally-generated intangible assets, substantially all of which were patents on technologies related to our products and production processes. We record an asset for patents, after the patent has been issued, based on the legal, filing, and other costs incurred to secure them. We amortize intangible assets on a straight-line basis over their estimated useful lives once the intangible assets meet the criteria to be amortized.

The following tables summarize our intangible assets at September 30, 2016 and December 31, 2015 (in thousands):

	September 30, 2016			
	Gross Amount	Accumulated Amortization	Accumulated Impairments	Net Amount
Developed technology	$114,612	$ (16,365)	$ (36,215)	$62,032
Power purchase agreements	6,644	—	—	6,644
Patents	6,070	(2,360)	$ —	$3,710
Total	$127,326	$ (18,725)	$ (36,215)	$72,386

	December 31, 2015			
	Gross Amount	Accumulated Amortization	Accumulated Impairments	Net Amount
Developed technology	114,565	$ (8,809)	$ —	$105,756
Patents	6,070	(1,824)	—	4,246
Total	$120,635	$ (10,633)	$ —	$110,002

During the three months ended June 30, 2016, we impaired $35.8 million of developed technology intangible assets acquired in our TetraSun acquisition as a result of the decision to end the related crystalline silicon manufacturing operations. See Note 4. "Restructuring and Asset Impairments" to our condensed consolidated financial statements for

further discussion relating to these restructuring activities. Amortization expense for our intangible assets was $2.1 million and $8.1 million for the three and nine months ended September 30, 2016, respectively, and $3.0 million and $6.3 million for the three and nine months ended September 30, 2015, respectively.

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Accrued expenses

Accrued expenses consisted of the following at September 30, 2016 and December 31, 2015 (in thousands):

	September 30, 2016	December 31, 2015
Accrued compensation and benefits	$ 49,981	$ 63,699
Accrued property, plant and equipment	11,174	7,808
Accrued inventory and balance of systems parts	30,033	53,542
Accrued project assets and deferred project costs	115,159	145,695
Product warranty liability (1)	37,552	38,468
Accrued expenses in excess of normal product warranty liability and related expenses (1)	3,977	5,040
Other	81,093	95,200
Accrued expenses	$ 328,969	$ 409,452

(1) See Note 13. "Commitments and Contingencies" to our condensed consolidated financial statements for further discussion of "Product warranty liability" and "Accrued expenses in excess of normal product warranty liability and related expenses."

Billings in excess of costs and estimated earnings

Billings in excess of costs and estimated earnings was $80.8 million and $87.9 million at September 30, 2016 and December 31, 2015, respectively, and represented billings made or payments received in excess of revenue recognized on contracts accounted for under the percentage-of-completion method. Typically, billings are made based on the completion of certain construction milestones as provided for in the sales arrangement, and the timing of revenue recognition may be different from when we can bill or collect from a customer.

Payments and billings for deferred project costs

Payments and billings for deferred project costs was $103.3 million and $28.6 million at September 30, 2016 and December 31, 2015, respectively, and represented customer payments received or customer billings made under the terms of solar power project related sales contracts for which all revenue recognition criteria for real estate transactions have not yet been met. The associated solar power project costs are included within deferred project costs. We classify such amounts as current if all revenue recognition criteria are expected to be met within the next 12 months, consistent with the classification of the associated deferred project costs.

Other current liabilities

Other current liabilities consisted of the following at September 30, 2016 and December 31, 2015 (in thousands):

	September 30, 2016	December 31, 2015
Deferred revenue	$ 8,482	$ 17,957
Derivative instruments	6,387	16,450
Contingent consideration (1)	16,954	9,233
Financing liability (2)	5,231	5,277
Other	18,787	8,821
Other current liabilities	$ 55,841	$ 57,738

(1)

See Note 13. “Commitments and Contingencies” to our condensed consolidated financial statements for further discussion.

(2) See Note 10. “Investments in Unconsolidated Affiliates and Joint Ventures” to our condensed consolidated financial statements for further discussion of the financing liabilities associated with our leaseback of the Maryland Solar project.

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Other liabilities

Other liabilities consisted of the following at September 30, 2016 and December 31, 2015 (in thousands):

	September 30, 2016	December 31, 2015
Product warranty liability (1)	$ 217,332	$ 193,283
Other taxes payable	24,215	66,549
Contingent consideration (1)	6,987	8,756
Liability in excess of normal product warranty liability and related expenses (1)	15,174	19,565
Financing liability (2)	33,842	36,706
Other	106,217	67,453
Other liabilities	$ 403,767	$ 392,312

(1) See Note 13. “Commitments and Contingencies” to our condensed consolidated financial statements for further discussion on “Product warranty liability,” “Contingent consideration,” and “Liability in excess of normal product warranty liability and related expenses.”

(2) See Note 10. “Investments in Unconsolidated Affiliates and Joint Ventures” to our condensed consolidated financial statements for further discussion of the financing liabilities associated with our leaseback of the Maryland Solar project.

8. Derivative Financial Instruments

As a global company, we are exposed in the normal course of business to interest rate and foreign currency risks that could affect our financial position, results of operations, and cash flows. We use derivative instruments to hedge against these risks and only hold such instruments for hedging purposes, not for speculative or trading purposes.

Depending on the terms of the specific derivative instruments and market conditions, some of our derivative instruments may be assets and others liabilities at any particular balance sheet date. We report all of our derivative instruments at fair value and account for changes in the fair value of derivative instruments within “Accumulated other comprehensive income” if the derivative instruments qualify for hedge accounting. For those derivative instruments that do not qualify for hedge accounting (“economic hedges”), we record the changes in fair value directly to earnings. See Note 9. “Fair Value Measurements” to our condensed consolidated financial statements for information about the techniques we use to measure the fair value of our derivative instruments.

The following tables present the fair values of derivative instruments included in our condensed consolidated balance sheets as of September 30, 2016 and December 31, 2015 (in thousands):

	September 30, 2016		
	Prepaid Expenses and Other Current Assets	Other Current Liabilities	Other Liabilities
Derivatives designated as hedging instruments:			
Foreign exchange forward contracts	$—	$ 357	$ 358
Total derivatives designated as hedging instruments	$—	$ 357	$ 358
Derivatives not designated as hedging instruments:			

Foreign exchange forward contracts	$472	$ 6,030	$ —
Total derivatives not designated as hedging instruments	$472	$ 6,030	$ —
Total derivative instruments	$472	$ 6,387	$ 358

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	December 31, 2015		
	Prepaid Expenses and Other Current Assets	Other Current Liabilities	Other Liabilities
Derivatives designated as hedging instruments:			
Foreign exchange forward contracts	$—	$ 132	$ 285
Cross-currency swap contract	—	6,909	13,835
Interest rate swap contract	—	16	—
Total derivatives designated as hedging instruments	$—	$ 7,057	$ 14,120
Derivatives not designated as hedging instruments:			
Foreign exchange forward contracts	$2,691	$ 9,393	$ —
Total derivatives not designated as hedging instruments	$2,691	$ 9,393	$ —
Total derivative instruments	$2,691	$ 16,450	$ 14,120

The impact of offsetting balances associated with derivative instruments designated as hedging instruments is shown below (in thousands):

	September 30, 2016					
				Gross Amounts Not Offset in Consolidated Balance Sheet		
	Gross Asset (Liability)	Gross Offset in Consolidated Balance Sheet	Net Amount Recognized in Financial Statements	Financial Instruments	Cash Collateral Pledged	Net Amount
Foreign exchange forward contracts	$(715)	—	(715)	—	—	$ (715)

	December 31, 2015					
				Gross Amounts Not Offset in Consolidated Balance Sheet		
	Gross Asset (Liability)	Gross Offset in Consolidated Balance Sheet	Net Amount Recognized in Financial Statements	Financial Instruments	Cash Collateral Pledged	Net Amount
Foreign exchange forward contracts	$(417)	—	(417)	—	—	$(417)
Cross-currency swap contract	$(20,744)	—	(20,744)	—	—	$(20,744)
Interest rate swap contract	$(16)	—	(16)	—	—	$(16)

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The following tables present the effective amounts related to derivative instruments designated as cash flow hedges affecting accumulated other comprehensive income (loss) and our condensed consolidated statements of operations for the nine months ended September 30, 2016 and 2015 (in thousands):

	Foreign Exchange Forward Contracts	Interest Rate Swap Contract	Cross Currency Swap Contract	Total
Balance in accumulated other comprehensive income (loss) at December 31, 2015	$ 162	$ (16)	$ (2,017)	$ (1,871)
Amounts recognized in other comprehensive income (loss)	37	(2)	5,108	5,143
Amounts reclassified to earnings impacting:				
Foreign currency loss, net	—	—	(4,896)	(4,896)
Interest expense, net	—	18	1,805	1,823
Balance in accumulated other comprehensive income (loss) at September 30, 2016	$ 199	$ —	$ —	$ 199
Balance in accumulated other comprehensive income (loss) at December 31, 2014	$ 6,621	$ (210)	$ (3,399)	$ 3,012
Amounts recognized in other comprehensive income (loss)	703	22	(11,373)	(10,648)
Amounts reclassified to earnings impacting:				
Net sales	(1,782)	—	—	(1,782)
Cost of sales	(5,509)	—	—	(5,509)
Foreign currency loss, net	—	—	12,126	12,126
Interest expense, net	—	153	327	480
Balance in accumulated other comprehensive income (loss) at September 30, 2015	$ 33	$ (35)	$ (2,319)	$ (2,321)

We recorded no amounts related to ineffective portions of our derivative instruments designated as cash flow hedges during the three and nine months ended September 30, 2016 and 2015. We recognized unrealized losses of $0.2 million and $0.6 million related to amounts excluded from effectiveness testing for our foreign exchange forward contracts designated as cash flow hedges within "Other income (expense), net" during the three and nine months ended September 30, 2016, respectively. We recognized unrealized losses of $0.2 million and unrealized gains of $0.3 million related to amounts excluded from effectiveness testing for our foreign exchange forward contracts designated as cash flow hedges within "Other income (expense), net" during the three and nine months ended September 30, 2015, respectively.

The following table presents amounts related to derivative instruments not designated as hedges affecting our condensed consolidated statements of operations for the three and nine months ended September 30, 2016 and 2015 (in thousands):

		Amount of Gain (Loss) Recognized in Income			
		Three Months Ended September 30,		Nine Months Ended September 30,	
	Income Statement Line Items	2016	2015	2016	2015
Foreign exchange forward contracts	Foreign currency loss, net	$ (6,763)	$ 9,527	$ (29,740)	$ 1,543
Foreign exchange forward contracts		$ —	$ (2,232)	$ —	$ 7,731

Cost of
sales

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Interest Rate Risk

We use cross-currency swap and interest rate swap contracts to mitigate our exposure to interest rate fluctuations associated with certain of our debt instruments. We do not use such swap contracts for speculative or trading purposes.

On September 30, 2011, we entered into a cross-currency swap contract to hedge the floating rate foreign currency denominated loan under our Malaysian Ringgit Facility Agreement. This swap had an initial notional value of Malaysian ringgit (“MYR”) MYR 465.0 million and entitled us to receive a three-month floating Kuala Lumpur Interbank Offered Rate (“KLIBOR”) interest rate while requiring us to pay a U.S. dollar fixed rate of 3.495%. Additionally, this swap hedged the foreign currency risk of the Malaysian ringgit denominated principal and interest payments as we made swap payments in U.S. dollars and received swap payments in Malaysian ringgits at a fixed exchange rate of 3.19 MYR to USD. This swap qualified for accounting as a cash flow hedge in accordance with ASC 815, and we designated it as such. The notional amount of the swap declined in line with our scheduled principal payments on the underlying hedged debt. In June 2016, we paid the remaining principal on the Malaysian Ringgit Facility Agreement and closed the corresponding cross-currency swap contract. As of December 31, 2015, the notional value of this cross-currency swap contract was MYR 232.6 million ($54.2 million).

On May 29, 2009, we entered into an interest rate swap contract to hedge a portion of the floating rate loans under our Malaysian Credit Facility, which became effective on September 30, 2009 with an initial notional value of €57.3 million and pursuant to which we were entitled to receive a six-month floating Euro Interbank Offered Rate (“EURIBOR”) interest rate while being required to pay a fixed rate of 2.80%. The derivative instrument qualified for accounting as a cash flow hedge in accordance with ASC 815, and we designated it as such. The notional amount of the interest rate swap contract declined in line with our scheduled principal payments on the underlying hedged debt. In March 2016, we paid the remaining principal on the Malaysian Credit Facility and closed the corresponding interest rate swap contract. As of December 31, 2015, the notional value of the interest rate swap contract was €2.2 million ($2.4 million).

Foreign Currency Exchange Risk

Cash Flow Exposure

We expect certain of our subsidiaries to have future cash flows that will be denominated in currencies other than the subsidiaries’ functional currencies. Changes in the exchange rates between the functional currencies of our subsidiaries and the other currencies in which they transact will cause fluctuations in the cash flows we expect to receive or pay when these cash flows are realized or settled. Accordingly, we enter into foreign exchange forward contracts to hedge a portion of these forecasted cash flows. As of September 30, 2016 and December 31, 2015, these foreign exchange forward contracts hedged our forecasted cash flows for 24 months and 33 months, respectively. These foreign exchange forward contracts qualify for accounting as cash flow hedges in accordance with ASC 815, and we designated them as such. We initially report the effective portion of a derivative’s unrealized gain or loss in “Accumulated other comprehensive income” and subsequently reclassify amounts into earnings when the hedged transaction occurs and impacts earnings. We determined that these derivative financial instruments were highly effective as cash flow hedges as of September 30, 2016 and December 31, 2015. As of September 30, 2016 and December 31, 2015, the notional values associated with our foreign exchange forward contracts qualifying as cash flow hedges were as follows (notional amounts and U.S. dollar equivalents in millions):

	September 30, 2016	
Currency	Notional Amount	USD Equivalent
Indian rupee	INR 860.0	$12.9

	December 31, 2015	

Currency	Notional Amount	USD Equivalent
Indian rupee	INR 1,290.0	$19.4

In the following 12 months, we expect to reclassify to earnings $0.1 million of net unrealized gains related to these forward contracts that are included in “Accumulated other comprehensive income” at September 30, 2016 as we realize the earnings effect of the related forecasted transactions. The amount we ultimately record to earnings will depend on the actual exchange rates when we realize the related forecasted transactions.

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Transaction Exposure and Economic Hedging

Many of our subsidiaries have assets and liabilities (primarily cash, receivables, marketable securities, payables, debt, and solar module collection and recycling liabilities) that are denominated in currencies other than the subsidiaries' functional currencies. Changes in the exchange rates between the functional currencies of our subsidiaries and the other currencies in which these assets and liabilities are denominated will create fluctuations in our reported condensed consolidated statements of operations and cash flows. We may enter into foreign exchange forward contracts or other financial instruments to economically hedge assets and liabilities against the effects of currency exchange rate fluctuations. The gains and losses on such foreign exchange forward contracts will economically offset all or part of the transaction gains and losses that we recognize in earnings on the related foreign currency denominated assets and liabilities.

We enter into foreign exchange forward contracts to economically hedge balance sheet and other exposures related to transactions between certain of our subsidiaries and transactions with third parties. Such contracts are considered economic hedges and do not qualify for hedge accounting. Accordingly, we recognize gains or losses from the fluctuations in foreign exchange rates and the fair value of these derivative contracts in "Foreign currency loss, net" on our condensed consolidated statements of operations. As of September 30, 2016 and December 31, 2015, the total net unrealized loss on our economic hedge foreign exchange forward contracts was $5.6 million and $6.7 million, respectively. These contracts mature at various dates within the next 2.0 years.

As of September 30, 2016 and December 31, 2015, the notional values of our foreign exchange forward contracts that do not qualify for hedge accounting were as follows (notional amounts and U.S. dollar equivalents in millions):

	September 30, 2016		
Transaction	Currency	Notional Amount	USD Equivalent
Purchase	Euro	€61.9	$69.4
Sell	Euro	€116.2	$130.3
Sell	Australian dollar	AUD 14.5	$11.1
Sell	Malaysian ringgit	MYR 24.5	$5.9
Sell	Canadian dollar	CAD 19.1	$14.6
Purchase	Chilean peso	CLP 10,780.6	$16.4
Purchase	Chinese yuan	CNY 20.5	$3.1
Sell	Japanese yen	JPY 9,446.2	$93.0
Sell	British pound	GBP 1.9	$2.5
Purchase	Indian rupee	INR 121.2	$1.8
Sell	Indian rupee	INR 12,889.1	$192.8
Sell	South African rand	ZAR 54.2	$3.9

	December 31, 2015		
Transaction	Currency	Notional Amount	USD Equivalent
Purchase	Euro	€42.0	$45.9
Sell	Euro	€150.1	$164.0
Purchase	Australian dollar	AUD 41.1	$29.9
Sell	Australian dollar	AUD 89.0	$64.8
Purchase	Malaysian ringgit	MYR 61.4	$14.3
Sell	Malaysian ringgit	MYR 80.7	$18.8
Sell	Canadian dollar	CAD 4.5	$3.2
Sell	Japanese yen	JPY 8,448.7	$70.1
Purchase	British pound	GBP 11.1	$16.5
Sell	British pound	GBP 16.0	$23.7
Sell	Indian rupee	INR 8,939.0	$134.6

Purchase	South African rand	ZAR 41.1	$2.7
Sell	South African rand	ZAR 81.5	$5.3

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9. Fair Value Measurements

The following is a description of the valuation techniques that we use to measure the fair value of assets and liabilities that we measure and report at fair value on a recurring basis:

- Cash equivalents. At December 31, 2015, our cash equivalents consisted of money market funds. We value our money market cash equivalents using observable inputs that reflect quoted prices for securities with identical characteristics, and accordingly, we classify the valuation techniques that use these inputs as Level 1.

- Marketable securities and restricted investments. At September 30, 2016 and December 31, 2015, our marketable securities consisted of foreign debt and time deposits, and our restricted investments consisted of foreign and U.S. government obligations. We value our marketable securities and restricted investments using observable inputs that reflect quoted prices for securities with identical characteristics or quoted prices for securities with similar characteristics and other observable inputs (such as interest rates that are observable at commonly quoted intervals). Accordingly, we classify the valuation techniques that use these inputs as either Level 1 or Level 2 depending on the inputs used. We also consider the effect of our counterparties' credit standings in these fair value measurements.

- Derivative assets and liabilities. At September 30, 2016 and December 31, 2015, our derivative assets and liabilities consisted of foreign exchange forward contracts involving major currencies. At December 31, 2015, our derivative assets and liabilities also consisted of a cross-currency swap contract involving certain currencies and interest rates and an interest rate swap. Since our derivative assets and liabilities are not traded on an exchange, we value them using standard industry valuation models. Where applicable, these models project future cash flows and discount the amounts to a present value using market-based observable inputs including interest rate curves, credit risk, foreign exchange rates, and forward and spot prices for currencies. These inputs are observable in active markets over the contract term of the derivative instruments we hold, and accordingly, we classify the valuation techniques as Level 2. In evaluating credit risk, we consider the effect of our counterparties' and our own credit standing in the fair value measurements of our derivative assets and liabilities, respectively.

At September 30, 2016 and December 31, 2015, the fair value measurements of our assets and liabilities that we measure on a recurring basis were as follows (in thousands):

	September 30, 2016			
		Fair Value Measurements at Reporting Date Using		
	Total Fair Value and Carrying Value on Our Balance Sheet	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Marketable securities:				
Foreign debt	635,985	—	635,985	—
Time deposits	40,000	40,000	—	—
Restricted investments	406,618	—	406,618	—

Derivative assets	472	—	472	—	
Total assets	$1,083,075	$40,000	$1,043,075	$	—
Liabilities:					
Derivative liabilities	$6,745	$—	$6,745	$	—

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	December 31, 2015			
		Fair Value Measurements at Reporting Date Using		
	Total Fair Value and Carrying Value on Our Balance Sheet	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Cash equivalents:				
Money market funds	$330	$330	$—	$ —
Marketable securities:				
Foreign debt	663,454	—	663,454	—
Time deposits	40,000	40,000	—	—
Restricted investments	326,114	—	326,114	—
Derivative assets	2,691	—	2,691	—
Total assets	$1,032,589	$40,330	$ 992,259	$ —
Liabilities:				
Derivative liabilities	$30,570	$—	$ 30,570	$ —

Fair Value of Financial Instruments

The carrying values and fair values of our financial and derivative instruments at September 30, 2016 and December 31, 2015 were as follows (in thousands):

	September 30, 2016		December 31, 2015	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Assets:				
Marketable securities	$675,985	$675,985	$703,454	$703,454
Foreign exchange forward contract assets	472	472	2,691	2,691
Restricted investments	406,618	406,618	326,114	326,114
Notes receivable – noncurrent	7,851	8,007	12,648	18,382
Notes receivable, affiliates – noncurrent	20,313	22,590	17,887	19,932
Liabilities:				
Long-term debt, including current maturities	$786,466	$798,488	$288,350	$294,449
Interest rate swap contract liabilities	—	—	16	16
Cross-currency swap contract liabilities	—	—	20,744	20,744
Foreign exchange forward contract liabilities	6,745	6,745	9,810	9,810

The carrying values on our condensed consolidated balance sheets of our cash and cash equivalents, trade accounts receivable, unbilled accounts receivable and retainage, current affiliate notes receivable, restricted cash, accounts payable, income taxes payable, and accrued expenses approximated their fair values due to their nature and relatively short maturities; therefore, we excluded them from the foregoing table.

We estimated the fair value of our notes receivable and long-term debt using a discounted cash flow approach (an income approach) or a market approach based on observable market inputs. We incorporated the credit risk of our counterparty for all asset fair value measurements and our own credit risk for all liability fair value measurements. Such fair value measurements are considered Level 2 under the fair value hierarchy.

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Credit Risk

We have certain financial and derivative instruments that subject us to credit risk. These consist primarily of cash, cash equivalents, marketable securities, trade accounts receivable, restricted cash and investments, notes receivable, and foreign exchange forward contracts. We are exposed to credit losses in the event of nonperformance by the counterparties to our financial and derivative instruments. We place cash, cash equivalents, marketable securities, restricted cash and investments, and foreign exchange forward contracts with various high-quality financial institutions and limit the amount of credit risk from any one counterparty. We continuously evaluate the credit standing of our counterparty financial institutions. Our net sales are primarily concentrated among a limited number of customers. We monitor the financial condition of our customers and perform credit evaluations whenever considered necessary. Depending upon the sales arrangement, we may require some form of payment security from our customers, including bank guarantees or commercial letters of credit.

10. Investments in Unconsolidated Affiliates and Joint Ventures

We have joint ventures or other strategic arrangements with partners in several markets, which are generally used to expedite our penetration of those markets and establish relationships with potential customers. We also enter into joint ventures or strategic arrangements with customers or other entities to maximize the value of particular projects. Some of these arrangements involve and are expected in the future to involve significant investments or other allocations of capital. Investments in unconsolidated entities for which we have significant influence, but not control, over the entities' operating and financial activities are accounted for under the equity method of accounting. Investments in unconsolidated entities for which we do not have the ability to exert such significant influence are accounted for under the cost method of accounting. The following table summarizes our equity and cost method investments as of September 30, 2016 and December 31, 2015 (in thousands):

	September 30, 2016	December 31, 2015
Equity method investments	$ 424,116	$ 375,355
Cost method investments	24,847	24,450
Investments in unconsolidated affiliates and joint ventures	$ 448,963	$ 399,805

8point3 Energy Partners LP

In June 2015, 8point3 Energy Partners LP (the "Partnership"), a limited partnership formed by First Solar and SunPower Corporation (the "Sponsors"), completed its initial public offering (the "IPO") pursuant to a Registration Statement on Form S-1, as amended. As part of the IPO, the Sponsors contributed various projects to 8point3 Operating Company, LLC ("OpCo") in exchange for voting and economic interests in the entity, and the Partnership acquired an economic interest in OpCo using proceeds from the IPO. The Partnership owns and operates a portfolio of solar energy generation projects and is expected to acquire additional projects from the Sponsors.

As of September 30, 2016, we owned an aggregate of 22,116,925 Class B shares representing a 28% voting interest in the Partnership, and an aggregate of 6,721,810 common units and 15,395,115 subordinated units in OpCo together representing a 28% economic and voting interest in the entity. Future quarterly distributions from OpCo are subject to a subordination period in which holders of the subordinated units are not entitled to receive any distributions until the common units have received their minimum quarterly distribution plus any arrearages in the payment of minimum distributions from prior quarters. The subordination period will end after OpCo has earned and paid minimum quarterly distributions for three years ending on or after August 31, 2018 and there are no outstanding arrearages on common units. Notwithstanding the foregoing, the subordination period could end after OpCo has earned and paid 150% of minimum quarterly distributions, plus the related distributions to incentive distribution right holders, for one year ending on or after August 31, 2016 and there are no outstanding arrearages on common units. At the end of the

subordination period, all subordinated units will convert to common units on a one-for-one basis. We also hold certain incentive distribution rights in OpCo, which represent a right to incremental distributions after certain distribution thresholds are met.

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The Partnership is managed and controlled by its general partner, 8point3 General Partner, LLC ("General Partner"), and we account for our interest in OpCo, a subsidiary of the Partnership, under the equity method of accounting as we are able to exercise significant influence over the Partnership due to our representation on the board of directors of its General Partner. Under the equity method of accounting, we recognize equity in earnings for our proportionate share of OpCo's net income or loss, including adjustments for the amortization of a $45.5 million basis difference resulting from the cost of our investment differing from our proportionate share of OpCo's equity. We recognized equity in earnings, net of tax, from our investment in OpCo of $8.6 million and $25.9 million for the three and nine months ended September 30, 2016, respectively. We recognized equity in earnings, net of tax, from our investment in OpCo of $1.4 million for the three and nine months ended September 30, 2015. As of September 30, 2016 and December 31, 2015, the carrying value of our investment in OpCo was $197.0 million and $152.5 million, respectively.

In connection with the IPO, we also entered into an agreement with a subsidiary of the Partnership to lease back one of our originally contributed projects, Maryland Solar, until December 31, 2019. Under the terms of the agreement, we make fixed rent payments to the Partnership's subsidiary and are entitled to all of the energy generated by the project. Due to our continuing involvement with the project, we account for the leaseback agreement as a financing transaction. As of September 30, 2016 and December 31, 2015, our financing obligation associated with the leaseback was $39.1 million and $42.0 million, respectively.

In May 2016, we completed the sale of our two 20 MW Kingbird projects ("Kingbird") located in Kern County, California to OpCo and a third-party investor for net revenue of $57.4 million and accounted for the transaction as a partial sale of real estate pursuant to ASC 360-20. Due to certain continuing involvement associated with tax related indemnifications to the third-party investor, we did not recognize any profit on the sale as our maximum exposure to loss exceeded the profit on the transaction. All of the cash proceeds from the sale of the Kingbird project were classified as cash flows from operating activities on our condensed consolidated statements of cash flows.

We provide O&M services to certain of the Partnership's partially owned project entities, including SG2 Holdings, LLC; Lost Hills Blackwell Holdings, LLC; NS Solar Holdings, LLC; Kingbird Solar A, LLC; and Kingbird Solar B, LLC. During the three and nine months ended September 30, 2016, we recognized revenue of $1.3 million and $4.0 million, respectively, for such O&M services. During the three and nine months ended September 30, 2015, we recognized revenue of $1.2 million for such O&M services.

In June 2015, OpCo entered into a $525.0 million senior secured credit facility, consisting of a $300.0 million term loan facility, a $25.0 million delayed draw term loan facility, and a $200.0 million revolving credit facility (the "OpCo Credit Facility"). In September 2016, OpCo amended its senior secured credit facility to include an incremental $250.0 million term loan facility, which increased the maximum borrowing capacity under the OpCo Credit Facility to $775.0 million. The OpCo Credit Facility is secured by a pledge of the Sponsors' equity interests in OpCo.

Desert Stateline Holdings, LLC

In August 2015, we sold 51% of our partially constructed 300 MW Desert Stateline project ("Desert Stateline") to a subsidiary of Southern Power Company. In March 2016, we amended the original sale agreement with Southern Power Company to include an additional 15% of the partially constructed project. Electricity generated by the system is contracted to serve a 20-year PPA with a local utility company. Our remaining 34% membership interest in the project holding company, Desert Stateline Holdings, LLC, is accounted for under the equity method of accounting as we are able to exercise significant influence over the project due to our representation on its management committee. Under the terms of the project LLC agreement, each member is entitled to receive cash distributions based on their respective membership interests, and Southern Power Company is entitled to substantially all of the project's federal tax benefits. During the three and nine months ended September 30, 2016, we recognized $2.4 million of equity in earnings, net of tax, from our investment in Desert Stateline Holdings, LLC. As of September 30, 2016 and

December 31, 2015, the carrying value of our investment was $199.4 million and $196.9 million, respectively.

Clean Energy Collective, LLC

In November 2014, we entered into various agreements to purchase a minority ownership interest in Clean Energy Collective, LLC ("CEC"). This investment provided us with additional access to the distributed generation market and a partner to develop and market community solar offerings to North American residential customers and businesses directly on behalf of client utility companies. As part of the investment, we also received a warrant, valued at $1.8 million, to purchase additional ownership interests at prices at or above our initial investment price per unit.

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In addition to our equity investment in CEC, we also entered into a loan agreement to provide CEC with term loan advances up to $15.0 million. All term loans are due in November 2017 on the third anniversary of the initial loan agreement. Interest is payable semiannually at rates ranging from 7% to 16% depending on CEC's current capital structure. As of September 30, 2016 and December 31, 2015, the balance outstanding on the term loans was $15.0 million. In February 2016, we entered into a convertible loan agreement with CEC for $4.6 million, which was funded in April 2016. The convertible loan bears interest at 10% per annum, and the outstanding principal and interest are due in February 2018 on the second anniversary of the initial loan agreement unless converted earlier pursuant to a qualified equity financing by CEC.

CEC is considered a VIE, and our 27% ownership interest in and loans to the company are considered variable interests. We account for our investment in CEC under the equity method of accounting as we concluded we are not the primary beneficiary of the company given that we do not have the power to make decisions over the activities that most significantly impact the company's economic performance. Under the equity method of accounting, we recognize equity in earnings for our proportionate share of CEC's net income or loss including adjustments for the amortization of a basis difference resulting from the cost of our investment differing from our proportionate share of CEC's equity. During the three and nine months ended September 30, 2016 we recognized losses, net of tax, of $0.6 million and $2.9 million, respectively, from our investment in CEC. During the three and nine months ended September 30, 2015, we recognized losses, net of tax, of $0.5 million and $1.5 million, respectively, from our investment in CEC. As of September 30, 2016 and December 31, 2015, the carrying value of our investment was $11.7 million and $16.1 million, respectively.

11. Percentage-of-Completion Changes in Estimates

We recognize revenue for certain systems business sales arrangements under the percentage-of-completion method. The percentage-of-completion method of revenue recognition requires us to make estimates of net contract revenues and costs to complete our projects. In making such estimates, management judgments are required to evaluate significant assumptions including the amount of net contract revenues, the cost of materials and labor, expected labor productivity, the impact of potential variances in schedule completion, and the impact of any penalties, claims, or performance incentives. If estimated total costs on any contract are greater than the net contract revenues, we recognize the entire estimated loss in the period the loss becomes known. The cumulative effect of the revisions to estimates related to net contract revenues and costs to complete contracts are recorded in the period in which the revisions to estimates are identified and the amounts can be reasonably estimated.

Changes in estimates for systems business sales arrangements accounted for under the percentage-of-completion method occur for a variety of reasons, including but not limited to (i) construction plan accelerations or delays, (ii) module cost forecast changes, and (iii) changes in other information used to estimate costs. Changes in estimates could have a material effect on our condensed consolidated statements of operations. The table below outlines the impact on gross profit of the aggregate net change in systems business contract estimates (both increases and decreases) for the three and nine months ended September 30, 2016 and 2015 as well as the number of projects that comprise such aggregate net change. For purposes of the following table, we only include projects with changes in estimates that have a net impact on gross profit of at least $1.0 million during the periods presented. Also included in the table is the net change in estimate as a percentage of the aggregate gross profit for such projects.

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Number of projects	7	5	8	8
Increase in gross profit resulting from net change in estimate (in thousands)	$25,557	$10,521	$68,687	$51,133
	3.3 %	2.0 %	7.5 %	3.0 %

Net change in estimate as a percentage of aggregate gross profit for associated projects

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12. Debt

Our long-term debt consisted of the following at September 30, 2016 and December 31, 2015 (in thousands):

Loan Agreement	Maturity	Loan Denomination	Balance (USD) September 30, 2016	Balance (USD) December 31, 2015
Revolving credit facility	July 2018	USD	$550,000	$ —
Project construction credit facilities	Various	Various	245,457	218,183
Malaysian ringgit facility agreement	September 2018	MYR	—	54,175
Malaysian euro facility agreement	April 2018	EUR	—	21,869
Malaysian facility agreement	March 2016	EUR	—	5,100
Capital lease obligations	Various	Various	691	1,065
Long-term debt principal			796,148	300,392
Less: unamortized discount and issuance costs			(8,991)	(10,977)
Total long-term debt			787,157	289,415
Less: current portion			(626,026)	(38,090)
Noncurrent portion			$161,131	$ 251,325

Revolving Credit Facility

Our amended and restated credit agreement with several financial institutions as lenders and JPMorgan Chase Bank, N.A. as administrative agent provides us with a senior secured credit facility (the "Revolving Credit Facility") with an aggregate available amount of $700.0 million, with the right to request an increase up to $900.0 million, subject to certain conditions. Borrowings under the Revolving Credit Facility bear interest at (i) LIBOR (adjusted for Eurocurrency reserve requirements) plus a margin of 2.25% or (ii) a base rate as defined in the credit agreement plus a margin of 1.25%, depending on the type of borrowing requested. These margins are subject to adjustment depending on our consolidated leverage ratio. As of September 30, 2016, we had borrowings outstanding of $550.0 million, which we expect to repay within the next 12 months, and had issued $128.6 million of letters of credit using availability under our Revolving Credit Facility, leaving a total remaining availability of $21.4 million. As of December 31, 2015, we had no borrowings outstanding and had issued $191.6 million of letters of credit using availability under our Revolving Credit Facility, leaving a total remaining availability of $508.4 million. Loans and letters of credit issued under the Revolving Credit Facility are jointly and severally guaranteed by First Solar, Inc.; First Solar Electric, LLC; First Solar Electric (California), Inc.; and First Solar Development, LLC and are secured by interests in substantially all of the guarantors' tangible and intangible assets other than certain excluded assets.

The credit agreement contains financial covenants including: a leverage ratio covenant, a minimum EBITDA covenant, and a minimum liquidity covenant. Additionally, the credit agreement contains customary non-financial covenants and certain restrictions on our ability to pay dividends. We were in compliance with all covenants of the facility as of September 30, 2016.

In addition to paying interest on outstanding principal under the Revolving Credit Facility, we are required to pay a commitment fee at a rate of 0.375% per annum, based on the average daily unused commitments under the facility. The commitment fee may also be adjusted due to changes in our consolidated leverage ratio. We also pay a letter of credit fee based on the applicable margin for Eurocurrency revolving loans on the face amount of each letter of credit and a fronting fee of 0.125%.

Project Construction Credit Facilities

Chile

In August 2014, Parque Solar Fotovoltaico Luz del Norte SpA (“Luz del Norte”), our indirect wholly-owned subsidiary, entered into credit facilities with the Overseas Private Investment Corporation (“OPIC”) and the International Finance Corporation (“IFC”) to provide limited-recourse senior secured debt financing in an aggregate principal amount of up to $290.0 million for the design, development, financing, construction, testing, commissioning, operation, and maintenance of a 141 MW PV solar power plant located near Copiapó, Chile. In September 2015, Luz del Norte reduced the borrowing capacity on the credit facilities to $238.0 million.

Up to $178.0 million of the aggregate principal amount of the loans will be funded by OPIC. The OPIC commitment is comprised of fixed rate loans in an aggregate principal amount of up to $133.3 million and variable rate loans in an aggregate principal amount of up to $44.7 million. The fixed rate loans mature in September 2029, and the variable rate loans mature in September 2032. As of September 30, 2016 and December 31, 2015, the balance outstanding on the OPIC loans was $125.1 million.

Up to $60.0 million of the aggregate principal amount of the loans will be funded by IFC. The IFC commitment is comprised of fixed rate loans in an aggregate principal amount of up to $44.9 million and variable rate loans in an aggregate principal amount of up to $15.1 million. The fixed rate loans mature in September 2029, and the variable rate loans mature in September 2032. As of September 30, 2016 and December 31, 2015, the balance outstanding on the IFC loans was $42.2 million.

In August 2014, Luz del Norte also entered into a Chilean peso facility (“VAT facility” and together with the OPIC and IFC loans, the “Luz del Norte Credit Facilities”) equivalent to $65.0 million with Banco de Crédito e Inversiones to fund Chilean value added tax associated with the construction of the Luz del Norte project described above. In connection with the VAT facility, which matures in February 2017, FSI provided a guaranty of substantially all payment obligations of Luz del Norte thereunder. As of September 30, 2016 and December 31, 2015, the balance outstanding on the VAT facility was $58.6 million and $40.4 million, respectively.

The OPIC and IFC loans are secured by liens over all of Luz del Norte’s assets, which had an aggregate book value of $406.3 million, including intercompany charges, as of September 30, 2016 and by a pledge of all of the equity interests in the entity. The Luz del Norte Credit Facilities contain customary representations and warranties, covenants, and events of default for comparable credit facilities. We were in compliance with all covenants related to the Luz del Norte Credit Facilities as of September 30, 2016.

Japan

In September 2015, First Solar Japan GK, our wholly-owned subsidiary, entered into a construction loan facility with Mizuho Bank Ltd. for borrowings up to ¥4.0 billion ($39.4 million) for the development and construction of utility-scale PV solar power plants in Japan (the “Japan Credit Facility”). In September 2016, First Solar Japan GK renewed the facility for an additional one-year period until September 2017. The facility is guaranteed by FSI and secured by pledges of certain projects’ cash accounts and other rights in the projects. As of September 30, 2016 and December 31, 2015, the balance outstanding on the facility was $15.3 million and $5.3 million, respectively. The facility contains customary representations and warranties, covenants, and events of default for comparable construction loan facilities in Japan. We were in compliance with all covenants related to the Japan Credit Facility as of September 30, 2016.

India

In March 2015, Marikal Solar Parks Private Limited and Mahabubnagar Solar Parks Private Limited, our indirect wholly-owned subsidiaries, entered into term loan facilities with Axis Bank, as administrative agent, for combined aggregate borrowings up to 1.1 billion ($16.5 million) for the development and construction of two 10 MW PV solar power plants located in Telangana, India. The term loan facilities have a combined letter of credit sub-limit of 0.8 billion ($12.0 million), which may also be used to support construction activities. As of September 30, 2016, we had issued 0.8 billion ($11.2 million) of letters of credit under the facilities. The term loan facilities mature in December 2028 and are secured by certain assets of the borrowers, which had an aggregate book value of $85.2 million as of September 30, 2016, including intercompany charges, and a pledge of a portion of the equity interests in the borrowers. As of September 30, 2016 and December 31, 2015, the balance outstanding on the term loan facilities was $4.3 million and $5.2 million, respectively. The credit facilities contain various financial covenants including a

leverage ratio covenant, a debt service ratio covenant, and a fixed asset coverage ratio covenant. We were in compliance with all covenants related to the credit facilities as of September 30, 2016.

In March 2016, Polepally Solar Parks Private Limited, our indirect wholly-owned subsidiary, entered into a term loan facility (together with the Marikal and Mahabubnagar term loans, the "India Credit Facilities") with Axis Bank, as administrative agent, for borrowings up to 1.3 billion ($19.4 million) for costs related to a 25 MW PV solar power plant located in Telangana, India. The term loan facility has a letter of credit sub-limit of 1.1 billion ($16.5 million), which may also be used for project related costs. The term loan facility matures in September 2029 and is secured by certain assets of the borrower, which had an aggregate book value of $31.4 million as of September 30, 2016, including intercompany charges, and a pledge of a portion of the equity interests in the borrower. In addition, the term loan facility is guaranteed by FSI until certain conditions are met, including the achievement of commercial operations by the plant and various other compliance and performance metrics. The term loan facility contains various covenants including a leverage ratio covenant, a debt service ratio covenant, and a fixed asset ratio covenant.

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Malaysian Ringgit Facility Agreement

FS Malaysia, our indirect wholly-owned subsidiary, entered into a credit facility agreement (“Malaysian Ringgit Facility Agreement”), among FSI as guarantor, CIMB Investment Bank Berhad, Maybank Investment Bank Berhad, and RHB Investment Bank Berhad as arrangers with CIMB Investment Bank Berhad also acting as facility agent and security agent, and the original lenders party thereto. The loans made to FS Malaysia were secured by, among other things, FS Malaysia’s leases for the lots on which our fifth and sixth manufacturing plants in Kulim, Malaysia (“Plants 5 and 6”) are located and all plant, machinery, and equipment purchased by FS Malaysia with the proceeds of the facility or otherwise installed in or utilized in Plants 5 and 6, to the extent not financed, or subject to a negative pledge under a separate financing facility related to Plants 5 and 6. In June 2016, we repaid the remaining $47.3 million principal balance on the Malaysian Ringgit Facility Agreement. There were no prepayment penalties associated with this early repayment.

Malaysian Euro Facility Agreement

FS Malaysia entered into a credit facility agreement (“Malaysian Euro Facility Agreement”) with Commerzbank Aktiengesellschaft and Natixis Zweigniederlassung Deutschland as arrangers and original lenders, and Commerzbank Aktiengesellschaft, Luxembourg Branch as facility agent and security agent. In connection with the Malaysian Euro Facility Agreement, FSI concurrently entered into a first demand guarantee agreement in favor of the lenders. Under this agreement, FS Malaysia’s obligations related to the credit facility were guaranteed, on an unsecured basis, by FSI. At the same time, FS Malaysia and FSI also entered into a subordination agreement, pursuant to which any payment claims of FSI against FS Malaysia were subordinated to the claims of the lenders. In April 2016, we repaid the remaining $22.7 million principal balance on the Malaysian Euro Facility Agreement. There were no prepayment penalties associated with this early repayment.

Variable Interest Rate Risk

Certain of our long-term debt agreements bear interest at prime, London Interbank Offered Rate (“LIBOR”), Tokyo Interbank Offered Rate (“TIBOR”), or equivalent variable rates. A disruption of the credit environment, as previously experienced, could negatively impact interbank lending and, therefore, negatively impact these floating rates. An increase in prime, LIBOR, TIBOR, or equivalent variable rates would increase the cost of borrowing under our Revolving Credit Facility and various project construction credit facilities.

Our long-term debt borrowing rates as of September 30, 2016 were as follows:

Loan Agreement	Borrowing Rate at September 30, 2016
Revolving Credit Facility	2.77%
	Fixed rate loans at bank rate plus 3.50%
Luz del Norte Credit Facilities	Variable rate loans at 91-Day U.S. Treasury Bill Yield or LIBOR plus 3.50%
	VAT loans at bank rate plus 1.30%
Japan Credit Facility	TIBOR plus 0.5%
India Credit Facilities	Bank rate plus 2.35%
Capital lease obligations	Various

Future Principal Payments

At September 30, 2016, the future principal payments on our long-term debt, excluding payments related to capital leases, were due as follows (in thousands):

Total
Debt

Remainder of 2016	$550,161
2017	76,474
2018	4,808
2019	5,782
2020	11,927
Thereafter	146,305
Total long-term debt future principal payments	$795,457

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13. Commitments and Contingencies

Commercial Commitments

During the normal course of business, we enter into commercial commitments in the form of letters of credit, bank guarantees, and surety bonds to provide financial and performance assurance to third parties. Our Revolving Credit Facility provides us with a sub-limit of $500.0 million to issue letters of credit, subject to certain additional limits depending on the currencies of the letters of credit, at a fee based on the applicable margin for Eurocurrency revolving loans and a fronting fee. As of September 30, 2016, we had $128.6 million in letters of credit issued under our Revolving Credit Facility, leaving $21.4 million of availability for the issuance of letters of credit after adjusting for borrowings on the facility. The majority of these letters of credit were supporting our systems business projects. As of September 30, 2016, we also had $7.7 million of bank guarantees and letters of credit under separate agreements that were posted by certain of our foreign subsidiaries, $251.5 million of letters of credit issued under three bilateral facilities, of which $30.3 million was secured with cash, and $141.1 million of surety bonds outstanding primarily for our systems business projects. The available bonding capacity under our surety lines was $639.2 million as of September 30, 2016.

Product Warranties

When we recognize revenue for module or systems sales, we accrue liabilities for the estimated future costs of meeting our limited warranty obligations for both modules and the balance of the systems. We make and revise these estimates based primarily on the number of our solar modules under warranty installed at customer locations, our historical experience with warranty claims, our monitoring of field installation sites, our internal testing of and the expected future performance of our solar modules and balance of systems (“BoS”) components, and our estimated replacement costs.

From time to time, we have taken remediation actions with respect to affected modules beyond our limited warranties, and we may elect to do so in the future, in which case we would incur additional expenses. Such potential voluntary future remediation actions beyond our limited warranty obligations could be material to our condensed consolidated statements of operations if we commit to any such remediation actions.

Product warranty activities during the three and nine months ended September 30, 2016 and 2015 were as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Product warranty liability, beginning of period	$250,371	$222,304	$231,751	$223,057
Accruals for new warranties issued	6,158	16,700	26,854	34,948
Settlements	(2,814)	(4,722)	(9,246)	(9,817)
Changes in estimate of product warranty liability	1,169	(1,212)	5,525	(15,118)