FIRST SOLAR, INC.
Form 10-Q
November 03, 2016
Table of Contents

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 [ ] (Do not check if a smaller reporting company)	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.

Table of Contents

FIRST SOLAR, INC. AND SUBSIDIARIES

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

TABLE OF CONTENTS

		Page
Part I.	Financial Information	
Item 1.	Condensed Consolidated Financial Statements (Unaudited):	
	Condensed Consolidated Statements of Operations for the three and nine months ended September 30, 2016 and 2015	3
	Condensed Consolidated Statements of Comprehensive Income for the three and nine months ended September 30, 2016 and 2015	4
	Condensed Consolidated Balance Sheets as of September 30, 2016 and December 31, 2015	5
	Condensed Consolidated Statements of Cash Flows for the nine months ended September 30, 2016 and 2015	6
	Notes to Condensed Consolidated Financial Statements	7
Item 2.	Management's Discussion and Analysis of Financial Condition and Results of Operations	45
Item 3.	Quantitative and Qualitative Disclosures About Market Risk	64
Item 4.	Controls and Procedures	64
Part II.	Other Information	65
Item 1.	Legal Proceedings	65
Item 1A.	Risk Factors	65
Item 5.	Other Information	65
Item 6.	Exhibits	66
Signature		67

Table of Contents

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.

Table of Contents

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.

Table of Contents

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.

Table of Contents

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.

Table of Contents

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:

Table of Contents

(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.

Table of Contents

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.

Table of Contents

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.

Table of Contents

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.

Table of Contents

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

Table of Contents

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.

Table of Contents

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.

Table of Contents

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.

Table of Contents

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

Table of Contents

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.

Table of Contents

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.

Table of Contents

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.

Table of Contents

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.

Table of Contents

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

Table of Contents

	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)

Table of Contents

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

Table of Contents

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.

Table of Contents

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

Table of Contents

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			
	Total Fair Value and Carrying Value on Our Balance Sheet	Fair Value Measurements at Reporting Date Using 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	$ —

Table of Contents

	December 31, 2015			
	Total Fair Value and Carrying Value on Our Balance Sheet	Fair Value Measurements at Reporting Date Using 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.

Table of Contents

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.

Table of Contents

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.

Table of Contents

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

Table of Contents

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	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.

Table of Contents

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.

Table of Contents

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%
Luz del Norte Credit Facilities	Fixed rate loans at bank rate plus 3.50% 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

Table of Contents

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)
Product warranty liability, end of period	$254,884	$233,070	$254,884	$233,070
Current portion of warranty liability	$37,552	$48,311	$37,552	$48,311
Noncurrent portion of warranty liability	$217,332	$184,759	$217,332	$184,759

We estimate our limited product warranty liability for power output and defects in materials and workmanship under normal use and service conditions based on a warranty return rate of approximately 1% to 3% for modules covered under warranty. As of September 30, 2016, a 1% change in the estimated warranty return rate would change our module warranty liability by $84.6 million, and a 1% change in the estimated warranty return rate for BoS components would not have a material impact on the associated warranty liability.

34

Table of Contents

Accrued Expenses in Excess of Product Warranty

We may also accrue expenses for the cost of any voluntary remediation programs beyond our normal product warranty. As of September 30, 2016 and December 31, 2015, accrued expenses in excess of our product warranty were $19.2 million and $24.6 million, respectively, of which $4.0 million and $5.0 million, respectively, were classified as current and included in “Accrued expenses” on our condensed consolidated balance sheets and $15.2 million and $19.6 million, respectively, were classified as noncurrent and included in “Other liabilities” on our condensed consolidated balance sheets. Our estimates for such remediation programs are based on an evaluation of available information including the estimated number of potentially affected solar modules, historical experience related to our remediation efforts, customer-provided data related to potentially affected systems, estimated costs for performing removal, replacement, and logistical services, and any post-sale expenses covered under the voluntary remediation program. If any of our estimates prove incorrect, we may be required to accrue additional expenses.

Performance Guarantees

As part of our systems business, we conduct performance testing of a system prior to substantial completion to confirm the system meets its operational and capacity expectations noted in the engineering, procurement, and construction (“EPC”) agreement. In addition, we may provide an energy performance test during the first year of a system’s operation to demonstrate that the actual energy generation for the first year meets or exceeds the modeled energy expectation, after certain adjustments. If there is an underperformance event with regards to these tests, we may incur liquidated damages as a percentage of the EPC contract price. In certain instances, a bonus payment may be received at the end of the first year if the system performs above a specified level. As of September 30, 2016 and December 31, 2015, we accrued $5.7 million and $0.3 million, respectively, of estimated obligations under such arrangements, which were classified as “Other current liabilities” in the condensed consolidated balance sheets.

As part of our O&M service offerings, we typically offer an effective availability guarantee, which stipulates that a system will be available to generate a certain percentage of total possible energy during a specific period after adjusting for factors outside of our control as the service provider, such as weather, curtailment, outages, force majeure, and other conditions that may affect system availability. Effective availability guarantees are only offered as part of our O&M services and terminate at the end of an O&M arrangement. If we fail to meet the contractual threshold for these guarantees, we may incur liquidated damages for certain lost energy under the PPA. Our O&M agreements typically contain provisions limiting our total potential losses under an agreement, including amounts paid for liquidated damages, to a percentage of O&M fees. Many of our O&M agreements also contain provisions whereby we may receive a bonus payment if system availability exceeds a separate threshold. As of September 30, 2016 and December 31, 2015, we did not accrue any estimated obligations under our effective availability guarantees.

Repurchase of Systems Projects

From time to time under sales agreements for a limited number of our solar power projects, we may be required to repurchase the projects if certain events occur, such as not achieving commercial operation of the project within a certain timeframe. For any sales agreements that have such conditional repurchase clauses, we will not recognize revenue on such sales agreements until the conditional repurchase clauses are of no further force or effect and all other necessary revenue recognition criteria have been met.

Indemnifications

In certain limited circumstances, we have provided indemnifications to customers or project tax equity investors under which we are contractually obligated to compensate such parties for losses they may suffer as a result of reductions in tax benefits received, including investment tax credits. Project related tax benefits are, in part, based on guidance

provided by the Internal Revenue Service and U.S. Treasury Department, which includes assumptions regarding the fair value of qualifying PV solar power systems. For any sales agreements that have such indemnification provisions, we reduce the profit recognized, if any, by the maximum exposure to loss until the indemnification provisions are of no further force or effect and all other necessary revenue recognition criteria have been met.

Table of Contents

Contingent Consideration

In connection with our previous TetraSun acquisition, we agreed to pay additional amounts to the sellers contingent upon achievement by the acquired business of certain negotiated goals, such as targeted module shipment volumes. In June 2016, we reversed the outstanding contingent consideration associated with our TetraSun acquisition of $7.4 million as a result of our executive management's decision to end production of our crystalline silicon modules, which adversely affected the likelihood of achieving certain module shipment volume milestones. Such reversal resulted in a corresponding gain recorded within "Other income (expense), net" on our condensed consolidated statements of operations for the for the nine months ended September 30, 2016. See Note 4. "Restructuring and Asset Impairments" to our condensed consolidated financial statements for further discussion related to these restructuring activities. As of December 31, 2015, we had recorded $2.5 million of current liabilities and $4.9 million of long-term liabilities for such contingent obligations based on their estimated fair values.

We continually seek to make additions to our advanced-stage project pipeline and are also actively developing our early to mid-stage project pipeline in order to secure PPAs and are also pursuing opportunities to acquire advanced-stage projects, which already have PPAs in place. In connection with such project acquisitions, we may agree to pay additional amounts to project sellers upon achievement of certain project-related milestones, such as obtaining a PPA, obtaining financing, and selling to a new owner. We recognize an estimated project acquisition contingent liability when we determine that such liability is both probable and reasonably estimable, and the carrying amount of the related project asset is correspondingly increased. As of September 30, 2016 and December 31, 2015, we had recorded $17.0 million and $6.7 million of current liabilities, respectively, and $7.0 million and $3.9 million of long-term liabilities, respectively, for such contingent obligations. Any future differences between the acquisition-date contingent obligation estimate and the ultimate settlement of the obligations will be recognized primarily as an adjustment to project assets, as contingent payments are considered direct and incremental to the underlying value of the related projects.

Solar Module Collection and Recycling Liability

We voluntarily established a module collection and recycling program to collect and recycle modules sold and covered under such program once the modules reach the end of their useful lives. For customer sales contracts that include modules covered under this program, we agree to pay the costs for the collection and recycling of qualifying solar modules, and the end-users agree to notify us, disassemble their solar power systems, package the solar modules for shipment, and revert ownership rights over the modules back to us at the end of the modules' service lives. Accordingly, we record our collection and recycling obligations within "Cost of sales" at the time of sale based on the estimated cost to collect and recycle the covered solar modules. During the three and nine months ended September 30, 2016 and 2015, substantially all of our modules sold were not subject to our collection and recycling program.

We estimate the cost of our collection and recycling obligations based on the present value of the expected probability weighted future cost of collecting and recycling the solar modules, which includes estimates for the cost of packaging materials, the cost of freight from the solar module installation sites to a recycling center, the material, labor, capital costs, and scale of recycling centers, and an estimated third-party profit margin and return on risk for collection and recycling services. We base these estimates on (i) our experience collecting and recycling our solar modules, (ii) the expected timing of when our solar modules will be returned for recycling, and (iii) expected economic conditions at the time the solar modules will be collected and recycled. In the periods between the time of sale and the related settlement of the collection and recycling obligation, we accrete the carrying amount of the associated liability by applying the discount rate used for its initial measurement. We classify accretion as an operating expense within "Selling, general and administrative" expense on our condensed consolidated statement of operations. We periodically review our estimates of expected future recycling costs and may adjust our liability accordingly.

During the three months ended September 30, 2015, we completed our annual cost study of obligations under our module collection and recycling program based on certain recycling technology advancements at our manufacturing facility in Perrysburg, Ohio and reduced the associated liability by $80.0 million. The recycling technology advancements represented a significant improvement over previous technologies and included a continuous flow recycling process, which increased the throughput of modules able to be recycled at a point in time. Such process improvements also resulted in corresponding reductions in capital, chemical, labor, maintenance, and other general recycling costs, which further contributed to the reduction in the recycling rate per module and corresponding change in the liability.

Our module collection and recycling liability was $169.7 million and $163.4 million as of September 30, 2016 and December 31, 2015, respectively. As of September 30, 2016, a 1% increase in the annualized inflation rate used in our estimated future collection and recycling cost per module would increase our liability by $38.3 million, and a 1% decrease in that rate would decrease our liability by $31.5 million.

Table of Contents

See Note 6. “Restricted Cash and Investments” to our condensed consolidated financial statements for more information about our arrangements for funding this liability.

Legal Proceedings

We are party to legal matters and claims in the normal course of our operations. While we believe that the ultimate outcome of these matters will not have a material adverse effect on our financial position, results of operations, or cash flows, the outcome of these matters is not determinable with certainty, and negative outcomes may adversely affect us.

Class Action

On March 15, 2012, a purported class action lawsuit titled Smilovits v. First Solar, Inc., et al., Case No. 2:12-cv-00555-DGC, was filed in the United States District Court for the District of Arizona (hereafter “Arizona District Court”) against the Company and certain of our current and former directors and officers. The complaint was filed on behalf of persons who purchased or otherwise acquired the Company’s publicly traded securities between April 30, 2008 and February 28, 2012 (the “Class Action”). The complaint generally alleges that the defendants violated Sections 10(b) and 20(a) of the Securities Exchange Act of 1934 by making false and misleading statements regarding the Company’s financial performance and prospects. The action includes claims for damages, including interest, and an award of reasonable costs and attorneys’ fees to the putative class. The Company believes it has meritorious defenses and will vigorously defend this action.

On July 23, 2012, the Arizona District Court issued an order appointing as lead plaintiffs in the Class Action the Mineworkers’ Pension Scheme and British Coal Staff Superannuation Scheme (collectively “Pension Schemes”). The Pension Schemes filed an amended complaint on August 17, 2012, which contains similar allegations and seeks similar relief as the original complaint. Defendants filed a motion to dismiss on September 14, 2012. On December 17, 2012, the court denied defendants’ motion to dismiss. On October 8, 2013, the Arizona District Court granted the Pension Schemes’ motion for class certification, and certified a class comprised of all persons who purchased or otherwise acquired publicly traded securities of the Company between April 30, 2008 and February 28, 2012 and were damaged thereby, excluding defendants and certain related parties. Merits discovery closed on February 27, 2015.

Defendants filed a motion for summary judgment on March 27, 2015. On August 11, 2015, the Arizona District Court granted defendants’ motion in part and denied it in part, and certified an issue for immediate appeal to the Ninth Circuit Court of Appeals (the “Ninth Circuit”). First Solar filed a petition for interlocutory appeal with the Ninth Circuit, and that petition was granted on November 18, 2015. On May 20, 2016, the Pension Schemes moved to vacate the order granting the petition, dismiss the appeal, and stay the merits briefing schedule. Briefing on the Pension Schemes’ motion is now complete. The Arizona District Court has entered a stay of the proceedings in district court until the appeal is decided.

Given the pending appeal, the need for further expert discovery, and the uncertainties of trial, we are not in a position to assess whether any loss or adverse effect on our financial condition is probable or remote or to estimate the range of potential loss, if any.

Opt-Out Action

On June 23, 2015, a suit titled Maverick Fund, L.D.C. v. First Solar, Inc., et al., Case No. 2:15-cv-01156-ROS, was filed in Arizona District Court by putative stockholders that opted out of the Class Action. The complaint names the Company and certain of our current and former directors and officers as defendants, and alleges that the defendants violated Sections 10(b) and 20(a) of the Securities Exchange Act of 1934, and violated state law, by making false and

misleading statements regarding the Company's financial performance and prospects. The action includes claims for recessionary and actual damages, interest, punitive damages, and an award of reasonable attorneys' fees, expert fees, and costs. The Company believes it has meritorious defenses and will vigorously defend this action.

The Arizona District Court has extended the deadline for responding to the complaint until after the Ninth Circuit resolves the appeal in the Smilovits matter described above. Accordingly, we are not in a position to assess whether any loss or adverse effect on our financial condition is probable or remote or to estimate the range of potential loss, if any.

Table of Contents

Derivative Actions

On April 3, 2012, a derivative action titled Tsevegmid v. Ahearn, et al., Case No. 1:12-cv-00417-CJB, was filed by a putative stockholder on behalf of the Company in the United States District Court for the District of Delaware (hereafter "Delaware District Court") against certain current and former directors and officers of the Company, alleging breach of fiduciary duties and unjust enrichment. The complaint generally alleges that from June 1, 2008, to March 7, 2012, the defendants caused or allowed false and misleading statements to be made concerning the Company's financial performance and prospects. The action includes claims for, among other things, damages in favor of the Company, certain corporate actions to purportedly improve the Company's corporate governance, and an award of costs and expenses to the putative plaintiff stockholder, including attorneys' fees. On April 10, 2012, a second derivative complaint was filed in the Delaware District Court. The complaint, titled Brownlee v. Ahearn, et al., Case No. 1:12-cv-00456-CJB, contains similar allegations and seeks similar relief to the Tsevegmid action. By court order on April 30, 2012, pursuant to the parties' stipulation, the Tsevegmid action and the Brownlee action were consolidated into a single action in the Delaware District Court. On May 15, 2012, defendants filed a motion to challenge Delaware as the appropriate venue for the consolidated action. On March 4, 2013, the magistrate judge issued a Report and Recommendation recommending to the court that defendants' motion be granted and that the case be transferred to the Arizona District Court. On July 12, 2013, the court adopted the magistrate judge's Report and Recommendation and ordered the case transferred to the Arizona District Court. The transfer was completed on July 15, 2013.

On April 12, 2012, a derivative complaint was filed in the Arizona District Court, titled Tindall v. Ahearn, et al., Case No. 2:12-cv-00769-ROS. In addition to alleging claims and seeking relief similar to the claims and relief asserted in the Tsevegmid and Brownlee actions, the Tindall complaint alleges violations of Sections 14(a) and 20(b) of the Securities Exchange Act of 1934. On April 19, 2012, a second derivative complaint was filed in the Arizona District Court, titled Nederhood v. Ahearn, et al., Case No. 2:12-cv-00819-JWS. The Nederhood complaint contains similar allegations and seeks similar relief to the Tsevegmid and Brownlee actions. On May 17, 2012 and May 30, 2012, respectively, two additional derivative complaints, containing similar allegations and seeking similar relief as the Nederhood complaint, were filed in Arizona District Court: Morris v. Ahearn, et al., Case No. 2:12-cv-01031-JAT and Tan v. Ahearn, et al., 2:12-cv-01144-NVW.

On July 17, 2012, the Arizona District Court issued an order granting First Solar's motion to transfer the derivative actions to Judge David Campbell, the judge to whom the Smilovits class action is assigned. On August 8, 2012, the court consolidated the four derivative actions pending in Arizona District Court, and on August 31, 2012, plaintiffs filed an amended complaint. Defendants filed a motion to stay the action on September 14, 2012. On December 17, 2012, the Arizona District Court granted defendants' motion to stay pending resolution of the Smilovits class action. On August 13, 2013, Judge Campbell consolidated the two derivative actions transferred from the Delaware District Court with the stayed Arizona derivative actions. On February 19, 2016, the Arizona District Court issued an order lifting the stay in part. Pursuant to the February 19, 2016 order, the plaintiffs filed an amended complaint on March 11, 2016, and defendants filed a motion to dismiss the amended complaint on April 1, 2016. On June 30, 2016, the Arizona District Court granted defendants' motion to dismiss the insider trading and unjust enrichment claims with prejudice, and further granted defendants' motion to dismiss the claims for alleged breaches of fiduciary duties with leave to amend. On July 15, 2016, plaintiffs filed a motion to reconsider certain aspects of the order granting defendants' motion to dismiss. The Arizona District Court denied the plaintiffs' motion for reconsideration on August 4, 2016. On July 15, 2016, plaintiffs filed a motion to intervene, lift the stay, and unseal documents in the Securities Class Action. On September 30, 2016, the Arizona District Court denied plaintiffs' motion. On October 17, 2016, plaintiffs filed a notice of appeal of the September 30, 2016 order. The Arizona District Court has set a deadline of October 31, 2016 for plaintiffs to file an amended complaint. On October 27, 2016, plaintiffs filed a motion to extend the deadline to file an amended complaint. The Arizona District Court has not ruled on plaintiffs' motion to extend the deadline.

On July 16, 2013, a derivative complaint was filed in the Superior Court of Arizona, Maricopa County, titled Bargar, et al. v. Ahearn, et al., Case No. CV2013-009938, by a putative stockholder against certain current and former directors and officers of the Company. The complaint contains similar allegations to the Delaware and Arizona derivative cases, and includes claims for, among other things, breach of fiduciary duties, insider trading, unjust enrichment, and waste of corporate assets. By court order on October 3, 2013, the Superior Court of Arizona, Maricopa County granted the parties' stipulation to defer defendants' response to the complaint pending resolution of the Smilovits class action or expiration of the stay issued in the consolidated derivative actions in the Arizona District Court. On November 5, 2013, the matter was placed on the court's inactive calendar. The parties have jointly sought and obtained multiple requests to continue the action on the inactive calendar. Most recently, on June 30, 2016, the court entered an order continuing the action on the inactive calendar until November 30, 2016.

The Company believes that plaintiffs in the derivative actions lack standing to pursue litigation on behalf of First Solar. The derivative actions are still in the initial stages and there has been no discovery. Accordingly, we are not in a position to assess whether any loss or adverse effect on our financial condition is probable or remote or to estimate the range of potential loss, if any.

Table of Contents

Department of Labor Proceeding

In March 2015, the Wage and Hour Division of the U.S. Department of Labor (the "DOL") notified our wholly-owned subsidiary First Solar Electric, LLC ("FSE") of the DOL's findings following a labor standards compliance review under the Davis Bacon and Related Acts at the Agua Caliente project in southwestern Arizona. FSE served as the general contractor for the project. The DOL alleges that certain workers at the project were misclassified and, as a result of that misclassification, were not paid the required prevailing wage. We disagree with certain of the DOL's investigative findings and are currently reviewing those issues of disagreement with the DOL. Possible adverse outcomes include the payment of back wages and debarment of FSE and its affiliates from doing certain business with the U.S. federal government. We cannot predict the ultimate outcome of the DOL proceeding.

14. Share-Based Compensation

We measure share-based compensation cost at the grant date based on the fair value of the award and recognize this cost as share-based compensation expense over the required or estimated service period for awards expected to vest. The share-based compensation expense that we recognized in our condensed consolidated statements of operations for the three and nine months ended September 30, 2016 and 2015 was as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Cost of sales	$1,612	$3,048	$6,255	$8,539
Research and development	849	997	2,704	3,099
Selling, general and administrative	3,435	8,164	15,508	21,483
Production start-up	—	4	—	25
Total share-based compensation expense	$5,896	$12,213	$24,467	$33,146

The following table presents our share-based compensation expense by type of award for 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
Restricted and performance stock units	$4,939	$10,579	$21,969	$29,350
Unrestricted stock	420	332	1,258	995
Stock purchase plan	377	458	1,071	1,127
	5,736	11,369	24,298	31,472
Net amount released from inventory	160	844	169	1,674
Total share-based compensation expense	$5,896	$12,213	$24,467	$33,146

Share-based compensation expense capitalized in inventory was $3.2 million and $3.4 million at September 30, 2016 and December 31, 2015, respectively. As of September 30, 2016, we had $28.6 million of unrecognized share-based compensation expense related to unvested restricted stock units and rights under our stock purchase plan, which we expect to recognize as expense over a weighted-average period of approximately 1.4 years.

The estimated forfeiture rate used to record compensation expense is based primarily on historical forfeitures and is adjusted periodically based on actual results. At September 30, 2016 and December 31, 2015, our forfeiture rate was 9.5%.

39

Table of Contents

15. Income Taxes

Our effective tax rate was (2.5)% and 2.3% for the nine months ended September 30, 2016 and 2015, respectively. The decrease in our effective tax rate was primarily driven by a higher percentage of profits earned in lower tax jurisdictions. The provision for income taxes differed from the amount computed by applying the statutory U.S. federal income tax rate of 35.0% primarily due to the benefit associated with foreign income taxed at lower rates, including the beneficial impact of our Malaysian tax holiday, and the reversal of liabilities for various uncertain tax positions, partially offset by additional tax expense attributable to losses in jurisdictions for which no tax benefits could be recorded.

Our Malaysian subsidiary has been granted a long-term tax holiday that expires in 2027. The tax holiday, which generally provides for a full exemption from Malaysian income tax, is conditional upon our continued compliance with meeting certain employment and investment thresholds, which we are currently in compliance with and expect to continue to comply with through the expiration of the tax holiday in 2027.

In July 2016, we received a letter from a foreign tax authority confirming our residency status in that jurisdiction. In accordance with the letter, we reversed a liability associated with an uncertain tax position related to the income of a foreign subsidiary. Accordingly, we recorded a benefit of $35.4 million through the tax provision from the reversal of such liability during the three months ended September 30, 2016.

In April 2015, we received a private letter ruling in a foreign jurisdiction related to the timing of the deduction for certain of our obligations. In accordance with the private letter ruling, we will begin treating these obligations as deductible when we actually make payments on the obligations, which are expected to occur subsequent to the expiration of our tax holiday. Accordingly, we recorded a net benefit of $30.3 million through the tax provision to establish a deferred tax asset associated with the future deductibility of these obligations during the nine months ended September 30, 2015.

We account for uncertain tax positions pursuant to the recognition and measurement criteria under ASC 740. During the three months ended September 30, 2016, we recognized a benefit of $12.8 million from the expiration of the statute of limitations for various uncertain tax positions. It is reasonably possible that an additional $11.0 million of uncertain tax positions will be recognized within the next 12 months.

We use the deferral method of accounting for investment tax credits under which the credits are recognized as reductions in the carrying value of the related assets. The use of the deferral method also results in a basis difference from the recognition of a deferred tax asset and an immediate income tax benefit for the future tax depreciation of the related assets. Such basis differences are accounted for pursuant to the income statement method.

We are subject to audit by U.S. federal, state, local, and foreign tax authorities. During the nine months ended September 30, 2015, we settled a tax audit in Spain, which resulted in a discrete tax expense of $3.0 million. We are currently under examination in India, Chile, and Germany. We believe that adequate provisions have been made for any adjustments that may result from tax examinations. However, the outcome of tax audits cannot be predicted with certainty. If any issues addressed by our tax audits are not resolved in a manner consistent with our expectations, we could be required to adjust our provision for income taxes in the period such resolution occurs.

Table of Contents

16. Net Income per Share

Basic net income per share is computed by dividing net income by the weighted-average number of common shares outstanding for the period. Diluted net income per share is computed giving effect to all potentially dilutive common shares, including restricted and performance stock units and stock purchase plan shares, unless there is a net loss for the period. In computing diluted net income per share, we utilize the treasury stock method.

The calculation of basic and diluted net income per share for the three and nine months ended September 30, 2016 and 2015 was as follows (in thousands, except per share amounts):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Basic net income per share				
Numerator:				
Net income	$154,146	$349,318	$338,119	$382,286
Denominator:				
Weighted-average common shares outstanding	103,339	100,906	102,496	100,713
Diluted net income per share				
Denominator:				
Weighted-average common shares outstanding	103,339	100,906	102,496	100,713
Effect of restricted and performance stock units and stock purchase plan shares	394	1,393	566	1,132
Weighted-average shares used in computing diluted net income per share	103,733	102,299	103,062	101,845
Net income per share:				
Basic	$1.49	$3.46	$3.30	$3.80
Diluted	$1.49	$3.41	$3.28	$3.75

The following table summarizes the potential shares of common stock that were excluded from the computation of diluted net income per share for the three and nine months ended September 30, 2016 and 2015 as they would have had an anti-dilutive effect (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Anti-dilutive shares	411	46	282	64

Table of Contents

17. Comprehensive Income and Accumulated Other Comprehensive Income

Comprehensive income, which includes foreign currency translation adjustments, unrealized gains and losses on available-for-sale securities, and unrealized gains and losses on derivative instruments designated and qualifying as cash flow hedges, the impact of which has been excluded from net income and reflected as components of stockholders' equity, was as follows for the three and nine months ended September 30, 2016 and 2015 (in thousands):

	Three Months Ended September 30,	
	2016	2015
Net income	$154,146	$349,318
Other comprehensive income (loss), net of tax:		
Foreign currency translation adjustments	1,418	(1,103)
Unrealized (loss) gain on marketable securities and restricted investments for the period, net of tax of $309 and $(1,366)	(7,656)	17,944
Less: reclassification for gains included in net income, net of tax of $36 and $0	(261)	—
Unrealized (loss) gain on marketable securities and restricted investments	(7,917)	17,944
Unrealized loss on derivative instruments for the period, net of tax of $59 and $18	(276)	(7,360)
Less: reclassification for losses included in net income, net of tax of $0 and $765	—	6,022
Unrealized loss on derivative instruments	(276)	(1,338)
Other comprehensive (loss) income, net of tax	(6,775)	15,503
Comprehensive income	$147,371	$364,821

	Nine Months Ended September 30,	
	2016	2015
Net income	$338,119	$382,286
Other comprehensive income (loss), net of tax:		
Foreign currency translation adjustments	4,635	(14,001)
Unrealized gain (loss) on marketable securities and restricted investments for the period, net of tax of $(3,771) and $450	62,841	(4,409)
Less: reclassification for gains included in net income, net of tax of $2,940 and $0	(35,162)	—
Unrealized gain (loss) on marketable securities and restricted investments	27,679	(4,409)
Unrealized gain (loss) on derivative instruments for the period, net of tax of $1 and $(182)	5,143	(10,832)
Less: reclassification for losses included in net income, net of tax of $0 and $2,278	(3,073)	7,593
Unrealized gain (loss) on derivative instruments	2,070	(3,239)
Other comprehensive income (loss), net of tax	34,384	(21,649)
Comprehensive income	$372,503	$360,637

The following tables reflect the changes in accumulated other comprehensive income, net of tax, for the nine months ended September 30, 2016 and 2015 (in thousands):

	Foreign Currency Translation Adjustment	Unrealized Gain (Loss) on Marketable Securities and Restricted Investments	Unrealized Gain (Loss) on Derivative Instruments	Total
Balance as of December 31, 2015	$ (69,769)	$ 86,884	$ (1,635)	$15,480
Other comprehensive income before reclassifications	4,635	62,841	5,143	72,619

Amounts reclassified from accumulated other comprehensive income	—	(35,162)	(3,073)	(38,235)
Net other comprehensive income	4,635	27,679	2,070	34,384
Balance as of September 30, 2016	$ (65,134)	$ 114,563	$ 435	$ 49,864

Table of Contents

	Foreign Currency Translation Adjustment	Unrealized Gain (Loss) on Marketable Securities and Restricted Investments	Unrealized Gain (Loss) on Derivative Instruments	Total
Balance as of December 31, 2014	$ (53,337)	$ 102,299	$ 1,178	$50,140
Other comprehensive loss before reclassifications	(14,001)	(4,409)	(10,832)	(29,242)
Amounts reclassified from accumulated other comprehensive income	—	—	7,593	7,593
Net other comprehensive loss	(14,001)	(4,409)	(3,239)	(21,649)
Balance as of September 30, 2015	$ (67,338)	$ 97,890	$ (2,061)	$28,491

Details of Accumulated Other Comprehensive Income	Amount Reclassified for the Nine Months Ended September 30, 2016	2015	Income Statement Line Item
Gains and (losses) on marketable securities and restricted investments:			
	$38,102	$—	Other income (expense), net
	(2,940)	—	Tax expense
	$35,162	$—	Total, net of tax
Gains and (losses) on derivative contracts:			
Foreign exchange forward contracts	$—	$1,782	Net sales
Foreign exchange forward contracts	—	5,509	Cost of sales
Cross currency swap contract	4,896	(12,126)	Foreign currency loss, net
Interest rate and cross currency swap contracts	(1,823)	(480)	Interest expense, net
	3,073	(5,315)	Total before tax
	—	(2,278)	Tax expense
	$3,073	$(7,593)	Total net of tax

18. Segment Reporting

We operate our business in two segments. Our components segment involves the design, manufacture, and sale of CdTe solar modules, which convert sunlight into electricity. Third-party customers of our components segment include integrators and operators of PV solar power systems. Our second segment is our fully integrated systems business (“systems segment”), through which we provide complete turn-key PV solar power systems, or solar solutions, that draw upon our capabilities, which include (i) project development, (ii) EPC services, and (iii) O&M services. We may provide our full EPC services or any combination of individual products and services within our EPC capabilities depending upon the customer and market opportunity. All of our systems segment products and services are for PV solar power systems, which primarily use our solar modules, and we sell such products and services to utilities, independent power producers, commercial and industrial companies, and other system owners. Additionally within our systems segment, we may temporarily own and operate certain of our PV solar power systems for a period of time based on strategic opportunities.

In our reportable segment financial disclosures, we include an allocation of net sales value for all solar modules manufactured by our components segment and installed in projects sold or built by our systems segment in the net sales of our components segment. In the gross profit of our reportable segment disclosures, we include the corresponding cost of sales value for the solar modules installed in projects sold or built by our systems segment in the components segment. The cost of solar modules is comprised of the manufactured cost incurred by our components segment.

See Note 23. “Segment and Geographical Information” in our Annual Report on Form 10-K for the year ended December 31, 2015 for a complete discussion of our segment reporting.

Table of Contents

Financial information about our reportable segments during the three and nine months ended September 30, 2016 and 2015 was as follows (in thousands):

	Three Months Ended September 30, 2016			Three Months Ended September 30, 2015		
	Components	Systems	Total	Components	Systems	Total
Net sales	$427,812	$260,217	$688,029	$441,530	$829,715	$1,271,245
Gross profit (2)	138,676	47,604	186,280	165,997	318,368	484,365
Depreciation and amortization expense	52,204	5,849	58,053	61,508	3,477	64,985
Income (loss) before taxes (1) (2)	109,217	(16,067)	93,150	137,878	260,009	397,887

	Nine Months Ended September 30, 2016			Nine Months Ended September 30, 2015		
	Components	Systems	Total	Components	Systems	Total
Net sales	$1,167,721	$1,303,173	$2,470,894	$988,591	$1,648,080	$2,636,671
Gross profit (2)	329,803	310,587	640,390	243,222	444,607	687,829
Depreciation and amortization expense	160,770	12,698	173,468	183,286	10,274	193,560
Income before taxes (1) (2)	183,831	120,930	304,761	116,877	272,903	389,780

	September 30, 2016			December 31, 2015		
	Components	Systems	Total	Components	Systems	Total
Goodwill (1)	$10,055	$68,833	$78,888	$16,152	$68,833	$84,985
Total assets	4,817,929	3,269,731	8,087,660	4,037,955	3,278,376	7,316,331

(1) The operating results for our components segment for the three and nine months ended September 30, 2016 included $1.4 million and $86.0 million, respectively, of restructuring and asset impairment charges associated with the end of our crystalline silicon module production. See Note 4. “Restructuring and Asset Impairments” to our condensed consolidated financial statements for more information regarding these restructuring activities.

(2) The operating result for our components segment for the three and nine months ended September 30, 2015 included the impact of an $80.0 million reduction in our module collection and recycling obligation. See Note 13. “Commitments and Contingencies” to our condensed consolidated financial statements for more information regarding the change in this obligation.

Product Revenue

The following table sets forth the total amounts of solar module and solar power system net sales recognized for the three and nine months ended September 30, 2016 and 2015. For the purposes of the following table, (i) solar module revenue is composed of revenue from the sale of solar modules to third parties, which does not include any modules sold as part of our PV solar power systems, and (ii) solar power system revenue is composed of revenue from the sale of PV solar power systems and related products and services, including any modules installed in such systems and any revenue generated by such systems (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Solar module revenue	$213,045	$60,836	$425,776	$180,792
Solar power system revenue	474,984	1,210,409	2,045,118	2,455,879
Net sales	$688,029	$1,271,245	$2,470,894	$2,636,671

44

Table of Contents

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

Cautionary Statement Regarding Forward-Looking Statements

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of the Securities Exchange Act of 1934 (the "Exchange Act") and the Securities Act of 1933, which are subject to risks, uncertainties, and assumptions that are difficult to predict. All statements in this Quarterly Report on Form 10-Q, other than statements of historical fact, are forward-looking statements. These forward-looking statements are made pursuant to safe harbor provisions of the Private Securities Litigation Reform Act of 1995. The forward-looking statements include statements, among other things, concerning: our business strategy, including anticipated trends and developments in and management plans for our business and the markets in which we operate; future financial results, operating results, revenues, gross margin, operating expenses, products, projected costs (including estimated future module collection and recycling costs), warranties, solar module efficiency and cost reduction roadmaps, restructuring, product reliability, investments in unconsolidated affiliates, and capital expenditures; our ability to continue to reduce the cost per watt of our solar modules; our ability to reduce the costs to construct PV solar power systems; research and development programs and our ability to improve the conversion efficiency of our solar modules; our ability to expand manufacturing capacity worldwide; sales and marketing initiatives; and competition. In some cases, you can identify these statements by forward-looking words, such as "estimate," "expect," "anticipate," "project," "plan," "intend," "seek," "believe," "forecast," "foresee," "likely," "may," "should," "goal," "target," "might," "will," "could," the negative or plural of these words and other comparable terminology. Forward-looking statements are only predictions based on our current expectations and our projections about future events. All forward-looking statements included in this Quarterly Report on Form 10-Q are based upon information available to us as of the filing date of this Quarterly Report on Form 10-Q. You should not place undue reliance on these forward-looking statements. We undertake no obligation to update any of these forward-looking statements for any reason. These forward-looking statements involve known and unknown risks, uncertainties, and other factors that may cause our actual results, levels of activity, performance, or achievements to differ materially from those expressed or implied by these statements. These factors include, but are not limited to, the matters discussed in Part I, Item 1A: "Risk Factors" of our Annual Report on Form 10-K for the year ended December 31, 2015 and elsewhere in this Quarterly Report on Form 10-Q, Current Reports on Form 8-K, and other reports filed with the Securities and Exchange Commission (the "SEC"). You should carefully consider the risks and uncertainties described under this section.

The following discussion and analysis should be read in conjunction with our condensed consolidated financial statements and the accompanying notes contained in this Quarterly Report on Form 10-Q. Unless expressly stated or the context otherwise requires, the terms "First Solar," "the Company," "we," "us," and "our" refer to First Solar, Inc. and its subsidiaries. When referring to our manufacturing capacity, total sales, and solar module sales, the unit of electricity in watts for megawatts ("MW") and gigawatts ("GW") is direct current ("DC") unless otherwise noted. When referring to our PV solar power systems, the unit of electricity in watts for MW and GW is alternating current ("AC") unless otherwise noted.

Table of Contents

Executive Overview

We are a leading global provider of comprehensive photovoltaic ("PV") solar energy solutions. We design, manufacture, and sell PV solar modules with an advanced thin-film semiconductor technology and also develop, design, construct, and sell PV solar power systems that primarily use the modules we manufacture. Additionally, we provide operations and maintenance ("O&M") services to system owners that use solar modules manufactured by us or by other third-party manufacturers. We have substantial, ongoing research and development efforts focused on module and system-level innovations. We are the world's largest thin-film PV solar module manufacturer and one of the world's largest PV solar module manufacturers. Our mission is to create enduring value by enabling a world powered by clean, affordable solar energy.

Certain highlights of our financial results and other key operational developments for three months ended September 30, 2016 include the following:

- Net sales for the three months ended September 30, 2016 decreased by 46% to $0.7 billion compared to $1.3 billion for the same period in 2015. The decrease in net sales was primarily driven by lower revenue from construction on the Desert Stateline project, the substantial completion of the Silver State South and McCoy projects in 2016, the substantial completion of the Imperial Solar Energy Center West project in 2015, and lower revenue from module plus transactions. This decrease in revenue was partially offset by higher revenue from the East Pecos Solar and Taylor projects on which we commenced construction in 2016 and late 2015, respectively, and an increase in the volume of modules sold to third parties.

- Gross profit for the three months ended September 30, 2016 decreased 11.0 percentage points to 27.1% from 38.1% for the same period in 2015. The decrease in gross profit was primarily due to the mix of lower gross profit projects sold and under construction and the reduction in our module collection and recycling obligation during the three months ended September 30, 2015, partially offset by higher gross margins on modules sold directly to third parties and as part of our systems business projects, driven mainly by reductions in the cost per watt of our modules.

- As of September 30, 2016, we had 30 installed production lines with an annual global manufacturing capacity of approximately 3.2 GW at our manufacturing facilities in Perrysburg, Ohio and Kulim, Malaysia. We produced 0.8 GW of solar modules during the three months ended September 30, 2016, which represented a 19% increase from the same period in 2015. This increase in production was primarily driven by additional manufacturing capacity, improved module conversion efficiencies, and higher capacity utilization. We expect to produce approximately 3.1 GW of solar modules during 2016.

- During the three months ended September 30, 2016, we ran our manufacturing facilities at 97% capacity utilization, which represented a 3 percentage point increase from the same period in 2015.

- The average conversion efficiency of our modules was 16.5% for the three months ended September 30, 2016, which was an improvement of 0.7 percentage points from the three months ended September 30, 2015.

Market Overview

The solar industry continues to be characterized by intense pricing competition, both at the module and system levels. In particular, module average selling prices in the United States and several other key markets have experienced an accelerated decline in recent months, and module average selling prices are expected to continue to decline to some degree in the short and medium terms according to market forecasts. In the aggregate, we believe manufacturers of solar modules and cells have, relative to global demand, significant installed production capacity and the ability for additional capacity expansion. We believe the solar industry may from time to time experience periods of structural

imbalance between supply and demand (i.e., where production capacity exceeds global demand), and that such periods will put pressure on pricing. We believe the solar industry is currently in such a period. Additionally, intense competition at the system level may result in an environment in which pricing falls rapidly, thereby further increasing demand for solar energy solutions but constraining the ability for project developers; engineering, procurement, and construction ("EPC") companies; and vertically-integrated solar companies such as First Solar to sustain meaningful and consistent profitability. In light of such market realities, we are executing our Long Term Strategic Plan, Vision 2020 ("Long Term Strategic Plan") as described below, under which we are focusing on our competitive strengths. Such strengths include our advanced module and system technologies as well as our differentiated, vertically-integrated business model that enables us to provide utility-scale PV solar energy solutions to key markets with immediate electricity needs.

Table of Contents

Worldwide solar markets continue to develop, in part aided by demand elasticity resulting from declining industry average selling prices, both at the module and system level, which make solar power more affordable to new markets. We are developing, constructing, or operating multiple solar projects around the world, many of which are the largest or among the largest in their regions. In North America, we continue to execute on our advanced-stage utility-scale project pipeline, which includes the construction of some of the world's largest PV solar power systems. We expect a substantial portion of our consolidated net sales, operating income, and cash flows through 2019 to be derived from these projects. We continue to advance the development and selling efforts for the other projects included in our advanced-stage utility-scale project pipeline, develop our early-to-mid stage project pipeline, and evaluate acquisitions of projects to expand our advanced-stage utility-scale project pipeline.

Lower industry module and system pricing, while currently challenging for certain solar manufacturers (particularly manufacturers with high cost structures), is expected to continue to contribute to global market diversification and volume elasticity. Over time, declining average selling prices are consistent with the erosion of one of the primary historical constraints to widespread solar market penetration, its affordability. In the near term, however, declining average selling prices are expected to adversely affect our results of operations relative to prior years. If competitors reduce pricing to levels below their costs, bid aggressively low prices for power purchase agreements ("PPAs") and EPC agreements, or are able to operate at negative or minimal operating margins for sustained periods of time, our results of operations could be further adversely affected. In certain markets in California and elsewhere, an oversupply imbalance at the system level may further contribute to reduced short-to-medium term demand for new solar installations relative to prior years, lower PPA pricing, and lower margins on module and systems sales to such markets. We continue to mitigate these uncertainties in part by executing on our module technology improvements, continuing the development of key markets, and implementing certain other cost reduction initiatives, including both manufacturing and balance of systems ("BoS") costs.

We continue to face intense competition from manufacturers of crystalline silicon solar modules and other types of solar modules and PV solar power systems. Solar module manufacturers compete with one another in price and in several module value attributes, including conversion efficiency, energy yield, and reliability, and, with respect to PV solar power systems, net present value, return on equity, and levelized cost of electricity ("LCOE"), meaning the net present value of total life cycle costs of the system divided by the quantity of energy which is expected to be produced over the system's life. As noted above, competition on the basis of selling price per watt has intensified in recent months, resulting in sharp declines in module average selling prices in several key markets. In addition, we believe crystalline silicon cell and wafer manufacturers have begun transitioning from lower efficiency Back Surface Field ("BSF") multi-crystalline cells (the legacy technology against which we generally compete in our markets) to higher efficiency Passivated Emitter Rear Contact ("PERC") multi-crystalline and mono-crystalline cells at potentially competitive cost structures.

We believe we are among the lowest cost PV module manufacturers in the solar industry on a module cost per watt basis, based on publicly available information. This cost competitiveness is reflected in the price at which we sell our modules and fully integrated PV solar power systems and enables our systems to compete favorably. Our cost competitiveness is based in large part on our module conversion efficiency, proprietary manufacturing technology (which enables us to produce a cadmium telluride or "CdTe" module in less than 3.5 hours using a continuous and highly automated industrial manufacturing process, as opposed to a batch process), our scale, and our operational excellence. In addition, our CdTe modules use approximately 1-2% of the amount of the semiconductor material that is used to manufacture traditional crystalline silicon solar modules. The cost of polysilicon is a significant driver of the manufacturing cost of crystalline silicon solar modules, and the timing and rate of change in the cost of silicon feedstock and polysilicon could lead to changes in solar module pricing levels. Polysilicon costs have had periods of decline over the past several years, and polysilicon consumption per cell has been reduced through the adoption of diamond wafer saw technology, contributing to a decline in our relative manufacturing cost competitiveness over traditional crystalline silicon module manufacturers.

Given the smaller size (sometimes referred to as form factor) of our current CdTe modules compared to certain types of crystalline silicon modules, we may incur higher labor and BoS costs associated with the construction of systems using our modules. Thus, to compete effectively on an LCOE basis, our current modules may need to maintain a certain cost advantage per watt compared to crystalline silicon-based modules with larger form factors. As part of our BoS cost reduction roadmap, we recently introduced next generation module technologies, which include larger form factors and substantially higher wattages than our current CdTe modules, thereby reducing the number of electrical connections and hardware required for installation. The resulting labor and material savings are expected to represent a significant improvement versus current technologies and a substantial reduction in total installed costs, once production of such module technologies begins, resulting in improved project returns as BoS costs represent a significant portion of the costs associated with the construction of a typical utility-scale system.

Table of Contents

In terms of energy yield, in many climates, our CdTe modules provide a significant energy yield advantage over conventional crystalline silicon solar modules (BSF and PERC) of equivalent efficiency rating. For example, in humid climates, our CdTe modules provide a superior spectral response, and in hot climates, our CdTe modules provide a superior temperature coefficient. As a result, at temperatures above 25°C (standard test conditions), our CdTe modules produce more energy per rated watt than competing conventional crystalline silicon solar modules. This advantage provides stronger system performance in high temperature climates, which is particularly advantageous as the majority of a system's generation, on average (in typical high insolation climates), occurs when module temperatures are above 25°C. In addition, our CdTe modules provide a better shading response than competing conventional crystalline silicon solar modules, which may lose up to three times as much power as CdTe modules when shading occurs. As a result of these factors, our PV solar power systems can produce more annual energy at a lower LCOE than competing systems with the same nameplate capacity.

While our modules and PV solar power systems are generally competitive in cost, reliability, and performance attributes, there can be no guarantee such competitiveness will continue to exist in the future to the same extent or at all. Any declines in the competitiveness of our products could result in additional margin compression, further declines in the average selling prices of our modules and systems, erosion in our market share for modules and systems, decreases in the rate of net sales growth, and/or declines in overall net sales. We continue to focus on enhancing the competitiveness of our solar modules and PV solar power systems by accelerating progress along our module technology and cost reduction roadmaps, continuing to make technological advances at the system level, using innovative installation techniques and know-how, and leveraging volume procurement around standardized hardware platforms. Such procurement efforts include the use of high-quality, conventional BoS components as we have begun phasing out the use of our proprietary trackers and fixed mounting structures to further reduce system costs and streamline our operations.

Certain Trends and Uncertainties

We believe that our operations may be favorably or unfavorably impacted by the following trends and uncertainties that may affect our financial condition and results of operations. See Part I, Item 1A: "Risk Factors" of our Annual Report on Form 10-K for the year ended December 31, 2015 filed with the SEC on February 24, 2016 for a discussion of other risks (the "Risk Factors") that may affect our financial condition and results of operations.

Long Term Strategic Plan, Vision 2020

Our Long Term Strategic Plan is a long-term roadmap to achieve our technology, growth, and cost leadership objectives. In executing our Long Term Strategic Plan, we are focusing on providing utility-scale PV solar energy solutions using our modules to key geographic markets that we believe have a compelling need for mass-scale PV electricity, including markets throughout the Americas, Asia, the Middle East, and Africa. As part of our Long Term Strategic Plan, we are focusing on opportunities in which our PV solar energy solutions can compete directly with fossil fuel offerings on an LCOE or similar basis, or complement such fossil fuel electricity offerings. Execution of the Long Term Strategic Plan entails a prioritization of market opportunities worldwide relative to our core strengths and a corresponding allocation of resources around the globe. This prioritization involves a focus on our core module and utility-scale offerings and exists within a current market environment that includes rooftop and distributed generation solar, particularly in the U.S. While it is unclear how rooftop and distributed generation solar might impact our core utility-scale offerings in the next several years, we believe that utility-scale solar will continue to be a compelling solar offering for companies with technology and cost leadership and will continue to represent an increasing portion of the overall electricity generation mix.

We are closely evaluating and managing the appropriate level of resources required as we pursue the most advantageous and cost effective projects and partnerships in our target markets. We have dedicated, and intend to

continue to dedicate, significant capital and human resources to reduce the total installed cost of PV solar energy, to optimize the design and logistics around our PV solar energy solutions, and to ensure that our solutions integrate well into the overall electricity ecosystem of each specific market. We expect that, over time, an increasing portion of our consolidated net sales, operating income, and cash flows may come from solar offerings in the key geographic markets described above as we execute on our Long Term Strategic Plan. The timing, execution, and financial impacts of our Long Term Strategic Plan are subject to risks and uncertainties, as described in the Risk Factors. We are focusing our resources in those markets and energy applications in which solar power can be a least-cost, best-fit energy solution, particularly in regions with high solar resources, significant current or projected electricity demand, and/or relatively high existing electricity prices. As part of these efforts, we continue to optimize resources globally, including business development, sales personnel, and other supporting professional staff in target markets.

Table of Contents

Joint ventures or other strategic arrangements with partners are a key part of our Long Term Strategic Plan, and we generally use such arrangements to expedite our penetration of various key 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. We continue to develop relationships with customers in these strategic markets with a view to creating opportunities for utility-scale PV solar power systems. We sell such systems directly to end customers, including utilities, independent power producers, commercial and industrial companies, and other system owners. Depending on the market opportunity, our sales offerings may range from module-only sales, to module sales with a range of development, EPC services, and other solutions, to full turn-key PV solar power system sales. We expect these offerings to continue to evolve over time as we work with our customers to optimize how our PV solar energy solutions can best meet our customers' energy and economic needs.

In order to create or maintain a market position in certain strategically targeted markets, our offerings from time to time may need to be competitively priced at levels associated with minimal gross profit margins, which may adversely affect our results of operations. We expect the profitability associated with our various sales offerings to vary from one another over time, and possibly vary from our internal long-range profitability expectations and targets, depending on the market opportunity and the relative competitiveness of our offerings compared with other energy solutions, fossil fuel-based or otherwise, that are available to potential customers. In addition, as we execute on our Long Term Strategic Plan, we will continue to monitor and adapt to any changing dynamics in the market set of potential buyers of solar project assets. Market environments with few potential project buyers and a higher cost of capital would generally exert downward pressure on the potential revenue from the uncontracted solar project assets we are developing, whereas, conversely, market environments with many potential project buyers and a lower cost of capital would likely have a favorable impact on the potential revenue from such uncontracted solar project assets.

We expect to use our working capital, project financing, or availability under our Revolving Credit Facility to finance the construction of certain PV solar power systems for strategic purposes or to maximize the value of such systems at the time of sale. From time to time, we may temporarily own and operate certain PV solar power systems, often with the intention to sell at a later date. We may also elect to construct and temporarily retain ownership interests in systems for which there is no PPA with an off-taker, such as a utility, but rather an intent to sell the electricity produced by the system on an open contract basis until the system is sold. Additionally, our joint ventures and other business arrangements with strategic partners have and may in the future result in us temporarily retaining a noncontrolling ownership interest in the underlying systems projects we develop, supply modules to, or construct potentially for a period of up to several years. Such business arrangements could become increasingly important to our competitive profile in markets globally, including North America. In each of the above mentioned examples, we may retain such ownership interests in a consolidated or unconsolidated separate entity.

We continually evaluate forecasted global demand, competition, and our addressable market, and seek to effectively balance manufacturing capacity with market demand and the nature and extent of our competition. To the extent we make investments to add or otherwise modify our manufacturing capacity in response to market demand and competition, such investments would require significant internal and possibly external sources of liquidity and would be subject to certain risks and uncertainties described in the Risk Factors, including those described under the headings "Our future success depends on our ability to effectively balance manufacturing production with market demand and, when necessary, continue to build new manufacturing plants over time in response to such demand and add production lines in a cost-effective manner, all of which are subject to risks and uncertainties" and "If any future production lines are not built in line with our committed schedules it may impair any future growth plans. If any future production lines do not achieve operating metrics similar to our existing production lines, our solar modules could perform below expectations and cause us to lose customers." In addition, to the extent such capacity expansion involves the production of modules with a larger inherent form factor than our Series 4 modules, the useful lives of certain existing manufacturing equipment and stored assets, specifically designed to produce our existing smaller form

factor modules, may become shorter than previously estimated, which could result in a decrease in the value, and possible impairment, of such equipment and stored assets, and possibly have a significant adverse impact on our results of operations.

Table of Contents

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"). As part of the IPO, we contributed various projects to a subsidiary of the Partnership in exchange for an ownership interest in the entity. The Partnership owns and operates a portfolio of solar energy generation projects and is expected to acquire additional projects from the Sponsors. In addition, the Partnership is expected to provide the Sponsors with a competitive cost of capital and greater optionality in the project sales process. Given the broader economic factors currently impacting the yieldco sector in general, including yieldco equity valuations generally, the timing and execution of project sales to the Partnership are subject to market conditions. For additional information, see the Risk Factors in our Annual Report on Form 10-K for the year ended December 31, 2015 and "Note 10. Investments in Unconsolidated Affiliates and Joint Ventures – 8point3 Energy Partners LP" of our condensed consolidated financial statements included in this Quarterly Report on Form 10-Q.

Construction of Some of the World's Largest PV Solar Power Systems

We continue to execute on our advanced-stage utility-scale project pipeline and expect a substantial portion of our consolidated net sales, operating income, and cash flows through 2019 to be derived from several large projects in this pipeline, including the following contracted projects which will be among the world's largest PV solar power systems: the 300 MW Desert Stateline project, located in San Bernardino County, California; the 310 MW Tribal Solar project; the 280 MW California Flats project, located in Monterey County, California; the 250 MW Moapa project, located in Clark County, Nevada; the 150 MW Rosamond project located in Kern County, California; and the 150 MW Sun Streams project, located in Maricopa County, Arizona. Please see the tables under "Management's Discussion and Analysis of Financial Condition and Results of Operations – Systems Project Pipeline" for additional information about these and other projects within our systems business advanced-stage project pipeline.

The construction progress and sales of these projects are subject to risks and delays as described in the Risk Factors. A delay in the substantial completion and/or sale of certain of these projects beyond the end of 2016 could have a significant adverse impact on such projects' value and expected revenue. Furthermore, the revenue recognition of our system projects is in many cases not linear in nature due to the timing of when all revenue recognition criteria are met, and consequently, period-over-period comparisons of results of operations may not be meaningful. Expected revenue from projects without a PPA, for which electricity will be sold on an open contract basis, may be subject to greater variability and uncertainty based on market factors compared to projects with a PPA.

Systems Project Pipeline

The following tables summarize, as of November 2, 2016, our approximately 3.1 GW systems business advanced-stage project pipeline. As of September 30, 2016, for the Projects Sold/Under Contract in our advanced-stage project pipeline of approximately 0.9 GW, we have recognized revenue with respect to the equivalent of approximately 0.8 GW. Such MW equivalent amount refers to the ratio of revenue recognized for the Projects Sold/Under Contract compared to the total contracted revenue for such projects, multiplied by the total MW for such projects. The remaining revenue to be recognized subsequent to September 30, 2016 for the Projects Sold/Under Contract is expected to be approximately $0.2 billion, which excludes proceeds from the expected sale of our remaining ownership interests in the Stateline project. The majority of such revenue amount is expected to be recognized through the later of the substantial completion or closing dates of the projects. The remaining revenue to be recognized does not have a direct correlation to expected remaining module shipments for such Projects Sold/Under Contract as expected module shipments do not represent total systems revenues and do not consider the timing of when all revenue recognition criteria are met, including the timing of module installation. The actual volume of modules installed in our Projects Sold/Under Contract will be greater than the project size in MW AC as module

volumes required for a project are based upon MW DC, which will be greater than the MW AC size pursuant to a DC-AC ratio typically ranging from 1.2 to 1.3. Such ratio varies across different projects due to various system design factors. Projects are removed from our advanced-stage project pipeline tables below once we have substantially completed construction and after substantially all revenue has been recognized. Projects, or portions of projects, may also be removed from the tables below in the event an EPC-contracted or partner-developed project does not obtain permitting or financing, an unsold or uncontracted project is not sold or contracted due to the changing economics of the project or other factors, or we decide to temporarily own and operate such projects based on strategic opportunities or market factors.

We continually seek to make additions to our advanced-stage project pipeline. We are actively developing our early to mid-stage project pipeline in order to secure PPAs and are also pursuing opportunities to acquire advanced-stage projects, which already have PPAs in place. New additions to our project pipeline during the period from August 4, 2016 to November 2, 2016 included a 40 MW AC solar power project in California.

Table of Contents

Projects Sold/Under Contract
(Includes uncompleted sold projects, projects under sales contracts subject to conditions precedent, and EPC agreements, including partner developed projects that we will be or are constructing.)

As of September 30, 2016

Project/Location	Project Size in MW AC (1)	PPA Contracted Partner	EPC Contract/Partner Developed Project	Expected Year Revenue Recognition Will Be Completed By	Percentage Complete	Percentage of Revenue Recognized
Stateline, California	300	SCE	(2)	2016	100%	100%
Astoria, California	175	(3)	Recurrent	2016	97%	97%
Taylor, Georgia	147	(4)	Southern Company	2016	97%	97%
East Pecos Solar, Texas	119	Austin Energy	Southern Company	2016	86%	86%
Butler, Georgia	103	Georgia Power	Southern Company	2016	94%	94%
Shams Ma'an, Jordan	53	NEPCO (5)	(3)	2016	97%	—%
Helios, Honduras	25	ENEE (6)	Grupo Terra	2017	2%	—%
Total	922					

Projects with Executed PPA Not Sold/Not Contracted

Project/Location	Project Size in MW AC (1)	Fully Permitted	PPA Contracted Partner	Expected or Actual Substantial Completion Year	Percentage Complete as of September 30, 2016
Tribal Solar	310	No	SCE	2019	2%
California Flats, California	280	No	PG&E / Apple Energy, LLC (7)	2018	32%
Moapa, Nevada	250	Yes	LADWP	2016	99%
India (multiple locations)	250	No	(8)	2016/2017	62%
Rosamond, California	150	Yes	SCE	2018	11%
Sun Streams, Arizona	150	Yes	SCE	2019	4%
Luz del Norte, Chile	141	Yes	(9)	2016	100%
American Kings Solar, California	126	No	SCE	2020	3%
Willow Springs, California	100	Yes	SCE	2018	16%
Sunshine Valley, Nevada	100	Yes	SCE	2019	1%
Switch Station 1, Nevada	100	No	Nevada Power Company	2017	20%
Switch Station 2, Nevada	79	No	Nevada Power Company / Sierra Pacific Power Company	2017	4%

Ishikawa, Japan	59	Yes	Hokuriku Electric Power Company	2018	4%
Little Bear, California	40	No	Marin Clean Energy (10)	2020	3%
Miyagi, Japan	40	No	Tohoku Electric Power Company	2018/2019	8%
Cuyama, California	40	Yes	PG&E	2017	25%
Total	2,215				

Table of Contents

(1) The volume of modules installed in MW DC will be higher than the MW AC size pursuant to a DC-AC ratio typically ranging from 1.2 to 1.3; such ratio varies across different projects due to various system design factors
(2) Southern Company holds a 66% controlling interest in the project
(3) Contracted but not specified
(4) PPA contracted partners include Cobb Electric Membership Corporation, Flint Electric Membership Corporation, and Sawnee Electric Membership Corporation
(5) NEPCO is defined as National Electric Power Company, the country of Jordan's regulatory authority for power generation and distribution and a consortium of investors
(6) ENEE is defined as Empresa Nacional de Energía Eléctrica
(7) PG&E 150 MW AC and Apple Energy, LLC 130 MW AC
(8) Southern Power Distribution Company of Telangana State Ltd – 110 MW AC; Andhra Pradesh Southern Power Distribution Company Ltd – 80 MW AC; Gulbarga Electricity Supply Co. – 20 MW AC; Bengaluru Electricity Supply Co. – 20 MW AC; and Chamundeshwari Electricity Supply Co. – 20 MW AC
(9) PPAs executed for approximately 70 MW AC of capacity; remaining electricity to be sold on an open contract basis
(10) Expandable to 160 MW AC, subject to satisfaction of certain PPA contract conditions

Results of Operations

The following table sets forth our condensed consolidated statements of operations as a percentage of net sales for the three and nine months ended September 30, 2016 and 2015:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Net sales	100.0 %	100.0 %	100.0 %	100.0 %
Cost of sales	72.9 %	61.9 %	74.1 %	73.9 %
Gross profit	27.1 %	38.1 %	25.9 %	26.1 %
Research and development	4.7 %	2.3 %	3.9 %	3.6 %
Selling, general and administrative	8.8 %	4.2 %	7.8 %	7.3 %
Production start-up	0.1 %	0.3 %	— %	0.6 %
Restructuring and asset impairments	0.6 %	— %	3.6 %	— %
Operating income	12.9 %	31.3 %	10.6 %	14.6 %
Foreign currency loss, net	(0.3)%	(0.1)%	(0.3)%	(0.2)%
Interest income	0.9 %	0.4 %	0.8 %	0.6 %
Interest expense, net	(0.8)%	(0.1)%	(0.7)%	(0.1)%
Other income (expense), net	0.9 %	(0.1)%	2.0 %	(0.1)%
Income tax benefit (expense)	7.3 %	(3.8)%	0.3 %	(0.3)%
Equity in earnings of unconsolidated affiliates, net of tax	1.5 %	— %	1.0 %	0.1 %
Net income	22.4 %	27.5 %	13.7 %	14.5 %

Segment Overview

We operate our business in two segments. Our components segment involves the design, manufacture, and sale of CdTe solar modules, which convert sunlight into electricity, and our systems segment includes the development, construction, operation, and maintenance of PV solar power systems, which primarily use our solar modules.

See Note 18. "Segment Reporting" to our condensed consolidated financial statements included with this Quarterly Report on Form 10-Q for more information. See also Item 2: "Management's Discussion and Analysis of Financial

Condition and Results of Operations – Systems Project Pipeline" for a description of the systems projects in our advanced-stage project pipeline.

Table of Contents

Product Revenue

The following table sets forth the total amounts of solar module and solar power system net sales for the three and nine months ended September 30, 2016 and 2015. For the purposes of the following table, (i) solar module revenue is composed of revenue from the sale of solar modules to third parties, which does not include any modules sold as part of our PV solar power systems, and (ii) solar power system revenue is composed of revenue from the sale of PV solar power systems and related products and services, including any modules installed in such systems and any revenue generated by such systems (in thousands):

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2016	2015	Three Month Change		2016	2015	Nine Month Change	
Solar module revenue	$213,045	$60,836	$152,209	250 %	$425,776	$180,792	$244,984	136 %
Solar power system revenue	474,984	1,210,409	(735,425)	(61)%	2,045,118	2,455,879	(410,761)	(17)%
Net sales	$688,029	$1,271,245	$(583,216)	(46)%	$2,470,894	$2,636,671	$(165,777)	(6)%

Solar module revenue to third parties increased $152.2 million for the three months ended September 30, 2016 compared to the three months ended September 30, 2015 primarily due to a 290% increase in the volume of watts sold, partially offset by a 10% decrease in the average selling price per watt. Solar power system revenue decreased $735.4 million for the three months ended September 30, 2016 compared to the three months ended September 30, 2015 primarily due to lower revenue from construction on the Desert Stateline project, the substantial completion of the Silver State South and McCoy projects in 2016, the substantial completion of the Imperial Solar Energy Center West project in 2015, and lower revenue from module plus transactions. This decrease in revenue was partially offset by higher revenue from the East Pecos Solar and Taylor projects on which we commenced construction in 2016 and late 2015, respectively. See Item 2: “Management’s Discussion and Analysis of Financial Condition and Results of Operations – Systems Project Pipeline” for the percentage complete and percentage of revenue recognized for current projects.

Solar module revenue to third parties increased $245.0 million for the nine months ended September 30, 2016 compared to the nine months ended September 30, 2015 primarily as a result of a 135% increase in the volume of watts sold. Solar power system revenue decreased $410.8 million for the nine months ended September 30, 2016 compared to the nine months ended September 30, 2015 primarily from the sale of majority interests in the North Star and Lost Hills projects in 2015, the substantial completion of the Imperial Solar Energy Center West project in 2015, lower revenue from module plus transactions, and the substantial completion of the McCoy and Decatur Solar Parkway projects in 2016. This decrease in revenue was partially offset by higher revenue from construction on the Desert Stateline and Astoria projects and the commencement of construction on the Taylor project in late 2015. See Item 2: “Management’s Discussion and Analysis of Financial Condition and Results of Operations – Systems Project Pipeline” for the percentage complete and percentage of revenue recognized for current projects.

Three and Nine Months Ended September 30, 2016 and 2015

Net sales

Components Business

We generally price and sell our solar modules per watt of nameplate power. During the three and nine months ended September 30, 2016, a significant portion of net sales for our components business included modules installed in our PV solar power systems described below under “Net sales – Systems Business.” Other than the modules included in our systems, we sold the majority of our solar modules to integrators and operators of systems in the United States, the

United Arab Emirates, and India.

From time to time, we enter into module sales agreements with customers worldwide for specific projects or volumes of modules. Such agreements are generally short-term in nature. During the three and nine months ended September 30, 2016, substantially all of our components business net sales, excluding modules installed in our systems, were denominated in U.S. dollars. During the three and nine months ended September 30, 2015, 41% and 23%, respectively, of our components business net sales, excluding modules installed in our systems, were denominated in British pounds and Euros and were subject to fluctuations in the exchange rates between such currencies and the U.S. dollar.

Table of Contents

We transfer title and risk of loss to the customer and recognize revenue upon shipment or delivery, depending on the terms of the underlying sales contracts. Pricing is typically fixed or determinable at the time of shipment, and our customers generally do not have extended payment terms or rights of return under these contracts. The revenue recognition policies for our components business are described further in Note 2. “Summary of Significant Accounting Policies” to our condensed consolidated financial statements included in this Quarterly Report on Form 10-Q.

Systems Business

Through our fully integrated systems business, we provide complete turn-key PV solar power systems, or solar solutions, which may include project development, EPC services, and O&M services. Additionally, we may temporarily own and operate certain of our PV solar power systems, which are also included within our systems business. We typically use the percentage-of-completion method using actual costs incurred over total estimated costs to construct a project (including module costs) as our standard accounting policy and apply this method after all revenue recognition criteria have been met. There are also instances in which we recognize revenue after a project has been completed, primarily due to a project not being sold prior to completion or because all revenue recognition criteria have not been met. The revenue recognition policies for our systems business are described in further detail in Note 2. “Summary of Significant Accounting Policies” to our condensed consolidated financial statements included in this Quarterly Report on Form 10-Q.

The following table shows net sales by reportable segment for the three and nine months ended September 30, 2016 and 2015:

	Three Months Ended September 30,				Nine Months Ended September 30,			
(Dollars in thousands)	2016	2015	Three Month Change		2016	2015	Nine Month Change	
Components	$427,812	$441,530	$(13,718)	(3)%	$1,167,721	$988,591	$179,130	18 %
Systems	260,217	829,715	(569,498)	(69)%	1,303,173	1,648,080	(344,907)	(21)%
Net sales	$688,029	$1,271,245	$(583,216)	(46)%	$2,470,894	$2,636,671	$(165,777)	(6)%

Net sales from our components segment, which includes solar modules used in our systems projects, decreased $13.7 million for the three months ended September 30, 2016 compared to the three months ended September 30, 2015 primarily due to a 10% increase in the volume of watts sold, partially offset by a 12% decrease in the average selling price per watt. Net sales from our systems segment, which excludes solar modules used in our systems projects, decreased by $569.5 million for the three months ended September 30, 2016 compared to the three months ended September 30, 2015 primarily due to lower revenue from construction on the Desert Stateline project, the substantial completion of the Silver State South and McCoy projects in 2016, and the substantial completion of the Imperial Solar Energy Center West project in 2015. This decrease in revenue was partially offset by higher revenue from East Pecos Solar and Taylor projects on which we commenced construction in 2016 and late 2015, respectively.

Net sales from our components segment, which includes solar modules used in our systems projects, increased $179.1 million for the nine months ended September 30, 2016 compared to the nine months ended September 30, 2015 primarily as a result of a 24% increase in the volume of watts sold, partially offset by a 5% decrease in the average selling price per watt. Net sales from our systems segment, which excludes solar modules used in our systems projects, decreased by $344.9 million for the nine months ended September 30, 2016 compared to the nine months ended September 30, 2015 primarily from the sale of majority interests in the North Star and Lost Hills projects in 2015, the substantial completion of the Imperial Solar Energy Center West project in 2015, and the substantial completion of the McCoy and Decatur Solar Parkway projects in 2016. This decrease in revenue was partially offset by higher revenue from construction on the Desert Stateline and Astoria projects and the commencement of construction on the Taylor project in late 2015.

Cost of sales

Components Business

Our cost of sales includes the cost of raw materials and components for manufacturing solar modules, such as glass, transparent conductive coatings, cadmium telluride and other thin-film semiconductors, laminate materials, connector assemblies, edge seal materials, and other materials and components. In addition, our cost of sales includes direct labor for the manufacturing of solar modules and manufacturing overhead such as engineering, equipment maintenance, environmental health and safety, quality and production control, information technology, and procurement costs. Our cost of sales also includes depreciation of manufacturing plant and equipment, facility-related expenses, and costs associated with shipping and warranties.

Table of Contents

We include the sale of solar modules manufactured by our components business and used by our systems business within net sales of our components business. Therefore, the related cost of sales is also included within our components business.

Systems Business

For our systems business, project-related costs include development costs (legal, consulting, transmission upgrade, interconnection, permitting, and other similar costs), standard EPC costs (consisting primarily of BoS costs for inverters, electrical and mounting hardware, project management and engineering costs, and construction labor costs), and site specific costs.

The following table shows cost of sales by reportable segment for the three and nine months ended September 30, 2016 and 2015:

	Three Months Ended September 30,				Nine Months Ended September 30,			
(Dollars in thousands)	2016	2015	Three Month Change		2016	2015	Nine Month Change	
Components	$289,136	$275,533	$13,603	5 %	$837,918	$745,369	$92,549	12 %
Systems	212,613	511,347	(298,734)	(58)%	992,586	1,203,473	(210,887)	(18)%
Total cost of sales	$501,749	$786,880	$(285,131)	(36)%	$1,830,504	$1,948,842	$(118,338)	(6)%
% of net sales	72.9 %	61.9 %			74.1 %	73.9 %		

Our cost of sales decreased $285.1 million, or 36%, and increased 11.0 percentage points as a percent of net sales for the three months ended September 30, 2016 compared to the three months ended September 30, 2015. The decrease in cost of sales was primarily driven by a $298.7 million decrease in our systems segment cost of sales associated with the volume of projects under construction and the timing of when all revenue recognition criteria were met. This net decrease was partially offset by a $13.6 million increase in our components segment cost of sales as a result of the following:

- A reduction in our module collection and recycling obligation of $69.7 million during the three months ended September 30, 2015 resulting from certain recycling technology advancements, which significantly increased the throughput of modules able to be recycled at a point in time, along with other material and labor cost reductions;
- Higher costs of $30.3 million from the increased volume of modules sold directly to third parties and as part of our systems business projects; and
- Higher inventory write-downs of $6.5 million primarily related to our remaining crystalline silicon module inventories; partially offset by
- Continued reductions in the cost per watt of our solar modules, which decreased cost of sales by $92.9 million.

Our cost of sales decreased $118.3 million, or 6%, and increased 0.2 percentage points as a percent of net sales for the nine months ended September 30, 2016 compared to the nine months ended September 30, 2015. The decrease in cost of sales was primarily the result of a $210.9 million decrease in our systems segment cost of sales due to the volume of projects under construction and the timing of when all revenue recognition criteria were met. This net decrease was partially offset by a $92.5 million increase in our components segment cost of sales primarily due to the following:

- Higher costs of $195.5 million associated with the increased volume of modules sold directly to third parties and as part of our systems business projects;
- A reduction in our module collection and recycling obligation of $69.7 million during the nine months ended September 30, 2015 as described above; and
-

- Higher inventory write-downs of $21.2 million primarily related to our remaining crystalline silicon module inventories; partially offset by
- Continued reductions in the cost per watt of our solar modules, which decreased cost of sales by $199.1 million.

Gross profit

Gross profit is affected by numerous factors, including the selling prices of our modules and systems, our manufacturing costs, BoS costs, project development costs, the capacity utilization of our manufacturing facilities, and foreign exchange rates. Gross profit is also affected by the mix of net sales generated by our components and systems businesses. Gross profit for our systems business excludes the net sales and cost of sales for solar modules used in our systems projects as these amounts are included in the gross profit of our components business.

Table of Contents

The following table shows gross profit for the three and nine months ended September 30, 2016 and 2015:

	Three Months Ended September 30,			Nine Months Ended September 30,		
(Dollars in thousands)	2016	2015	Three Month Change	2016	2015	Nine Month Change
Gross profit	$186,280	$484,365	$(298,085) (62)%	$640,390	$687,829	$(47,439) (7)%
% of net sales	27.1 %	38.1 %		25.9 %	26.1 %	

Gross profit decreased 11.0 percentage points to 27.1% during the three months ended September 30, 2016 from 38.1% during the three months ended September 30, 2015 primarily as a result of the mix of lower gross profit projects sold and under construction and the reduction in our module collection and recycling obligation during the three months ended September 30, 2015, partially offset by higher gross margins on modules sold directly to third parties and as part of our systems business projects, driven mainly by reductions in the cost per watt of our modules. Gross profit decreased 0.2 percentage points to 25.9% during the nine months ended September 30, 2016 from 26.1% during the nine months ended September 30, 2015, primarily due to the reduction in our module collection and recycling obligation during the nine months ended September 30, 2015, the mix of lower gross profit projects sold and under construction, and higher inventory write-downs, partially offset by the higher gross margins on modules sold directly to third parties and as part of our systems business projects as described above.

Research and development

Research and development expense consists primarily of salaries and personnel-related costs, the cost of products, materials, and outside services used in our process and product research and development activities for both the components and systems businesses, and depreciation and amortization expense associated with research and development specific facilities and equipment. The majority of our research and development expense is attributable to our components segment. We maintain a number of programs and activities to improve our technology and processes in order to enhance the performance and reduce the costs of our solar modules and PV solar power systems using our modules.

The following table shows research and development expense for the three and nine months ended September 30, 2016 and 2015:

	Three Months Ended September 30,			Nine Months Ended September 30,		
(Dollars in thousands)	2016	2015	Three Month Change	2016	2015	Nine Month Change
Research and development	$32,173	$29,630	$2,543 9%	$95,291	$93,865	$1,426 2%
% of net sales	4.7 %	2.3 %		3.9 %	3.6 %	

The increase in research and development expense for the three months ended September 30, 2016 compared to the three months ended September 30, 2015 was primarily due to higher costs for outside services and equipment related expenses, partially offset by lower employee compensation expense. During the three months ended September 30, 2016, the average conversion efficiency of our CdTe solar modules produced was 16.5% compared to 15.8% for the three months ended September 30, 2015.

The increase in research and development expense for the nine months ended September 30, 2016 compared to the nine months ended September 30, 2015 was primarily due to higher costs for outside services, partially offset by lower employee compensation expense. During the nine months ended September 30, 2016, the average conversion efficiency of our CdTe solar modules produced was 16.3% compared to 15.3% for the nine months ended

September 30, 2015.

Table of Contents

Selling, general and administrative

Selling, general and administrative expense consists primarily of salaries and other personnel-related costs, professional fees, insurance costs, travel expenses, and other business development and selling expenses. Our components and systems businesses each have their own administrative functions, such as accounting, legal, finance, project finance, and procurement. Costs for these functions are recorded and included within selling, general and administrative expense of the respective segment. Our key corporate support functions consist primarily of company-wide tax, treasury, accounting, human resources, marketing, legal, finance, investor relations, information technology, communications, government relations, and executive management. These corporate functions and the assets supporting such functions benefit both the components and systems segments. We allocate corporate costs to the components and systems segments as part of selling, general and administrative costs based upon the estimated benefits provided to each segment from these corporate functions. We determine the estimated benefits provided to each segment for these corporate costs based upon a combination of the estimated time spent by corporate employees supporting each segment and the average relative selling, general and administrative costs incurred by each segment before such corporate allocations.

The following table shows selling, general and administrative expense for the three and nine months ended September 30, 2016 and 2015:

	Three Months Ended September 30,			Nine Months Ended September 30,		
(Dollars in thousands)	2016	2015	Three Month Change	2016	2015	Nine Month Change
Selling, general and administrative	$60,345	$53,716	$6,629 12%	$191,624	$192,305	$(681) –%
% of net sales	8.8 %	4.2 %		7.8 %	7.3 %	

Our selling, general and administrative expense for the three months ended September 30, 2016 increased compared to the three months ended September 30, 2015. This increase was primarily driven by lower accretion expense associated with the reduction in our module collection and recycling obligation during the three months ended September 30, 2015 and higher business development expense in North America, partially offset by lower employee compensation expense. Our selling, general and administrative expense for the nine months ended September 30, 2016 was consistent with the nine months ended September 30, 2015.

Production start-up

Production start-up expense consists primarily of employee compensation and other costs associated with operating a production line before it has been qualified for full production, including the cost of materials for solar modules run through the production line during the qualification phase and applicable facility related costs. Costs related to equipment upgrades and implementation of manufacturing process improvements are also included in production start-up expense as well as costs related to the selection of a new site, including related legal and regulatory costs, to the extent we cannot capitalize these expenditures. In general, we expect production start-up expense per production line to be higher when we build an entirely new manufacturing facility compared with the addition of new production lines at an existing manufacturing facility, primarily due to the additional infrastructure investment required when building an entirely new facility. Production start-up expense is attributable to our components segment.

The following table shows production start-up expense for the three and nine months ended September 30, 2016 and 2015:

Three Months Ended	Nine Months Ended

(Dollars in thousands)	September 30, 2016	2015	Three Month Change		September 30, 2016	2015	Nine Month Change	
Production start-up	$752	$3,198	$(2,446)	(76)%	$807	$16,818	$(16,011)	(95)%
% of net sales	0.1 %	0.3 %			— %	0.6 %		

During the three and nine months ended September 30, 2016 we incurred certain production start-up expenses related to our recently announced next generation CdTe module offerings. During the three and nine months ended September 30, 2015, we incurred $3.2 million and $16.8 million, respectively, of production start-up expense related to the commencement of our TetraSun operations at our manufacturing facility in Kulim, Malaysia and the addition of two production lines at our manufacturing facility in Perrysburg, Ohio.

Table of Contents

Restructuring and asset impairments

Restructuring and asset impairments includes those expenses incurred related to material restructuring initiatives and includes any associated asset impairments, costs for employee termination benefits, costs for contract terminations and penalties, and other restructuring related costs. Such restructuring initiatives are intended to align the organization with current business strategies and conditions and to reduce costs.

The following table shows restructuring and asset impairments for the three and nine months ended September 30, 2016 and 2015:

	Three Months Ended September 30,				Nine Months Ended September 30,			
(Dollars in thousands)	2016	2015	Three Month Change		2016	2015	Nine Month Change	
Restructuring and asset impairments	$4,314	$ —	$4,314	100%	$89,846	$ —	$89,846	100%
% of net sales	0.6 %	—%			3.6 %	—%		

During the three and nine months ended September 30, 2016 we incurred $4.3 million and $89.8 million, respectively, of restructuring and asset impairment charges. The charges for the three months ended September 30, 2016 primarily related to severance benefits to terminated employees associated with restructuring activities unrelated to the end of our crystalline silicon module production. The charges for the nine months ended September 30, 2016 primarily related to our decision to end our crystalline silicon module production and reallocate the associated resources to next generation CdTe module offerings. These charges included impairments of certain crystalline silicon module manufacturing equipment, impairments of developed technology intangible assets for our crystalline silicon module technology, impairments of goodwill from the disposal of our crystalline silicon components reporting unit, and other miscellaneous charges. See Note 4. “Restructuring and Asset Impairments” to our condensed consolidated financial statements included in this Quarterly Report on Form 10-Q for additional information.

Foreign currency loss, net

Foreign currency loss, net consists of the net effect of gains and losses resulting from holding assets and liabilities and conducting transactions denominated in currencies other than our subsidiaries’ functional currencies.

The following table shows foreign currency loss, net for the three and nine months ended September 30, 2016 and 2015:

	Three Months Ended September 30,				Nine Months Ended September 30,			
(Dollars in thousands)	2016	2015	Three Month Change		2016	2015	Nine Month Change	
Foreign currency loss, net	$(2,296)	$(1,803)	$(493)	27%	$(8,259)	$(4,981)	$(3,278)	66%

Foreign currency loss, net for the three months ended September 30, 2016 was consistent with the three months ended September 30, 2015. Foreign currency loss, net increased during the nine months ended September 30, 2016 compared to the nine months ended September 30, 2015 primarily as a result of hedging activities related to our subsidiaries in India and differences between our economic hedge positions and the underlying exposures along with changes in foreign currency rates.

Interest income

Interest income is earned on our cash, cash equivalents, marketable securities, and restricted cash and investments. Interest income also includes interest earned from notes receivable and late customer payments.

The following table shows interest income for the three and nine months ended September 30, 2016 and 2015:

	Three Months Ended September 30,				Nine Months Ended September 30,			
(Dollars in thousands)	2016	2015	Three Month Change		2016	2015	Nine Month Change	
Interest income	$5,894	$5,322	$572	11%	$18,829	$16,444	$2,385	15%

Interest income for the three and nine months ended September 30, 2016 was consistent with the three and nine months ended September 30, 2015, respectively.

Table of Contents

Interest expense, net

Interest expense is incurred on various debt financings. We capitalize interest expense into our project assets or property, plant and equipment when such costs qualify for interest capitalization, which reduces the amount of net interest expense reported in any given period.

The following table shows interest expense, net for the three and nine months ended September 30, 2016 and 2015:

	Three Months Ended September 30,				Nine Months Ended September 30,			
(Dollars in thousands)	2016	2015	Three Month Change		2016	2015	Nine Month Change	
Interest expense, net	$(5,563)	$(1,775)	$(3,788)	213%	$(17,356)	$(2,795)	$(14,561)	521%

Interest expense, net of amounts capitalized, for the three and nine months ended September 30, 2016 increased compared to the three and nine months ended September 30, 2015 primarily due to higher levels of project specific debt financing and lower interest costs capitalized to certain projects, which were substantially completed during 2016.

Other income (expense), net

Other income (expense), net is primarily comprised of miscellaneous items, amounts excluded from hedge effectiveness, and realized gains and losses on the sale of marketable securities and restricted investments.

The following table shows other income (expense), net for the three and nine months ended September 30, 2016 and 2015:

	Three Months Ended September 30,				Nine Months Ended September 30,			
(Dollars in thousands)	2016	2015	Three Month Change		2016	2015	Nine Month Change	
Other income (expense), net	$6,419	$(1,678)	$8,097	483%	$48,725	$(3,729)	$52,454	1,407%

Other income (expense), net for the three months ended September 30, 2016 increased compared to the three months ended September 30, 2015 primarily from the resolution of an outstanding matter with a former customer. Other income (expense), net for the nine months ended September 30, 2016 increased compared to the nine months ended September 30, 2015 primarily due to 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, the resolution of an outstanding matter with a former customer, and the reversal of the outstanding contingent consideration associated with our TetraSun acquisition as the result of our executive management’s decision to end production of our crystalline silicon modules, which adversely affected the likelihood of achieving certain module shipment volume milestones. See Note 4. “Restructuring and Asset Impairments” to our condensed consolidated financial statements for further discussion relating to these restructuring activities.

Income before taxes and equity in earnings of unconsolidated affiliates

The following table shows income before taxes and equity in earnings of unconsolidated affiliates for the three and nine months ended September 30, 2016 and 2015:

(Dollars in thousands)	Three Months Ended September 30, 2016	2015	Three Month Change		Nine Months Ended September 30, 2016	2015	Nine Month Change	
Components	$109,217	$137,878	$(28,661)	(21)%	$183,831	$116,877	$66,954	57 %
Systems	(16,067)	260,009	(276,076)	(106)%	120,930	272,903	(151,973)	(56)%
Total income before taxes	$93,150	$397,887	$(304,737)	(77)%	$304,761	$389,780	$(85,019)	(22)%

Components segment income before taxes decreased for the three months ended September 30, 2016 compared to the three months ended September 30, 2015 primarily as a result of the reduction in our module collection and recycling obligation during the three months ended September 30, 2015, partially offset by higher gross margins on modules sold directly to third parties and as part of our systems business projects. Systems segment income before taxes for the three months ended September 30, 2016 decreased compared to the three months ended September 30, 2015 primarily due to the lower volume and unfavorable mix of lower gross profit of projects sold and under construction.

Table of Contents

Components segment income before taxes increased for the nine months ended September 30, 2016 compared to the nine months ended September 30, 2015 primarily as a result of higher gross margins on modules sold directly to third parties and as part of our systems business projects and gains on the sale of certain restricted investments, partially offset by higher restructuring and asset impairment charges primarily associated with the end of our crystalline silicon module production and the reduction in our module collection and recycling obligation during the nine months ended September 30, 2015. Systems segment income before taxes for the nine months ended September 30, 2016 decreased compared to the nine months ended September 30, 2015 primarily due to the lower volume and unfavorable mix of lower gross profit of projects sold and under construction.

Income tax benefit (expense)

Income tax expense or benefit, deferred tax assets and liabilities, and liabilities for unrecognized tax benefits reflect our best estimate of current and future taxes to be paid. We are subject to income taxes in both the United States and numerous foreign jurisdictions in which we operate; principally Australia, India, and Malaysia. Significant judgments and estimates are required in determining our consolidated income tax expense. The statutory federal corporate income tax rate in the United States is 35.0%, while the tax rates in Australia, India, and Malaysia are 30.0%, 30.9%, and 25.0%, respectively. In Malaysia, we have been granted a long-term tax holiday, scheduled to expire in 2027, pursuant to which substantially all of our income earned in Malaysia is exempt from income tax.

The following table shows consolidated income tax benefit (expense) for the three and nine months ended September 30, 2016 and 2015:

	Three Months Ended September 30,				Nine Months Ended September 30,			
(Dollars in thousands)	2016	2015	Three Month Change		2016	2015	Nine Month Change	
Income tax benefit (expense)	$50,522	$(48,454)	$98,976	204%	$7,711	$(9,134)	$16,845	184%
Effective tax rate	(54.2)%	12.2%			(2.5)%	2.3%		

Our tax rate is affected by recurring items, such as tax rates in foreign jurisdictions and the relative amounts of income we earn in those jurisdictions. The rate is also affected by discrete items that may occur in any given year, but are not consistent from year to year. Income tax expense decreased by $99.0 million during the three months ended September 30, 2016 compared to the three months ended September 30, 2015 primarily due to a $35.4 million discrete tax benefit associated with the reversal of an uncertain tax position following the receipt of a letter from a foreign tax authority confirming our residency status in that jurisdiction, a higher percentage of profits earned in lower tax jurisdictions, and a decrease in pretax income. Income tax expense decreased by $16.8 million during the nine months ended September 30, 2016 compared to the nine months ended September 30, 2015 primarily as a result of a higher percentage of profits earned in lower tax jurisdictions and a decrease in pretax income.

Equity in earnings of unconsolidated affiliates, net of tax

Equity in earnings of unconsolidated affiliates, net of tax represents our proportionate share of the earnings or losses of unconsolidated affiliates with whom we have made equity method investments.

The following table shows equity in earnings of unconsolidated affiliates, net of tax for the three and nine months ended September 30, 2016 and 2015:

	Three Months Ended September 30,		Nine Months Ended September 30,	
(Dollars in thousands)	2016	2015	2016	2015

			Three Month Change				Nine Month Change	
Equity in earnings of unconsolidated affiliates, net of tax	$10,474	$(115)	$10,589	9,208%	$25,647	$1,640	$24,007	1,464%

Equity in earnings of unconsolidated affiliates, net of tax for the three and nine months ended September 30, 2016 increased compared to the three and nine months ended September 30, 2015 primarily due to equity in earnings from our investment in 8point3 Operating Company, LLC, a subsidiary of 8point3 Energy Partners LP.

Table of Contents

Critical Accounting Policies and Estimates

In preparing our condensed consolidated financial statements in conformity with accounting principles generally accepted in the United States, we make estimates and assumptions that affect the amounts of reported assets, liabilities, revenues, and expenses, as well as the disclosure of contingent liabilities. Some of our accounting policies require the application of significant judgment in the selection of the appropriate assumptions for making these estimates. By their nature, these judgments are subject to an inherent degree of uncertainty. We base our judgments and estimates on our historical experience, our forecasts, and other available information as appropriate. We believe that the judgments and estimates involved in the accounting for percentage-of-completion revenue recognition, accrued solar module collection and recycling, product warranties and manufacturing excursions, performance guarantees, accounting for income taxes, long-lived asset impairments, and goodwill have the greatest potential impact on our condensed consolidated financial statements. The actual results experienced by us may differ materially and adversely from our estimates. To the extent there are material differences between our estimates and the actual results, our future results of operations will be affected.

For a complete description of our critical accounting policies that affect our more significant judgments and estimates used in the preparation of our condensed consolidated financial statements, refer to our Annual Report on Form 10-K for the year ended December 31, 2015 filed with the SEC. There have been no material changes in our critical accounting policies during the nine months ended September 30, 2016.

Recent Accounting Pronouncements

See Note 3. “Recent Accounting Pronouncements” to our condensed consolidated financial statements included in this Quarterly Report on Form 10-Q for a summary of recent accounting pronouncements.

Liquidity and Capital Resources

As of September 30, 2016, we believe that our cash, cash equivalents, marketable securities, cash flows from operating activities including the contracted portion of our advanced-stage project pipeline, availability under our Revolving Credit Facility considering minimum liquidity covenant requirements, and access to the capital markets will be sufficient to meet our working capital, systems project investment, and capital expenditure needs for at least the next 12 months. We monitor our working capital to ensure we have adequate liquidity, both domestically and internationally.

We intend to maintain appropriate debt levels based upon cash flow expectations, our overall cost of capital, and expected cash requirements for operations, capital expenditures, and discretionary strategic spending. In the future, we may also engage in additional debt or equity financings, including project specific debt financings. We believe that when necessary, we will have adequate access to the capital markets, although our ability to raise capital on terms commercially acceptable to us could be constrained if there is insufficient lender or investor interest due to industry-wide or company-specific concerns. Such financings could result in increased debt service expenses or dilution to our existing stockholders.

As of September 30, 2016, we had $2.1 billion in cash, cash equivalents, and marketable securities compared to $1.8 billion as of December 31, 2015. Cash, cash equivalents, and marketable securities as of September 30, 2016 increased primarily as a result of proceeds from borrowings under our Revolving Credit Facility, which are expected to be used to pay certain project construction costs, partially offset by financing the construction of certain projects with other forms of working capital. As of September 30, 2016 and December 31, 2015, $1.9 billion and $1.5 billion, respectively of our cash, cash equivalents, and marketable securities were held by foreign subsidiaries and were generally based in U.S. dollar and Euro denominated holdings. We utilize a variety of tax planning and financing

strategies in an effort to ensure that our worldwide cash is available in the locations in which it is needed.

Table of Contents

Our systems business requires significant liquidity and is expected to continue to have significant liquidity requirements in the future. The net amount of our project assets, deferred project costs, billings in excess of costs and estimated earnings, and payments and billings for deferred project costs, which approximates our net capital investment in the development and construction of systems projects was $1.2 billion as of September 30, 2016. Solar power project development and construction cycles, which span the time between the identification of a site location and the commercial operation of a system, vary substantially and can take many years to mature. As a result of these long project cycles and strategic decisions to finance the construction of certain projects, we may need to make significant up-front investments of resources in advance of the receipt of any cash from the sale of such projects. These up-front investments may include using our working capital, project financing, or availability under our Revolving Credit Facility to finance the construction of such projects. For example, we may have to complete, or substantially complete, the construction of a systems project before such project is sold. Delays in construction progress or in completing the sale of our systems projects that we are self-financing may also impact our liquidity. We have historically financed these up-front systems project investments primarily using working capital. In certain circumstances, we may need to finance construction costs exclusively using working capital, if project financing becomes unavailable due to market-wide, regional, or other concerns.

We are partnering with local developers on project development in markets around the world where we may take an equity stake in a project for a number of years. We are also self-developing projects in such markets where we may hold all or a significant portion of the equity in the projects for several years. Given the duration of these investments and the currency risk relative to the U.S. dollar in some of these new markets, we continue to explore local financing alternatives. Should these financing alternatives be unavailable or too cost prohibitive, we could be exposed to significant currency risk and our liquidity could be adversely impacted.

Additionally, we may elect to retain an ownership interest in certain systems projects after they become operational if we determine it would be of economic and strategic benefit to do so. If, for example, we cannot sell a systems project at economics that are attractive to us or potential customers are unwilling to assume the risks and rewards typical of PV solar power system ownership, we may instead elect to temporarily own and operate such systems until we can sell the systems on economically attractive terms. As with traditional electricity generation assets, the selling price of a PV solar power system could be higher at or post-completion to reflect the elimination of construction and performance risks and other uncertainties. The decision to retain ownership of a system impacts liquidity depending upon the size and cost of the project. As of September 30, 2016, we had $487.2 million of PV solar power systems that have been placed in service, primarily in international markets. We may elect to enter into temporary or long-term project financing to reduce the impact on our liquidity and working capital with regards to such projects and systems. We may also consider entering into tax equity or other arrangements with respect to ownership interests in certain of our projects, including selling interests in our projects to our limited partnership YieldCo vehicle described under “Management’s Discussion and Analysis of Financial Condition and Results of Operations – Certain Trends and Uncertainties – 8point3 Energy Partners LP,” which could cause a portion of the economics of such projects to be recognized over time.

The following additional considerations have impacted or may impact our liquidity for the remainder of 2016 and beyond:

- The amount of solar module inventory and BoS parts as of September 30, 2016 was $370.7 million. As we continue with the construction of our advanced-stage project pipeline, we must produce solar modules and procure BoS parts in the required volumes to support our planned construction schedules. As part of this construction cycle, we typically must manufacture modules or acquire the necessary BoS parts for construction activities in advance of receiving payment for such materials, which may temporarily reduce our liquidity. Once solar modules and BoS parts are installed in a project, such installed amounts are classified as either project assets, deferred project costs, PV solar power systems, or cost of sales depending upon whether the project is subject to a definitive sales contract and

whether all revenue recognition criteria have been met. As of September 30, 2016, $126.1 million, or 43%, of our solar module inventory was either on-site or in-transit to our systems projects. All BoS parts are for our systems business projects.

The amount of accounts receivable, unbilled and retainage as of September 30, 2016 was $245.8 million, which included $224.2 million of unbilled amounts. These unbilled accounts receivable represent revenue that has been recognized in advance of billing the customer under the terms of the underlying construction contracts. Such construction costs have been funded with working capital, and the unbilled amounts are expected to be billed and collected from customers during the next 12 months. Once we meet the billing criteria under a construction contract, we bill our customers accordingly and reclassify the accounts receivable, unbilled and retainage to accounts receivable trade, net. The amount of accounts receivable, unbilled and retainage as of September 30, 2016 also included $21.6 million of retainage, which represents the portion of a systems project 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. Such retainage amounts relate to construction costs incurred and construction work already performed.

Table of Contents

- We may commit working capital during the remainder of 2016 and beyond to acquire solar power projects in various stages of development, including advanced-stage projects with PPAs, and to continue developing those projects as necessary. Depending upon the size and stage of development, costs to acquire such solar power projects could be significant. When evaluating project acquisition opportunities, we consider both the strategic and financial benefits of any such acquisitions.

- Joint ventures or other strategic arrangements with partners are a key part of our strategy. We have initiatives in several markets to expedite our penetration of those markets and establish relationships with potential customers. Some of these arrangements involve and are expected to involve significant investments or other allocations of capital that could reduce our liquidity or require us to pursue additional sources of financing, assuming such sources are available to us. Additionally, we have elected and may in the future elect or be required to temporarily retain a noncontrolling ownership interest in certain underlying systems projects we develop, supply modules to, or construct. Any such retained ownership interest is expected to impact our liquidity to the extent we do not obtain new sources of capital to fund such investments.

- During the remainder of 2016, we expect to spend $50 million to $100 million for capital expenditures, including expenditures related to the manufacturing of new CdTe module technologies and upgrades to our existing machinery and equipment, which we believe will further increase our solar module conversion efficiencies.

- Under sales agreements for certain of our solar power projects, we may be required to repurchase such projects if certain events occur, such as not achieving commercial operation of the project within a certain time frame. Although we consider the possibility that we would be required to repurchase any of our solar projects to be remote, our current working capital and other available sources of liquidity may not be sufficient to make any required repurchase. If we are required to repurchase a solar power project, we would have the ability to market and sell such project at then current market pricing, which could be at a lower than expected price to the extent the event requiring the repurchase impacts the project's marketability. Our liquidity may also be impacted as the time between the repurchase of a project and the potential sale of such repurchased project could take several months.

Cash Flows

The following table summarizes the key cash flow metrics for the nine months ended September 30, 2016 and 2015 (in thousands):

	Nine Months Ended September 30,	
	2016	2015
Net cash used in operating activities	$(100,573)	$(414,016)
Net cash used in investing activities	(119,603)	(2,405)
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)

Operating Activities

The decrease in net cash used in operating activities was primarily driven by the lower volume of solar power projects under development and construction, which generally require significant liquidity when such projects are financed using working capital. Specifically, the reduction in the volume of our systems business affected our trade accounts receivable, project assets, deferred project costs, and accounts payable.

Investing Activities

The increase in net cash used in investing activities was primarily due to lower distributions received from equity method investments of $237.5 million, partially offset by net proceeds from sales and maturities of marketable securities of $25.7 million during the nine months ended September 30, 2016 compared to net purchases of marketable securities of $116.0 million during the same period in 2015.

Table of Contents

Financing Activities

The increase in net cash provided by financing activities was primarily the result of $550.0 million of proceeds from borrowings under our Revolving Credit Facility, partially offset by lower proceeds from borrowings under long-term debt arrangements and higher repayments of long-term debt.

Contractual Obligations

Our contractual obligations have not materially changed since the end of 2015 with the exception of borrowings under our Revolving Credit Facility, the repayment of the remaining principal balances on our Malaysian Ringgit Facility and Malaysian Euro Facility long-term debt arrangements, the reversal of the outstanding contingent consideration associated with our TetraSun acquisition, and other changes in the ordinary course of business. See Note 12. “Debt” to our condensed consolidated financial statements for information related to the changes in our long-term debt and Note 13. “Commitments and Contingencies” for information related to contingent consideration. See also our Annual Report on Form 10-K for the year ended December 31, 2015 for additional information regarding our contractual obligations.

Off-Balance Sheet Arrangements

As of September 30, 2016, we have no off-balance sheet debt or similar obligations, other than financial assurance related instruments and operating leases, which are not classified as debt. We do not guarantee any third-party debt. See Note 13. “Commitments and Contingencies” to our condensed consolidated financial statements included in this Quarterly Report on Form 10-Q for further information about our financial assurance related instruments.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

There have been no material changes from the information previously provided under Item 7A of our Annual Report on Form 10-K for the year ended December 31, 2015.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

We carried out an evaluation, under the supervision and with the participation of management including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of our “disclosure controls and procedures” as defined in Exchange Act Rule 13a-15(e) and 15d-15(e). Based on that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that as of September 30, 2016 our disclosure controls and procedures were effective to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in SEC rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

Changes in Internal Control over Financial Reporting

We also carried out an evaluation, under the supervision and with the participation of management including our Chief Executive Officer and Chief Financial Officer, of our “internal control over financial reporting” as defined in Exchange Act Rule 13a-15(f) and 15d-15(f) to determine whether any changes in our internal control over financial reporting occurred during the three months ended September 30, 2016 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. Based on that evaluation, there were no such changes in our internal control over financial reporting that materially affected, or are reasonably likely to materially affect,

our internal control over financial reporting during the three months ended September 30, 2016.

CEO and CFO Certifications

We have attached as exhibits to this Quarterly Report on Form 10-Q the certifications of our Chief Executive Officer and Chief Financial Officer, which are required in accordance with the Exchange Act. We recommend that this Item 4 be read in conjunction with those certifications for a more complete understanding of the subject matter presented.

Table of Contents

Limitations on the Effectiveness of Controls

Control systems, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control systems' objectives are being met. Further, the design of any system of controls must reflect the fact that there are resource constraints, and the benefits of all controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within our Company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty and that breakdowns can occur because of error or mistake. Control systems can also be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the controls. The design of any system of controls is also based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Over time, controls may become inadequate because of changes in conditions or deterioration in the degree of compliance with policies or procedures.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

See Note 13. "Commitments and Contingencies" under the heading "Legal Proceedings" of our condensed consolidated financial statements included in this Quarterly Report on Form 10-Q for legal proceedings and related matters.

Item 1A. Risk Factors

In addition to the other information set forth in this report, you should carefully consider the factors discussed in Part I, Item 1A: "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2015, which could materially affect our business, financial condition, results of operations, or cash flows. The risks described in our Annual Report on Form 10-K for the year ended December 31, 2015 are not the only risks facing the Company. Additional risks and uncertainties not currently known to us or that we currently consider immaterial may also materially adversely affect our business, financial condition, results of operations, or cash flows. There have been no material changes in the risk factors contained in our Annual Report on Form 10-K for the year ended December 31, 2015.

Item 5. Other Information

None.

Table of Contents

Item 6. Exhibits

The following exhibits are filed with this Quarterly Report on Form 10-Q:

Exhibit Number	Exhibit Description
10.01	Employment Agreement, effective as of October 24, 2016, and Change in Control Severance Agreement, effective as of October 24, 2016, between First Solar, Inc. and Alexander R. Bradley
31.01	Certification of Chief Executive Officer pursuant to 15 U.S.C. Section 7241, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.02	Certification of Chief Financial Officer pursuant to 15 U.S.C. Section 7241, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.01*	Certification of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

* This exhibit shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934 or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934, whether made before or after the date hereof and irrespective of any general incorporation language in any filings.

Table of Contents

SIGNATURE

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

FIRST SOLAR, INC.

Date: November 2, 2016 By: /s/ BRYAN SCHUMAKER
Name: Bryan Schumaker
Title: Chief Accounting Officer