FIRST SOLAR, INC.
Form 10-K
February 25, 2015

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

Form 10-K

(Mark one)

[x] ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2014

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)

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

Title of each class	Name of each exchange on which registered
Common stock, $0.001 par value	The NASDAQ Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act:
None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes [x] No [ ]

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes [ ] No [x]

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 if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. [ ]

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

Large accelerated filer [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]

The aggregate market value of the registrant's common stock, $0.001 par value per share, held by non-affiliates of the registrant on June 30, 2014, the last business day of the registrant's most recently completed second fiscal quarter, was approximately $4.9 billion (based on the closing sales price of the registrant's common stock on that date). As of February 20, 2015, 100,291,843 shares of the registrant's common stock, $0.001 par value per share, were issued and outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

The information required by Part III of this Annual Report on Form 10-K, to the extent not set forth herein, is incorporated by reference from the registrant's definitive proxy statement relating to the Annual Meeting of Shareholders to be held in 2015, which will be filed with the Securities and Exchange Commission within 120 days after the end of the fiscal year to which this Annual Report on Form 10-K relates.

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FIRST SOLAR, INC. AND SUBSIDIARIES

FORM 10-K FOR THE FISCAL YEAR ENDED DECEMBER 31, 2014

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Throughout this Annual Report on Form 10-K, we refer to First Solar, Inc. and its consolidated subsidiaries as "First Solar," the "Company," "we," "us," and "our." Our last three fiscal years ended on December 31, 2014, 2013, and 2012.

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NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K 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 inherent risks, uncertainties, and assumptions that are difficult to predict. All statements in this Annual Report on Form 10-K, 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, and capital expenditures; our ability to continue to reduce the cost per watt of our solar modules; research and development programs and our ability to improve the conversion efficiency of our solar modules; 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 Annual Report on Form 10-K are based upon information available to us as of the filing date of this Annual Report on Form 10-K. 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, including, but not limited to:

- structural imbalances in global supply and demand for photovoltaic ("PV") modules;
- the market for renewable energy, including solar energy;
- reduction, elimination or expiration of government subsidies and support programs for solar energy projects;
- our ability to execute on our Long Term Strategic Plan;
- interest rate fluctuations and both our and our customers' ability to secure financing;
- our ability to execute on our solar module and balance of systems ("BoS") cost reduction roadmap;
- our ability to attract new customers and to develop and maintain existing customer and supplier relationships;
- changes in, or the failure to comply with, government regulations and environmental, health and safety requirements;
- our competitive position and other key competitive factors;
- environmental responsibility, including with respect to cadmium telluride and cadmium sulfide;
- claims under our limited warranty obligations;
- future collection and recycling costs for solar modules covered by our module collection and recycling program;
- our ability to protect our intellectual property;
- our ability to prevent and/or minimize the impact of cyber attacks or other breaches of our information systems;
- our continued investment in research and development;
- the supply and price of components and raw materials, including cadmium telluride;
- our ability to successfully develop and complete our systems business projects;
- our ability to attract and retain key executive officers and associates;
- general economic and business conditions, including those influenced by international and geopolitical events; and
- all other matters discussed in Item 1A: "Risk Factors," and elsewhere in this Annual Report on Form 10-K.

You should carefully consider the risks and uncertainties described under this section.

Unit of Power

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.

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PART I

Item 1: Business

Company Overview

We are a global provider of solar energy solutions, focused on providing power solutions across key market segments. We design, manufacture and sell PV solar modules with an advanced thin-film semiconductor technology and we develop, design, construct and sell PV solar power solutions that primarily use the solar modules we manufacture. We also manufacture crystalline silicon solar modules with proprietary high-power density, mono-crystalline technology, and we provide single-axis mounting systems with proprietary tracking capabilities. Additionally, we provide operations and maintenance ("O&M") services to plant 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 systems 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.

In addressing overall global demand for PV solar electricity, we have developed a differentiated, fully integrated systems business that can provide competitively priced utility-scale PV solutions for system owners and low cost solar electricity to end-users. Our fully integrated systems business has enabled us to drive cost reduction across the value chain and deliver compelling solutions to our customers and end-users. With our fully integrated systems business, we believe we are in a position to continue to expand our business in economically sustainable markets (in which support programs are minimal), which are developing in areas that have a combination of abundant solar resources, relatively high current electricity costs and sizable electricity demand. We are committed to continually lowering the cost of solar electricity, and in the long-term, we plan to compete on an economic basis with conventional fossil-fuel-based peaking power generation.

In furtherance of our goal of delivering affordable solar electricity, we are continually focused on reducing PV solar power system costs in five primary areas: module manufacturing, BoS costs (consisting of the costs of the components of a solar power system other than the solar modules that we manufacture, such as inverters, mounting hardware, trackers, grid interconnection equipment, wiring and other devices, and installation labor costs), project development costs, the cost of capital, and the operating expenses of a PV solar system. First, with respect to our module manufacturing costs, we believe our advanced technology has allowed us to reduce our average module manufacturing costs to among the lowest in the world for modules produced on a commercial scale, based on publicly available information. We believe that our module manufacturing cost is competitive, on a comparable basis with, or is lower than, those of traditional crystalline silicon solar module manufacturers. By continuing to improve module conversion efficiency and energy density, increasing production line throughput, and lowering raw material costs, we believe that we can further reduce our manufacturing costs per watt and maintain cost competitiveness with traditional crystalline silicon solar module manufacturers. Second, with respect to our planned BoS cost reduction roadmap, we have aggressive programs which target key improvements in components and system design, which, when combined with continued improvements in solar module conversion efficiency, volume procurement around standardized hardware platforms, use of innovative installation techniques and know how, and accelerated installation times, are expected to result in continued reductions in our BoS costs resulting in a lower system levelized cost of energy. Third, with respect to our project development costs, we seek optimal site locations in an effort to maximize solar resource and minimize transmission and permitting costs, and to accelerate lead times to electricity generation. Fourth, with respect to the cost of capital, by continuing to demonstrate the financial viability and operational performance of our utility-scale PV solar power systems and increasing our system operating experience, we believe we can continue to lower the cost of capital associated with our systems, thereby further enhancing the economic viability of our projects and lowering the cost of electricity generated by PV solar power systems that incorporate our modules and

technology. The remaining primary PV solar power system cost relates to the actual operating expenses of a system, which includes the operations and maintenance costs of the plant. We believe that our O&M services are an important aspect to the overall future reduction expected in the levelized cost of electricity ("LCOE") of a PV solar power system through seamless grid integration, increased reliability and maximization of availability of the systems we operate and maintain for our customers.

In addition to enabling the PV system cost reductions described above, we believe that combining our vertical integration across the value chain enables us to be more competitive, accelerate the adoption of our technology in solar power systems, and identify and remove constraints to the successful migration to sustainable solar markets around the world. Our vertically integrated capabilities enable us to maximize value and mitigate risk for our customers and offer valuable benefits such as grid integration and stabilization, thereby positioning us to deliver meaningful PV energy solutions to varied energy problems worldwide. We seek to offer leadership across the entire solar value chain, resulting in more reliable and cost effective PV energy solutions for our customers, and furthering our mission to create enduring value by enabling a world powered by clean, affordable solar electricity.

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Market Overview

Solar energy is a growing form of renewable energy with numerous economic as well as environmental benefits that make it an attractive complement to, and/or substitute for, traditional forms of electricity generation. In recent years, the price of PV systems, and accordingly the cost of producing electricity from PV solar, has dropped to levels that are in some markets and applications close to or even below the retail price of electricity. The rapid price decline that PV experienced in the last few years opens new possibilities to develop PV systems in some locations with limited or no financial incentives. The fact that a PV solar system requires no fuel provides a unique and valuable hedging benefit to owners of PV systems relative to traditional electricity generation assets. Once installed, solar systems can function for 25 or more years with relatively less maintenance or oversight, compared to traditional forms of electricity generation. In addition to PV solar's economic benefits, PV solar has several environmental benefits. For example, PV systems do not generate any greenhouse gas or other emissions and use no or minimal amounts of water compared to traditional forms of electricity generation. Solar markets worldwide continue to develop, aided by the above factors as well as 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, and we have continued to develop our localized presence and expertise in these markets.

The solar industry continues to be characterized by intense pricing competition, both at the module and system levels. We believe the solar industry will continue to 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. In light of such market realities, we continue to execute our Long Term Strategic Plan described below, under which we are focusing on our competitive strengths. A key core strength is our differentiated, vertically integrated business model that enables us to provide utility-scale PV generation solutions to sustainable geographic markets that have an immediate need for mass-scale PV electricity.

Strategy and Competitive Strengths

To build upon our industry leading position and to remain one of the preferred providers of PV energy solutions, we are pursuing the following strategies: differentiation, sustainable growth and financial viability.

Differentiation

First Solar is vertically integrated across substantially the entire solar value chain. Many of the efficiencies, cost reductions and capabilities that we deliver to our customers are not easily replicable for other industry participants that are not similarly vertically integrated. The First Solar model offers PV energy solutions that benefit from our capabilities, including: project development; engineering and plant optimization; grid integration and plant control systems; project finance; advanced PV modules; trackers and fixed mounting systems; procurement and construction consulting; operations and maintenance; energy forecasting; and warranties and performance guarantees.

First Solar systems deliver solar energy that is cost competitive with certain conventional energy sources today, depending on the location and application. Our solutions diversify the energy portfolio and reduce the risk of fuel-price volatility, while delivering a LCOE that is cost competitive in some circumstances with electricity generated from fossil fuels. With the absence of commodity price risk, solar energy has a meaningful value proposition, including a long-term fixed price with relatively low operating costs, reliable energy and no risk of fuel price volatility. When compared to the price of power derived from a conventional source of energy, a fixed price cannot be achieved unless the cost of hedging is included. Hedging costs of a commodity such as natural gas, along with the costs of credit support required for a long-term hedge, can significantly increase conventional energy costs.

First Solar’s bankability and financial credibility enables us to offer meaningful system-level warranties for entire solar power plants years after the installation, which provides us with a competitive advantage relative to some of our peers in the solar sector in the context of project financing.

- We offer one of the most bankable utility-scale solar energy solutions in the world. With our proven experience, financial stability and ability to maximize the use of our leading technology in debt-financed projects, our bankable energy solutions provide access to capital and relatively low-cost financing to leading utilities and energy investors.

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- First Solar has developed advanced grid integration technology, which provides PV plants the ability to actively stabilize the electricity grid and operate more like traditional electricity generation plants. Advanced plant features of our grid integration systems include the ability to provide accurate energy forecasts, regulate voltage, curtail active power when necessary, limit the rate of change of power, prevent trips during faults and disturbances, and react to changes in grid frequency.

- First Solar has made significant improvements to BoS components to optimize the entire PV power plant and reduce lifecycle costs. Our proprietary data acquisition, plant control, and mounting systems are examples of plant optimizing technologies that enable us to provide reliable and predictable solar energy, increased energy yields and system availabilities, faster construction velocities, and a lower levelized cost of electricity. Additionally, our advanced plant controls enable seamless integration of our utility scale solar plants onto the electricity grid, providing vital grid support services such as voltage and power factor regulation, active and reactive power control, ramp rate control, frequency regulation, and fault ride-through.

- We invest significant resources in advanced research and development ("R&D"), both at the module and system level. First Solar's R&D model differentiates us from our competition due to its vertical integration, from advanced research to product development, manufacturing and applications. Our module conversion efficiency has improved on average more than half a percent every year for the last 10 years. First Solar has recently achieved two new world records for cadmium telluride ("CdTe") PV efficiency, achieving independently certified research cell efficiency of 21.5% and total area module efficiency of 17.0%. Our module R&D efforts are being focused on continually improving the energy density of other modules and otherwise driving improvements in the lifetime energy production of our modules while simultaneously integrating our module and BoS offerings for cost effective, productive and reliable PV power plants.

- In many climates, First Solar's CdTe PV module can provide an energy yield advantage over conventional crystalline silicon solar modules with equal power rating. For example, in humid climates, our CdTe PV module provides a superior spectral response and in hot climates, our CdTe PV module provides a superior temperature coefficient. As a result, at temperatures above 25°C, First Solar CdTe modules produce more energy than competing conventional crystalline silicon solar modules with equal power rating. This performance advantage provides stronger plant performance in high temperature climates, which is particularly advantageous as more than 90% of a plant's generation on average (in typical hot climates) occurs when module temperatures are above 25°C. As a result, First Solar power plants can produce up to 8% more annual energy than competing power plants with the same nameplate capacity.

- First Solar CdTe PV modules are manufactured in a high-throughput, automated environment that integrates all manufacturing steps into a continuous flow line. At the outset, a sheet of glass enters the production line and in less than 2.5 hours it is transformed into a complete PV module-flash tested, boxed and ready for shipment. We currently have 30 manufacturing lines worldwide and 2.7 GW of annual manufacturing capacity. Each line is currently capable of producing approximately 2,500 modules per day; totaling approximately 70,000 modules each day across 30 lines. About every 1.2 seconds, a completed PV module rolls off a First Solar line somewhere in the world. With expected increases in module efficiency as per our roadmap, our capacity has a potential to scale up to approximately 3 GW in 2017 based on the 30 existing lines. In addition, our stored manufacturing equipment includes up to 10 lines either from our former German factories or from manufacturing facilities that we put on hold with capacity of up to approximately 1.3 GW. As a result our total available manufacturing capacity includes up to 4.3 GW of either installed or stored capacity that can be readily installed and deployed in production and become a significant enabler of our future growth. In January 2015, we marked a new milestone by achieving 10 GW of solar capacity installed globally using our CdTe PV modules manufactured to date, making us the first thin film PV module manufacturer in the world to achieve this milestone.

First Solar crystalline silicon modules are made from high efficiency N Type Mono cells manufactured in our first crystalline silicon wafer fab in Kulim, Malaysia and then assembled into a 60 or 72 cell module by third party contract manufacturers. The wafer fab began production in December 2014 and is expected to be ramping to full capacity during the first half of 2015. When fully ramped, the cell factory will have the capacity to produce 55,000 156mm cells per day for a nameplate capacity of 100 MW annually. The standard First Solar 60 cell PV module will have a power rating of 300 watts. The manufacturing process is expected to deliver a very high efficient cell at a much lower manufacturing cost than is currently available in the marketplace. We believe the ability to offer solar solutions based on two different module platforms (CdTe modules, particularly suited for utility-scale or larger commercial and industrial applications, and high efficiency crystalline silicon modules, particularly suited for rooftop or other constrained space applications), is a source of positive differentiation relative to our competitors, many of whom are capable of providing solar solutions using only one module category.

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O&M is a key driver for power plants to deliver on their projected revenues. By leveraging our extensive experience in plant optimization and advanced diagnostics, we have developed one of the most advanced O&M programs in the industry. With more than 2.5 GW AC of utility-scale PV plants under the O&M program, we maintain a fleet average system availability greater than 99.5%. Our experienced O&M staff enhances the probability that our customers' power plants produce the energy predicted in their energy model. Our products and services are engineered to maximize energy output and revenue for our customers while significantly reducing their unplanned maintenance costs. Plant owners benefit from predictable expenses over the life of the contract and reduced risk of energy loss. Our goal is to optimize our customers' power plants to produce the maximum amount of energy production and revenue under their power purchase agreement ("PPA") throughout its operational life. We have made significant investments in O&M technologies in order to develop and create a scalable and sustainable O&M platform. Our O&M program is compliant with the North American Electric Reliability Corporation ("NERC") standards and is designed to be scalable to accommodate the growing O&M needs of customers worldwide. Our 2014 acquisition of skytron-energy, which has installed monitoring and control systems in more than 600 PV plants across Europe with a total peak capacity of 5 GW, more than doubled our portfolio of monitored assets and greatly expanded our worldwide O&M capabilities. We believe our O&M expertise is a significant differentiator, as it is difficult for many competitors to replicate this experience.

- We manage, as owner or partial owner, project assets to preserve and enhance shareholder value. We provide seamless management of projects from initial land development through construction, commissioning, and operation bringing to bear all of our experience in each of these phases.

Sustainable Growth

In executing our Long Term Strategic Plan we are focusing on providing solar PV generation solutions to sustainable geographic markets that we believe have a compelling need for mass-scale PV electricity, including markets throughout the Americas, Asia, Australia, the Middle East, and Africa. As part of our Long Term Strategic Plan, we are focusing on opportunities in which our solar PV generation solutions can compete directly with fossil fuel offerings on an LCOE or similar basis, or complement such fossil fuel electricity generations. Execution of the Long Term Strategic Plan entails a development of resources around the globe, in particular, dedicating resources to regions such as Latin America, Asia, the Middle East, and Africa. We are evaluating and managing closely the appropriate level of resources required as we transition into and penetrate these specific markets. We have and intend to continue to dedicate significant capital and human resources to reduce the total installed cost of solar PV generation, to optimize the design and logistics around our solar PV generation 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 will come from solar offerings in the sustainable 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 Item 1A: "Risk Factors."

Joint ventures or other business arrangements with strategic partners are a key part of our Long Term Strategic Plan, and we use such arrangements to expedite our penetration of various markets and establish relationships with potential customers and policymakers. Some of these business arrangements have and are expected in the future to involve significant investments or other allocations of capital on our part. We continue to develop relationships with policymakers, regulators, and end customers in each of these markets with a view to developing markets for utility scale PV solar power systems. We sell solar power solutions directly to end customers, including independent power producers, utilities, retail electricity providers, and commercial and industrial customers. Depending on the market opportunity, our sales offerings range from module only sales, to module sales with a range of development, engineering, procurement, and construction ("EPC") services and solutions, to full turn-key PV solar power system sales. We expect these sales offerings to continue to evolve over time as we work with our customers to optimize how our PV solar generation solutions can best meet our customers' energy and economic needs. In addition to our

utility-scale power plant offerings, we have fuel displacement, commercial, industrial, and off-grid and energy access offerings as described below.

Financial Viability

First Solar's commitment is to create long-term shareholder value and generate returns on invested capital in excess of its weighted average cost of capital over that time horizon. Despite substantial downward pressure on the price of solar modules due to significant excess capacity in the industry, we have continued to deliver strong financial performance and liquidity. As planned, we expect to continue to drive operating expense efficiencies and improvements while still investing in growth, the continued development of our global sales capabilities and our R&D roadmap. We seek to balance our incentive compensation and decision-making processes to ensure we direct our efforts and investments towards long-term profitable and sustainable growth with appropriate returns on invested capital and reinvest excess returns back into the business.

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Offerings and Capabilities

Offerings

We are focusing our resources in markets and on 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. We differentiate our product offering by geographic market and localize the solution, as needed. Our consultative approach to our customers' solar energy needs and capabilities results in customized solutions to meet their economic goals. We have designed our customer solutions according to the needs of the following different business areas. Although we have substantial experience with the utility-scale power plant and advanced PV module offerings described below, certain other offerings are in various stages of development.

- Utility-Scale Power Plant. We have extensive, proven experience in delivering reliable grid-connected bulk power systems for utility-scale generation. First Solar's grid-connected PV power plants diversify the energy portfolio, reduce fossil-fuel consumption, reduce the risk of fuel price volatility, and save costs, proving that centralized solar generation can deliver reliable and affordable solar electricity to the grid in many places around the world. Benefits of our grid-connected bulk power system solutions include reduction of fuel imports and improvements in energy security; diversification of the energy portfolio and reductions of risk related to fuel-price volatility; enhanced peaking generation and faster time-to-power; improved grid reliability and stability with advanced PV plant controls and managed PV variability through accurate forecasting.

- AC Power Block. First Solar's AC Power Block is a pre-engineered system solution with guaranteed performance, consisting of First Solar modules, mounting solutions, third-party inverters, a power block warranty and certain related services and is available in modular units ranging from 800 kilowatts to 3.8 MW. Building on the core of our PV plant technology, the AC Power Block enables our local EPC partners to develop PV power plants in diverse regions. By utilizing technologies optimized by First Solar, the AC Power Block is designed to provide verification of the power plant energy model ensuring that delivered performance equals predicted performance. The AC Power Block is designed to (i) feature execution by a local partner with First Solar technology and training; (ii) provide a bankable revenue stream; (iii) streamline development, financing, permitting, installation, and commissioning; (iv) reduce LCOE and (v) ensure predictable energy performance. As a result of First Solar's experience in utility-scale generation, First Solar power plants can deliver an accurate energy profile, cost structure and be optimized for project-specific economics. By applying our knowledge and technical expertise to the AC Power Block solution, we are able to predict the energy model and guarantee the first year revenues. The AC Power block performance guarantee is expected to result in a high level of bankable revenue stream for project owners.

- Fuel Displacement. Our hybrid power plant solutions, which are currently in development, are expected to reduce fuel consumption and save costs for certain energy customers using liquid fuel as their primary energy source. Today, solar electricity is cheaper than diesel generated electricity in certain markets. With fixed pricing and no fuel-price volatility, solar can provide a meaningful value proposition for energy customers burning liquid fuel as their primary energy source. Our innovative hybrid system solutions can provide cost-competitive solar energy as an alternative source of fuel, reducing fuel consumption and variable costs with reliable and affordable solar electricity. Benefits of our fuel displacement offerings include the reduction of fuel consumption and cost savings; an increase in fuel reserves or exports at market prices; a smaller impact from fuel price volatility; greater energy independence; reduction of CO_2 emissions and generator operating time.

- Commercial and Industrial ("C&I") - Distributed Generation. We are in the process of developing system solutions, both ground-mounted and roof-top, for commercial and industrial applications, using both our CdTe PV technology and our high efficiency crystalline silicon technology. Distributed solar generation can be deployed rapidly, and

because the energy generated is consumed locally, less energy is lost in transmission from the point of production. While our CdTe PV modules have been used in many C&I systems worldwide, our high-power density, mono-crystalline solar modules are particularly attractive in restricted spaces, enabling our customers to pack more power and energy production into each location, resulting in improved performance in site-constrained locations.

- Off-Grid and Energy Access. Our off-grid and energy access offerings, currently in development, can address underserved energy markets and bring power solutions to some of the approximately 1.3 billion people without access to a modern energy grid. First Solar's energy access offerings are expected to provide a practical and affordable option for underserved off-grid energy markets across the globe. Our mini-grid capabilities under development can provide aggregate surplus supply for village electrification in remote locations to power homes, schools, hospitals, telecommunication systems, and many other modern applications. Our underserved energy market capabilities under development can provide base-

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load solar generation with no fuel cost or delivery risk; reduce health risks associated with kerosene and diesel fuel; support fast installation, low maintenance, and easy service and provide income generation and economic development opportunities. We are currently engaged in three off-grid energy access test pilot sites in Kenya.

- Community Solar. Our community solar offering addresses the residential and small business sectors, providing a broad range of customers access to competitively priced solar energy regardless of the suitability of their rooftops. Community solar utilizes relatively small ground-mounted installations that provide clean energy to utilities, which then offer consumers the ability to buy into a specific community installation and benefit from the solar power generated by that resource. First Solar's expertise in utility scale generation and module technology, paired with the community solar project development expertise of our partner Clean Energy Collective, allows residential power consumers to "go solar," including those who live in apartment buildings or whose home rooftops cannot accommodate solar panels. We are currently working with strategic partners to develop a commercially scalable community solar offering.

- Advanced PV Modules. Our Series 4 and Series 3 Black Plus CdTe PV module outperforms conventional crystalline silicon solar modules with equal power rating due in part to superior spectral response and temperature coefficient in many climates. At temperatures above 25°C, First Solar modules produce more energy than conventional crystalline silicon solar modules with equal power rating. Our TetraSun crystalline silicon module is designed for applications where space is at a premium or customers prefer a high power density solution. With a proprietary cell architecture, our crystalline silicon modules offer one of the industry's highest power ratings and conversion efficiencies and lowest temperature coefficients, resulting in high energy density in space-constrained installations.

Full Suite of Capabilities

The First Solar model offers PV energy solutions with superior value and less risk with our expertise across substantially the entire solar value chain, including:

- Project Development. During project development, we obtain land and land rights for the development of PV solar power systems incorporating our modules, negotiate long-term PPAs with potential purchasers of the electricity to be generated by those plants or develop plants in regulated markets where feed-in-tariff ("FiT") or similar structures are in place, manage the interconnection and transmission process, negotiate agreements to interconnect the systems to the electricity grid, and obtain the permits which are required prior to the construction of the PV solar power systems, including applicable environmental and land use permits. We also buy projects in various stages of development and continue developing those projects with system designs incorporating our own modules. We sell developed PV solar power systems to system operators who wish to own generating facilities, such as utilities, or to investors who are looking for long-term investment vehicles that are expected to generate consistent returns.

- EPC Services. We provide EPC services to projects developed by us, to projects developed by independent solar power project developers, and directly to system owners such as utilities. EPC products and services include engineering design and related services, BoS procurement, advanced development of grid integration solutions, and construction contracting and management. Depending on the customer and market need, we may provide our full EPC services or any combination of individual products and services within our EPC capabilities. An example of such combination of individual services would be providing engineering design and procurement of BoS parts ("EP" services) for a third-party constructing a PV solar power system.

- O&M Services. We have a comprehensive O&M service offering with multiple PV solar power systems in operation. Utilizing a state of the art Global Operations Center, our team of O&M experts provide comprehensive services including NERC compliance, energy forecasting, 24/7 monitoring and control, PPA and Large Generator Interconnection Agreement compliance, performance engineering analysis, turn-key maintenance services including

spare parts and breakdown repair, and environmental services. We offer our O&M service to solar power plant owners that use either our solar modules or modules manufactured by other third-party manufacturers.

- Project Finance. Our project finance group is primarily responsible for negotiating and executing the financing, structuring and/or sales of PV solar power systems incorporating our modules, which allows us to optimize the value of our project development portfolio. Our project finance team includes professionals with experience in arranging financing including non-recourse project debt financing in the bank loan markets and debt capital markets and project equity capital from tax oriented and strategic industry equity investors.

- The First Solar Tracker and Other Balance of System. BoS consists of all of the non-module components of the solar power plant. We sell certain components of the solar system including single-axis trackers, which are manufactured by

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a third-party using our proprietary technology. We offer several proprietary mounting solutions that have been custom-designed by First Solar engineers to integrate exclusively with our modules and reduce system costs. Project specific factors such as the local irradiance, weather, soil, wind, and topography will dictate the optimal mounting solution for each project. With a single-axis tracker technology and multiple fixed mounting solutions to choose from, we offer a suite of mounting systems that have been engineered to maximize energy output, increase installation velocity, and reduce costs. Our proprietary tracker systems follow the sun throughout the day to maximize energy output and generate up to 25% more energy than fixed mounting systems. In addition, our vertical integration combined with partner collaboration has enabled us to continue to make system-level improvements, such as a next-generation PV solar plant design in development combining our CdTe modules with GE's ProSolar 1500 volt inverter/transformer system.

- Asset Management. We have energy professionals with extensive experience in managing merchant positions in energy markets. We utilize these professionals to implement opportunistic strategies to secure power sales contracts, and hedge market exposure to optimize value while mitigating price risk. We are also developing capabilities in power sales and marketing, which will enable us to source buyers of electricity from our projects as needed, for instance during any stub periods between a solar plant's commercial operation date and the subsequent start date of a long-term PPA.

Global Markets

We have established and are continuing to develop a localized business presence on six continents, as described below. Energy markets are by their nature localized, with different drivers and market forces impacting electricity generation in a particular region or for a particular application. Accordingly, our business is evolving worldwide and shaped by the varying ways in which our PV solar solutions can be a compelling and economically viable solution to energy needs in different markets and applications.

The Americas

- United States. Multiple PV markets in the United States, which accounted for 90% of our 2014 net sales, exemplify several of the criteria critical for a sustainable solar market: (i) sizeable electricity demand, particularly around growing population centers and industrial areas, (ii) high existing power prices, and (iii) abundant solar resources. In those areas and applications in which these factors are more pronounced, our PV solar solutions are getting closer to competing solely on an economic basis with more traditional forms of energy generation. The market penetration of PV solar is impacted by certain state and federal support programs, including the 30% federal investment tax credit set to step down to 10% at the end of 2016, as described under "Market Overview" and "Support Programs." We have significant experience and a market leadership position in developing, financing, engineering, constructing, and maintaining utility-scale power plants in the United States, particularly in California and other southwestern states. Currently, our solar projects in the United States account for a majority of the 1.5 GW AC advanced-stage pipeline of projects that we are either currently constructing or expect to construct. See Item 7: "Management's Discussion and Analysis of Financial Condition and Results of Operations-Systems Project Pipeline" for more information about these projects.

- Chile. Chile is a promising region for PV solar in that certain markets are characterized by high existing electricity prices, abundant solar resources and visible demand in the form of mining or industrial activity. The Chilean government's National Energy Strategy includes expansion of the country's renewable energy capacity to 20 percent of its total generated power by 2025. In 2014, we began construction on our 141 MW AC Luz del Norte PV power plant located near Copiapó, Chile. Energy from Luz del Norte, once completed, will be supplied into the Chilean Central Interconnected System, contributing significantly toward Chile's renewable energy goal. In addition to being the largest solar plant in the region, Luz del Norte, once completed, will be the biggest solar power facility in the world to

sell electricity on an open contract basis.

- Other Americas. We are developing our business in other countries in the Americas including Brazil, Mexico, and certain Central American countries.

Europe, Middle East and Africa

- Europe. While PV solar adoption in prior years was driven to a large degree by feed-in-tariffs and other incentive programs in Germany, France, Italy and Spain, PV solar has entered its next phase in which growth will ultimately be determined by the degree to which PV solar solutions can compete economically with more traditional forms of electricity generation, particularly in areas with high prevailing electricity prices, strong electricity demand and strong solar resources. In particular, the UK, Germany, France and the Netherlands are all running tenders in which large-scale solar PV can bid for capacity.

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In Europe, which accounted for approximately 4% of our 2014 net sales, we have been engaged in project development activities with respect to certain projects in the United Kingdom, Germany, France and the Netherlands, and we are actively evaluating additional project and business opportunities in Turkey, Israel and emerging Southeastern European markets as well as mature Western European solar markets. We are party to a joint venture with Belectric Solarkraftwerke GmbH to realize solar energy projects on three continents. The joint venture is based in Germany and is tasked with developing selected PV power projects independently acquired or developed by either of the two companies in Europe, North Africa, as well as projects of fewer than 20 megawatts, in the United States. Under the terms of the joint venture, First Solar will supply its thin-film modules, selected components such as the First Solar tracker and value-added services, while Belectric will provide its advanced balance of systems and a range of service capabilities. Both companies' engineering, procurement and construction contributions will vary by project and geography. In November 2014, First Solar and Belectric announced ground-breaking on a new 46 MW DC utility-scale power plant, in Oxfordshire, Southern England.The project is the fourth to be executed in the United Kingdom under the joint venture; with its recently built solar farms in Wiltshire and East Anglia, the joint venture is expecting to reach a total capacity of 80 MW DC in the United Kingdom.

- Middle East. The Middle East region offers strong growth potential driven by a combination of economics, abundant solar resources and robust policy. Key markets in the region, including the United Arab Emirates, Jordan, and Egypt, have implemented policy mechanisms designed to ramp up the share of renewable energy in their generation portfolios. While their motives for investing in solar energy range from energy security to the diversification of their generation portfolios to the minimization of domestic consumption of hydrocarbons, the common factor is that the economics of solar PV have made it a compelling choice as a generation source.

Jordan and Egypt have actively facilitated the development of the independent power production sector in their countries, as a means of responding to urgent energy needs. For example, Jordan has committed to installing 600MW of solar PV capacity by 2020, while Egypt recently launched the Middle East's first multi-gigawatt scale solar tender, which was over-subscribed. Meanwhile, the emirate of Dubai, in the United Arab Emirates, doubled the capacity of the second phase of its flagship solar park to 200MW; it has also tripled its renewable energy commitment from 5 to 15 percent of its generation capacity by 2030. However, as with any emerging market, challenges remain and these are primarily with regard to evolving policy and legislation, prevailing energy subsidies, available infrastructure, and geopolitical risk.

First Solar is pursuing a wide range of opportunities to support the Middle East region's efforts to cultivate its considerable solar resources. We established a local business presence in Dubai and in Saudi Arabia. We constructed the 13 MW DC first phase of the Mohammed bin Rashid Al Maktoum Solar Park in Dubai, which set the benchmark for utility scale solar in the region. In Jordan, we supported the development of and will construct the 53MW AC Shams Ma'an solar plant, which is expected to account for one percent of Jordan's annual energy output, when it is completed in 2016.

- Africa. Africa offers strong potential for PV solar, which can play a useful role meeting the region's varying energy needs. For example, the mining industry in South Africa and around the region is working to address electricity supply challenges that have a direct impact on operations. Whether mines are grid-connected or relying on diesel generators, solar energy, with its cost competitiveness and reliability, represents a meaningful value proposition. Deploying PV hybrid solutions that supplement existing power sources, such as the electricity grid or diesel generators, can help mining companies address their daytime electricity supply challenges, while minimizing costs and lowering their environmental impact. In South Africa, the government is procuring bids under a competitive tender process in support of a target of procuring over 18 GW of renewable energy (wind, solar, etc.) by 2030 in South Africa's Integrated Resource Plan of which over 8.4 GW was allocated to solar PV. We are also developing energy access locations using PV solar to address the electricity needs of people in Africa without access to a modern energy grid, as described above under "Business – Offerings and Capabilities – Off-Grid and Energy Access." First Solar

has established an operating subsidiary in Cape Town, South Africa as a regional hub for activities across sub-Saharan Africa.

Asia-Pacific (“APAC”) and India

Australia. Australia is a promising region for PV solar in that certain markets are characterized by abundant solar resources and visible demand in the form of mining and industrial activity. In Australia, which accounted for approximately 5% of our 2014 net sales, the solar industry is impacted by several regulatory initiatives that support the installation of solar PV modules in both rooftop and free-field applications, including the federal government’s national Renewable Energy Target, which has set a renewable energy goal of 20% by 2020. This target is the subject of political debate and the development of large scale renewable energy projects is currently constrained by the uncertainty. Additional support has been provided by the Australian Renewable Energy Agency which offers grant-based funding for solar PV projects in both grid-connected and off-grid applications.

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First Solar is currently constructing for AGL Energy Limited a 102 MW solar power plant at Nyngan and a 53 MW solar project at Broken Hill, both located in New South Wales. The Nyngan and Broken Hill solar projects will be Australia's largest utility-scale solar projects once completed in 2015. In 2012, First Solar completed construction of the 10 MW Greenough River Solar Farm in Western Australia in cooperation with Verve Energy and GE Energy Financial Services. Greenough River Solar Farm is the largest PV solar farm in operation in Australia. In addition to supplying thin film PV modules and EPC services for the plant, First Solar is providing O&M services under a 15 year contract.

- Japan. Japan has evolving electricity market characteristics, particularly after the 2011 Fukushima Daiichi nuclear disaster, that make it an attractive market for PV solar. Japan announced new safety standards after the failure of the Fukushima Daiichi nuclear power station resulting in the idling of Japan's nuclear reactors, which historically generated nearly 50 GW or 30% of the country's electricity. Japan has few domestic fossil fuel resources and as a result of the shutdown of its nuclear reactors, it further increased its dependence on fossil fuel imports to cover the generation shortfall. Japan is the largest importer of liquefied natural gas globally. The Japanese government has announced a long-term goal of dramatically increasing installed solar power capacity. Japan is a signatory to the Kyoto Protocol, which requires it to reduce greenhouse gas emissions. As Japan will not likely reach its renewable energy (including solar) targets, Japan has provided incentives for solar power installations. Its FiT program has been oversubscribed, leading some of the distribution companies to limit the granting of new interconnection requests. However, high solar demand is expected to be maintained in Japan over the next several years.

We established a Japan operating subsidiary and opened an office in Tokyo to effectively pursue growth opportunities. In 2014, we completed construction of a 1.4 MW DC solar project in Kitakyushu-shi, Japan using our CdTe PV modules. We are expecting to partner with Japanese companies to develop, construct, and operate solar power plants, mitigating Japan's dependence on nuclear power and natural gas fuel imports. Our sales offerings in Japan include both our CdTe modules and high efficiency TetraSun crystalline silicon modules.

- India. There is significant potential for PV in India due to its growing energy needs, substantial population centers, a lack of electrification to many parts of the country, high competing energy costs, high levels of irradiance, and the aggressive renewable energy targets set by the government. In India, the Central Government has initiated actions to roll out Phase-III of its Jawaharlal Nehru National Solar Mission ("JNNSM"), which aims to install 22 GW of new solar electricity generating capacity by 2022, or a cumulative target capacity addition of 11 GW between 2013-17 as part of Phase II of JNNSM.

In addition to national level initiatives, various Indian states have also embarked on solar power programs at the state level. Renewable Purchase Obligations ("RPOs") have been introduced to help drive the PV market in India. Affected electricity consumers can achieve their purchase obligations by setting up their own installation or purchasing power directly through a PPA. Alternatively they can purchase solar Renewable Energy Certificates from other producers to meet their target.

In 2014, we announced plans to build 45 MW AC of utility-scale solar plants at two sites in the state of Telangana, India. The project will supply electricity through the grid to the Southern Distribution Company of Telangana State Limited for a period of 20 years. Additionally, we continue to maintain our equity investment in Kiran Energy Solar Power Pvt. Ltd. and Mahindra Solar One Pvt. Ltd. power plants in India's Rajasthan state. First Solar in India is seeking to develop utility scale solar PV projects, address the energy/RPO needs of the utilities and also target the open access industrial and commercial power demand. Options such as partnering with local entrepreneurs to develop solutions for segments in the energy access market and creating solutions by combining solar PV with other modes of generation and reduce dependence on liquid fuels especially in back-up (or even primary power) markets are also being explored. For a description of some of the risks associated with our efforts in India, see "Item 1A: Risk Factors -

Risks Related to Our Markets and Customers - Our ability to pursue an expansion strategy in India could be adversely affected by protectionist or other adverse public policies."

- Other APAC. We are developing our business in other APAC countries including Indonesia, Malaysia, Thailand and the Philippines. Each of these regions has one or more market characteristics or trends (such as an environment of declining fuel subsidies in Indonesia) which can make PV solar electricity attractive. In China, we continue to evaluate our options and remain committed to our presence, with the goal of developing sales and joint venture opportunities in the market.

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Support Programs

Although our Long Term Strategic Plan provides for First Solar to transition over time toward operating in sustainable markets that do not require solar specific government subsidies or support programs, in the near-term our net sales and profits remain subject to variability based on the availability and size of government subsidies and economic incentives. Support programs for PV solar electricity generation, depending on the jurisdiction, include FiTs, quotas (including renewable portfolio standards and tendering systems), and net energy metering programs. In addition to these support programs, financial incentives for PV solar electricity generation include tax incentives, grants, loans, rebates, and production incentives. Although we expect to become less impacted by, and less dependent on, support programs as we execute our Long Term Strategic Plan and transition into primarily sustainable markets, support programs will continue to play varying roles in accelerating the adoption of PV solar systems around the world.

In Europe, renewable energy targets, in conjunction with FiTs, Renewable Obligation Certificates ("ROC's") and other schemes such as tenders for large-scale PV, have contributed to the growth in PV solar markets. Renewable energy targets prescribe how much energy consumption must come from renewable sources, while incentive policies and competitive tenders policies are intended to support new supply development by providing investor certainty. A 2009 European Union ("EU") directive on renewable energy, which replaced an earlier 2001 directive, sets varying targets for all EU member states in support of the directive's goal of a 20% share of energy from renewable sources in the EU by 2020, and requires national action plans that establish clear pathways for the development of renewable energy sources.

Tax incentive programs exist in the U.S. at both the federal and state level and can take the form of investment and production tax credits, accelerated depreciation and sales and property tax exemptions and abatements. At the federal level, investment tax credits for business and residential solar systems have gone through several cycles of enactment and expiration since the 1980's. In October 2008, the U.S. Congress extended the 30% federal energy investment tax credit ("ITC") for both residential and commercial solar installations for eight years, through December 31, 2016. The ITC is a primary economic driver of solar installations in the U.S. Its extension through 2016 has contributed to greater medium term demand visibility in the U.S.; however, its step-down to 10% at the end of 2016 (unless extended) underscores the need for the LCOE from solar systems to continue to decline toward grid parity. The step-down of the 30% ITC poses significant uncertainties regarding the future of U.S. PV solar market demand.

The majority of states in the U.S. have enacted legislation adopting Renewable Portfolio Standards ("RPS") mechanisms. Under an RPS, regulated utilities and other load serving entities are required to procure a specified percentage of their total electricity sales to end-user customers from eligible renewable resources, such as solar generating facilities, by a specified date. Some programs may further require that a specified portion of the total percentage of renewable energy must come from solar generating facilities. RPS legislation and implementing regulations vary significantly from state to state, particularly with respect to the percentage of renewable energy required to achieve the state's RPS, the definition of eligible renewable energy resources, and the extent to which renewable energy credits (certificates representing the generation of renewable energy) qualify for RPS compliance. Measured in terms of the volume of renewable electricity required to meet its RPS mandate, California's RPS program is the most significant in the U.S., and the California market for renewable energy has dominated the western U.S. region for the past several years. First enacted in 2002, California's RPS statute has been amended several times to increase the overall percentage requirement as well as to accelerate the target date for program compliance. Pursuant to amendments enacted by the California Legislature in 2011, the California RPS program now requires utilities and other obligated load serving entities to procure 33% of their retail electricity demand from eligible renewable resources by 2020. In 2014, approximately 73% of our total net sales were derived from our systems projects or third-party module sales to solar power systems in California.

Business Segments

We operate our business in two segments. Our components segment involves the design, manufacture, and sale of solar modules which convert sunlight into electricity. We manufacture CdTe modules and we also began manufacturing high-efficiency crystalline silicon modules during the fourth quarter of 2014. Third-party customers of our components segment include project developers, system integrators, and owners 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, (iii) O&M services, and (iv) project finance expertise, all as described in more detail below. 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 such products and services are sold directly to investor owned utilities, independent power developers and

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producers, commercial and industrial companies, and other PV solar power system owners. Additionally, within our systems segment, we may hold and operate certain of our PV solar power systems based on strategic opportunities.

See Note 24 “Segment and Geographical Information,” to our consolidated financial statements for the year ended December 31, 2014 included in this Annual Report on Form 10-K for further information on our business segments.

Components Business

Our components business involves the design, manufacture, and sale of solar modules which convert sunlight into electricity.

Solar Modules

CdTe Modules. Our flagship module since the inception of First Solar has been manufactured using our advanced CdTe thin-film technology. Each solar module is a glass laminate approximately 2ft x 4ft (60cm x 120cm) in size that encapsulates a CdTe thin-film semiconductor. Our solar modules had an average rated power per module of approximately 95 watts, 91 watts, and 86 watts for 2014, 2013, and 2012, respectively. During 2014, we announced the release of our Series 4™ module, which offers up to eight percent more energy than conventional crystalline silicon modules with the same power rating, and is compatible with advanced 1500-volt plant architectures. The Series 4A™ variant features a new anti-reflective coated glass, which enhances energy production. Our semiconductor structure is a single-junction polycrystalline thin-film that uses CdTe as the absorption layer. CdTe has absorption properties that are matched to the solar spectrum and can deliver competitive conversion efficiencies using only about 1-2% of the amount of semiconductor material (i.e., silicon) that is used to traditional manufacture crystalline silicon solar modules. One of the drivers of First Solar modules’ performance advantage over crystalline silicon modules is a lower temperature coefficient, delivering higher energy yields at elevated operating temperature typical of utility-scale solar power plants in sunny regions.

Crystalline Silicon Modules. In the fourth quarter of 2014, we began manufacturing modules incorporating high-efficiency crystalline silicon technology for deployment in space constrained applications.

Descriptions below of our components business relate to our CdTe modules unless otherwise noted.

Manufacturing Process

CdTe Modules

We manufacture our CdTe solar modules on high-throughput production lines and perform all manufacturing steps ourselves in an automated, proprietary, and continuous process. Our solar modules employ a thin layer of semiconductor material to convert sunlight into electricity. Our manufacturing process eliminates the multiple supply chain operators and expensive and time-consuming batch processing steps that are used to produce crystalline silicon solar modules. Currently, we manufacture our solar modules at our Perrysburg, Ohio, and Kulim, Malaysia manufacturing facilities.

We have integrated our CdTe manufacturing processes into a continuous production line with the following three stages: the deposition stage, the cell definition and treatment stage, and the assembly and test stage. In the deposition stage, panels of transparent oxide-coated glass are robotically loaded onto the production line where they are cleaned, heated, and coated with thin layers of cadmium sulfide followed by a layer of CdTe using our proprietary vapor transport deposition technology, after which the semiconductor-coated plates are cooled rapidly to increase strength. In the cell definition and treatment stage, we use high speed lasers to transform the large single semiconductor coating

on the glass plate into a series of interconnected cells that deliver the desired current and voltage output. In this stage, we also treat the semiconductor film using proprietary chemistries and processes to improve the device performance, and we apply a metal terminated sputtered back contact. Finally, in the assembly and test stage, we apply busbars, inter-laminate material, and a rear glass cover sheet that is laminated to encapsulate the semiconductor. A junction box and termination wires are then applied to complete the assembly. The final assembly stage is the only stage in our production line that requires manual processing.

We maintain a robust quality and reliability assurance program that monitors critical process parameters to ensure that industry and internal standards are met. This rigorous set of evaluations is conducted prior to each solar module undergoing acceptance testing for both electrical leakage and power measurement on a solar simulator. The quality and reliability tests complement production surveillance with an ongoing monitoring program, subjecting production modules to accelerated life cycle and stress testing to ensure conformance to requirements of the International Electrotechnical Commission (“IEC”) and Underwriters Laboratories Inc. (“UL”). This program assures a high level of product quality and reliability, helping to predict power performance in the field.

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Crystalline Silicon Modules

We manufacture our crystalline silicon cells in our new wafer fab in Kulim, Malaysia. The manufacturing process starts with 156mm N Type mono crystalline silicon wafers supplied by a variety of wafer suppliers. Incoming wafers are subjected to a series of inspections to ensure that high quality standards are met. The proprietary manufacturing process consists of passivation, annealing, metallization, printing, wet cleans and electroplating steps and are all fully automated independent steps. Completed cells are tested and binned according to strict performance criteria. The final module assembly is completed by a contract manufacturing company that performs manufacturing to our module specifications using a bill of materials managed by us.

We maintain a robust quality and reliability assurance program that monitors critical process parameters to ensure that industry and internal standards are met. This rigorous set of evaluations is conducted prior to each solar module undergoing acceptance testing for both electrical leakage and power measurement on a solar simulator. The quality and reliability tests complement production surveillance with an ongoing monitoring program, subjecting production modules to accelerated life cycle and stress testing to ensure conformance to IEC and UL requirements. This program assures a high level of product quality and reliability, helping to predict power performance in the field.

Research, Development, and Engineering

We continue to devote substantial resources to research and development with the primary objective of lowering the lifecycle cost of electricity generated by our PV systems. We conduct our research and development activities primarily in the United States. Within our components business, we focus our research and development activities on, among other areas, continuing to increase the conversion efficiency and energy yield of our solar modules and continuously improving durability and manufacturing efficiencies, including throughput improvement, volume ramp, and material cost reduction.

In the course of our research and development activities, we continuously explore and research technologies in our efforts to sustain competitive differentiation in our modules. We typically qualify process and product improvements for full production at our Perrysburg, Ohio plant and then use a systematic process to propagate them to our other production lines. We believe that our systematic approach to technology change management will provide continuous improvements and ensure uniform adoption across our production lines. In addition, our CdTe production lines are replicas or near replicas of each other and, as a result, a process or production improvement on one line can be rapidly deployed to other production lines.

We regularly produce research cells in our laboratories, some of which are tested for performance and certified by independent labs such as the National Renewable Energy Laboratory. Cell efficiency measures the proportion of light converted in a single solar cell at standard test conditions. Our research cells are produced using laboratory equipment and methods and are not intended to be representative of our manufacturing capability. We believe that our record cells demonstrate a potential long-term module efficiency entitlement of over 18% using our commercial scale manufacturing equipment.

During 2013 we acquired GE’s global CdTe solar intellectual property portfolio, setting a course for significant advancement of our PV thin-film solar technology. The combination of the two companies’ complementary technologies and First Solar’s existing manufacturing capabilities are expected to accelerate the development of CdTe solar module performance and improve efficiency at manufacturing scale. In addition, GE Global Research and First Solar R&D are collaborating on future technology development to further advance CdTe solar technology pursuant to an agreement through 2016.

For information regarding our research and development expense for the years ended December 31, 2014, 2013, and 2012, See Item 7: “Management’s Discussion and Analysis of Financial Condition and Results of Operations – Results of Operations.”

Customers

With respect to our components business, during 2014, we sold the majority of our solar modules (not included in our systems projects) to solar power system project developers, system integrators, and operators headquartered primarily in Germany, India, and the United States, which either resell our solar modules to end-users or integrate them into solar power plants that they own, operate, or sell. Third-party module sales represented approximately 7% of our total 2014 net sales. Additionally, we develop, design, construct and sell PV solar power systems that use the solar modules we manufacture.

During 2014, NextEra Energy, Inc, Southern Company and MidAmerican Energy Company individually accounted for more than 10% of our components segment’s net sales, which includes the solar modules used in our systems projects. We are investing in sustainable market development, particularly in areas with abundant solar resources and sizable electricity demand, and as part

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of such efforts we are seeking to develop additional customer relationships in sustainable markets and regions, which has reduced and is expected to continue to reduce our customer and geographic concentration and dependence.

Competition

The renewable energy, solar energy, and solar module sectors are highly competitive and continually evolving as participants in these sectors strive to distinguish themselves within their markets and compete within the larger electric power industry. We face intense competition for sales of solar modules, which has resulted in and may continue to result in reduced margins and loss of market share. With respect to our components business, our primary sources of competition are currently crystalline silicon solar module manufacturers, as well as other thin-film module manufacturers and companies developing solar thermal and concentrated PV technologies. Certain of our existing or future competitors may be part of larger corporations that have greater financial resources and greater brand name recognition than we do and, as a result, may be better positioned to adapt to changes in the industry or the economy as a whole. Certain competitors may have direct or indirect access to sovereign capital, which could enable such competitors to operate at minimal or negative operating margins for sustained periods of time. Among PV module and cell manufacturers, the principal methods of competition include sales price per watt, conversion efficiency, reliability, warranty terms, and customer payment terms. If competitors reduce module pricing to levels near or below their manufacturing costs, or are able to operate at minimal or negative operating margins for sustained periods of time, our results of operations could be adversely affected. At December 31, 2014, the global PV industry consisted of more than approximately 164 manufacturers of solar modules and cells. In the aggregate, these manufacturers have significant production capacity relative to global demand. We believe the solar industry will continue to 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, which could adversely affect our results of operations.

In addition, we expect to compete with future entrants to the PV industry that offer new technological solutions. We also face competition from semiconductor manufacturers and semiconductor equipment manufacturers or their customers, that produce PV cells, solar modules, or turn-key production lines. We also face competition from companies that currently offer or are developing other renewable energy technologies (including wind, hydropower, geothermal, biomass, and tidal technologies) and other power generation sources that employ conventional fossil fuels.

Raw Materials

Our CdTe module manufacturing process uses approximately 30 types of raw materials and components to construct a complete solar module. One critical raw material in our production process is cadmium telluride. Of the other raw materials and components, the following eight are also critical to our manufacturing process: front glass coated with transparent conductive oxide, cadmium sulfide, photo resist, laminate material, tempered back glass, cord plate/cord plate cap, lead wire, and solar connectors. Before we use these materials and components in our manufacturing process, a supplier must undergo a rigorous qualification process. We continually evaluate new suppliers and currently are qualifying several new suppliers and materials. When possible we attempt to use suppliers that can provide a raw material supply source that is near our manufacturing locations, reducing the cost and lead times for such materials. A few of our critical materials or components are single sourced and most others are supplied by a limited number of suppliers.

CdTe Solar Module Collection and Recycling Program

First Solar is committed to extended producer responsibility and takes into account the environmental impact of its products over their entire life cycle. We established the solar industry’s first comprehensive module collection and recycling program. First Solar’s module recycling process is designed to maximize the recovery of valuable materials,

including the glass and encapsulated semiconductor material, for use in new modules or other new products and minimizes the environmental impacts associated with our modules at the end of their useful life. Approximately 90% of each collected First Solar module can be recycled into materials for use in new products, including new solar modules.

First Solar offers recycling services to customers to help them meet these module collection and recycling obligations. First Solar's recycling service provides plant owners with the flexibility of determining end-of life module disposition, with options that enable them to more efficiently manage their capital and improve their returns. For modules sold under sales arrangements covered under the Solar Module Collection and Recycling Program ("the program"), we include a description of our module collection and recycling obligations. For such modules covered under the program, we agree to cover the costs for the collection and recycling of solar modules, and the end-users agree to notify us, disassemble their solar power systems, package the solar modules for shipment and revert module ownership rights back to us at the end of the modules' service lives.

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The European Union's Waste Electronics and Electrical Equipment ("WEEE") Directive places the obligation of recycling (including collection, treatment, and environmentally sound disposal) of electrical and electronic equipment ("EEE") products upon producers. The Directive is now applicable to solar PV modules in many of the EU countries. For modules covered under the program that have been sold to and installed in the EU, we continue to maintain a commitment to cover and pre-fund the estimated collection and recycling costs consistent with our historical program. However, as the detailed legal requirements of the transposed WEEE Directive become known through 2015, we will prospectively adjust our offering in the various EU member states as required to ensure compliance with the local EU member state regulations.

For our pre-funded collection and recycling program we continue to fund the estimated collection and recycling cost incremental to amounts already pre-funded in prior years for the cumulative modules covered by the program within 90 days of the end of each fiscal year, assuming for this purpose a minimum service life of 25 years for our solar modules. In addition to achieving substantial environmental benefits, our solar module collection and recycling program may provide us the opportunity to recover certain raw materials and components for reuse in our manufacturing process. We currently have recycling facilities operating at each manufacturing facility (with sufficient capacity for manufacturing scrap, anticipated warranty returns, and modules collected at the end of their useful life over the next several years) that produce glass cullet suitable for use in the production of new glass products by a third-party supplier and unrefined semiconductor materials that will be further processed by a third-party supplier and then used to produce semiconductor materials for use in new solar modules.

To ensure that the pre-funded amounts for covered modules under the program are available regardless of our financial status in the future, a trust structure has been established; funds are put into custodial accounts in the name of a trustee. Only the trustee can distribute funds from the custodial accounts for qualified collection and recycling costs. These funds cannot be accessed for any purpose other than for qualified module collection and recycling costs of First Solar modules; such collection and recycling services will either be performed by us or a third-party. End users with solar modules covered by our pre-funded program can request collection and recycling of their eligible solar modules by us at any time at no additional cost.

Solar Module Warranties

We provide a limited warranty against defects in materials and workmanship under normal use and service conditions for 10 years following delivery to the owners of our solar modules. We also typically warrant to our owners that solar modules installed in accordance with agreed-upon specifications will produce at least 97% of their labeled power output rating during the first year, with the warranty coverage reducing by 0.7% every year thereafter throughout the 25 year performance warranty. Prior to 2014, we typically warranted to our owners that solar modules installed in accordance with agreed-upon specifications would produce at least 90% of their labeled power output rating during the first 10 years following their installation and at least 80% of their labeled power output rating during the following 15 years. In resolving claims under both the defects and power output warranties, we have the option of either repairing or replacing the covered solar modules or, under the power output warranty, providing additional solar modules to remedy the power shortfall. We also have the option to make a payment for the then current market price for solar modules to resolve claims. Our warranties are automatically transferred from the original purchasers of our solar modules to subsequent purchasers upon resale.

As an alternative to our module power output warranty, we have offered a system level module performance warranty for a limited number of our recent system sales. This system level module performance warranty is designed for utility scale systems and provides 25-year plant-level energy degradation protection. The system level module performance warranty typically is calculated as a percentage of a system's expected energy production, adjusted for certain actual site conditions, with the warranted level of performance declining each year in a linear fashion, but never falling below 80% during the term of the warranty. In resolving claims under the system level module performance warranty

to restore the system to warranted performance levels, we first must validate that the root cause is due to module performance; then we typically have the option of either repairing or replacing modules, providing supplemental modules or making a cash payment. Consistent with our module power output warranty, when we elect to satisfy a valid warranty claim by providing replacement or supplement modules under the system level module performance warranty, we do not have any obligation to pay for the labor to remove or install modules.

Currently, a majority of our systems projects are subject to such system level module performance warranty, and we expect that this percentage will increase in the future as we extend it to future systems sales arrangements. We do not anticipate that the system level module performance warranty will have a material impact on our future warranty claim rates, as such warranty is designed to be in line with the expected risk-adjusted aggregate performance of our modules. The offering of such system level warranty addresses the challenge of identifying, from the potential millions of modules installed in a utility scale system, individual modules that are performing below warranty by focusing on the energy generated by the system rather than the capacity of individual modules.

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From time to time we have taken remediation actions with respect to affected modules beyond our limited warranty, 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 obligation could have a material adverse effect on our results of operations if we commit to any such remediation actions.

Systems Business

Through our fully integrated systems business, we provide a complete turn-key solar power system solution or any combination of our systems solutions, which may include project development, EPC services, O&M services, and project finance.

Our systems business has grown over the past several years through a combination of business acquisitions and organic growth. In January 2013, we acquired Solar Chile, a Santiago-based solar development company. Solar Chile has a portfolio of utility-scale PV power projects in varying stages of development currently totaling approximately 1 GW in northern Chile, including the Atacama Desert region, which offers the highest solar irradiance in the world. In addition, in August 2013, we acquired a pipeline of U.S. and Mexico development assets from Element Power. Included in the 1.5 GW pipeline are diverse projects in various stages of development in California, Arizona, Texas, Georgia, North Carolina, Colorado, Louisiana, Illinois and Mexico.

Project Development

Project development activities include: site selection and securing rights to acquire or use the site, obtaining in a timely manner the requisite interconnection and transmission studies, executing an interconnection agreement, obtaining environmental and land use permits, maintaining effective site control, and entering into a PPA with an off-taker of the power to be generated by the project. These activities culminate in receiving the right to construct and operate a solar power system. Depending on the market opportunity or geographic location, we may acquire projects in various stages of development or acquire project companies from developers in order to complete the development process, construct a PV power plant incorporating our modules and sell the system to a long-term project owner, or in certain cases, operate the system on our own. Depending on the market opportunity or geographic location, we may collaborate with local partners in connection with these project development activities. Depending on the type of project or geographic location, PPAs or FiT structures define the price and terms the utility customer or investor will pay for power produced from a project. Entering into a PPA generally provides the underlying economics needed to finalize development including permitting, beginning construction, arranging financing, and marketing the project for sale to a long-term project owner. Depending primarily on the location, stage of development upon our acquisition of the project, and other site attributes, the development cycle typically ranges from one to five years. We may be required to incur significant costs for preliminary engineering, permitting, legal, and other expenses before we can determine whether a project is feasible, economically attractive, or capable of being built. If there is a delay in obtaining any required regulatory approvals, we may be forced to incur additional costs, write-down capitalized project assets, and the right of the off-taker under the PPA to terminate may be triggered.

Customers

With respect to our systems business, our customers consist of investor owned utilities, independent power developers and producers, commercial and industrial companies, and other system owners who may purchase from us completed solar power plants (which include our solar modules), any combination of EPC services, and O&M services for the plants we build. During 2014, the substantial majority of our systems business sales were generated in North America.

During 2014, the principal customers of our systems segment were Southern Company, NextEra Energy, Inc, and MidAmerican Energy Company, each of which also accounted for more than 10% of our systems segment net sales

during 2014.

Competition

With respect to our systems business, we face competition from other providers of renewable energy solutions, including developers of PV, solar thermal and concentrated solar power systems, and developers of other forms of renewable energy projects, including wind, hydropower, geothermal, biomass, and tidal projects. To the extent other solar module manufacturers become more vertically integrated, we expect to face increased competition from such companies as well. We also face competition from other EPC companies and joint venture type arrangements between EPC companies and solar companies. Certain current or potential future competitors may also have a low cost of capital and/or access to foreign capital. While the decline in PV modules prices over the last several years has increased interest in solar electricity worldwide, there are limited barriers of entry in many parts of the PV solar value chain, depending on the geographic market. Accordingly, competition at the systems level can be intense, thereby exerting downward pressure on systems level profit margins industry-wide, to the extent competitors are willing and able to bid aggressively low prices for new projects and PPAs, using low cost assumptions for modules, BoS components, installation, maintenance and other costs. Please see Item 1A: “Risk Factors - Competition at the systems level can be intense,

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depending on the market opportunity, thereby potentially exerting downward pressure on systems level profit margins industry-wide, which could reduce our net sales, profitability and adversely affect our results of operations."

EPC Warranty

In addition to our solar module warranties described above, for solar power plants built by our systems business, we typically provide a limited warranty on the balance of the system against defects in engineering design, installation, and workmanship for a period of one to two years following the substantial completion of a phase or the entire solar power plant. In resolving claims under the engineering design, installation, and workmanship warranties, we have the option of remedying the defect through repair, or replacement.

As part of our systems business, we conduct performance testing of the solar power plant prior to substantial completion to confirm the power plant meets operational and capacity expectations noted in the EPC agreement. In addition, we may provide an energy generation performance test during the first year of the solar power plant's operation. Such a test is designed to demonstrate that the actual energy generation for the first year meets or exceeds the modeled energy expectation, after certain adjustments and exclusions. If there is an underperformance event, determined at the end of the first year after substantial completion, we may incur liquidated damages as a percentage of the EPC contract price. In some instances, a bonus payment may be received at the end of the first year if the power plant performs above a certain level. In limited cases, a similar energy generation test is offered as part of our operations and maintenance service, up to a maximum of five years. In such a case, liquidated damages are incurred at the lost energy price noted in the PPA.

Research, Development, and Engineering

Our systems business research and development activities are primarily focused on the objective of lowering the LCOE through reductions in BoS costs, improved systems design, and energy yield enhancements associated with PV systems that use our solar modules. These R&D efforts are also focused on continuing to improve our systems in terms of grid stabilization. We conduct our research and development activities for the systems business primarily in the United States. Innovations related to system design, hardware platforms, inverters, trackers, and installation techniques and know how, among other things, can and are expected in the future to continue to reduce BoS costs, which can represent a significant portion of the costs associated with the construction of a typical utility-scale PV solar power system.

For information regarding our research and development expense for the years ended December 31, 2014, 2013, and 2012, See Item 7: "Management's Discussion and Analysis of Financial Condition and Results of Operations – Results of Operations."

Own and Operate

From time to time we may temporarily own and operate certain PV solar power systems while we attempt to market them. The ability to do so allows us to gain control of the sales process, provide a lower risk profile to a future buyer of a system, and improve our ability to drive higher eventual sale values. As of February 2015, we owned (or have ownership interests in) and operated three solar power plants. As an owner and operator of these PV solar power systems, we and certain of our operating subsidiaries are subject to the authority of the Federal Energy Regulatory Commission ("FERC"), as well as various other local, state and federal regulatory bodies. For more information about risks related to owning and operating PV solar power systems, please see Item 1A: "Risk Factors - As a temporary owner and operator of certain PV solar systems that are delivering electricity to the grid, certain of our indirect subsidiaries are regulated as a public utility under U.S. federal and state law, which could adversely affect the cost of doing business and limit our growth." For more information about the economics of such ownership and the impacts on

our liquidity See Item 7: “Management’s Discussion and Analysis of Financial Condition and Results of Operations – Liquidity and Capital Resources.”

Intellectual Property

Our success depends, in part, on our ability to maintain and protect our proprietary technology and to conduct our business without infringing on the proprietary rights of others. We rely primarily on a combination of patents, trademarks and trade secrets, as well as associate and third-party confidentiality agreements, to safeguard our intellectual property. We regularly file patent applications to protect inventions arising from our research and development, and are currently pursuing patent applications in the U.S. and worldwide. Our patent applications and any future patent applications might not result in a patent being issued with the scope of the claims we seek, or at all, and any patents we may receive may be challenged, invalidated, or declared unenforceable. In addition, we have registered and/or have applied to register, trademarks and service marks in the U.S. and a number of foreign countries for “First Solar” and “First Solar and Design.”

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With respect to proprietary know-how that is not patentable and processes for which patents are difficult to enforce, we rely on, among other things, trade secret protection and confidentiality agreements to safeguard our interests. We believe that many elements of our PV module manufacturing process, including our unique materials sourcing, involve proprietary know-how, technology, or data that are not covered by patents or patent applications, including technical processes, equipment designs, algorithms, and procedures. We have taken security measures to protect these elements. Our research and development personnel have entered into confidentiality and proprietary information agreements with us. These agreements address intellectual property protection issues and require our associates to assign to us all of the inventions, designs, and technologies they develop during the course of employment with us. We also require our customers and business partners to enter into confidentiality agreements before we disclose any sensitive aspects of our modules, technology, or business plans.

We have not been subject to any material intellectual property infringement or misappropriation claims.

Environmental, Health, and Safety Matters

Our operations include the use, handling, storage, transportation, generation, and disposal of hazardous materials and hazardous wastes. We are subject to various national, state, local, and international laws and regulations relating to the protection of the environment, including those governing the discharge of pollutants into the air and water, the use, management, and disposal of hazardous materials and wastes, occupational health and safety, and the cleanup of contaminated sites. Therefore, we could incur substantial costs, including cleanup costs, fines, and civil or criminal sanctions and costs arising from third-party property damage or personal injury claims as a result of violations of, or liabilities under, environmental and occupational health and safety laws and regulations or non-compliance with environmental permits required for our operations. We believe we are currently in substantial compliance with applicable environmental and occupational health and safety requirements and do not expect to incur material expenditures for environmental and occupational health and safety controls in the foreseeable future. However, future developments such as the implementation of new, more stringent laws and regulations, more aggressive enforcement policies, or the discovery of unknown environmental conditions may require expenditures that could have a material adverse effect on our business, results of operations, or financial condition. See Item 1A: “Risk Factors - Environmental obligations and liabilities could have a substantial negative impact on our financial condition, cash flows, and profitability.”

Corporate History

In February 2006 we were incorporated as a Delaware corporation. Our common stock has been listed on The NASDAQ Global Select Market under the symbol “FSLR” since our initial public offering in November 2006. In October 2009, our common stock was added to the S&P 500 Index, making First Solar the first, and currently only, pure-play renewable energy company in the index.

Associates

As of December 31, 2014, we had approximately 6,060 associates (our term for full and part-time employees), including approximately 4,320 in module manufacturing positions and approximately 550 associates that work directly in our systems business. The remainder of our associates are in research and development, sales and marketing, and general and administrative positions. None of our associates are currently represented by labor unions or covered by a collective bargaining agreement. As we expand domestically and internationally, however, we may encounter either regional laws that mandate union representation or associates who desire union representation or a collective bargaining agreement. We believe that our relations with our associates are good.

Information About Geographic Areas

We have significant marketing, distribution, and manufacturing operations both within and outside the United States. Currently, we manufacture our solar modules at our Perrysburg, Ohio, and Kulim, Malaysia manufacturing facilities.

In 2014, the foreign country with the greatest concentration risk was Australia, which accounted for 5% of our consolidated net sales. As part of our Long Term Strategic Plan, we are in the process of expanding our operations, particularly with respect to our systems business, to various countries worldwide, including countries in Latin America, Asia, the Middle East, Australia and Africa. As a result, we are subject to the legal, tax, political, social and regulatory requirements, and economic conditions of an increasing number of jurisdictions. The international nature of our operations subjects us to a number of risks, including fluctuations in exchange rates, adverse changes in foreign laws or regulatory requirements and tariffs, taxes, and other trade restrictions. See Item 1A: “Risk Factors — Our substantial international operations subject us to a number of risks, including unfavorable political, regulatory, labor, and tax conditions in foreign countries” and “Risk Factors — We may be unable to execute on our Long Term Strategic Plan, which could have a material adverse effect on our business, results of operations or financial condition.” See Note

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24 “Segment and Geographical Information,” to our consolidated financial statements included in this Annual Report on Form 10-K for information about our net sales and long-lived assets by geographic region for the years ended December 31, 2014, 2013, and 2012. See also Item 7: “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” for other information about our operations and activities in various geographic regions.

Available Information

We maintain a website at http://www.firstsolar.com. We make available free of charge on our website our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy statements, and any amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act, as soon as reasonably practicable after we electronically file these materials with, or furnish them to, the SEC. The information contained in or connected to our website is not incorporated by reference into this report. We use our website as one means of disclosing material non-public information and for complying with our disclosure obligations under the SEC’s Regulation FD. Such disclosures will typically be included within the Investor Relations section of our website (http://investor.firstsolar.com). Accordingly, investors should monitor such portions of our website in addition to following our press releases, SEC filings, and public conference calls and webcasts.

The public may also read and copy any materials that we file with the SEC at the SEC’s Public Reference Room at 100 F Street, NE, Washington, D.C. 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC also maintains an Internet website that contains reports and other information regarding issuers, such as First Solar, that file electronically with the SEC. The SEC’s Internet website is located at http://www.sec.gov.

Executive Officers of the Registrant

Our executive officers and their ages and positions as of February 24, 2015, were as follows:

Name	Age	Position
James A. Hughes	52	Chief Executive Officer
Mark R. Widmar	49	Chief Financial Officer and Chief Accounting Officer
Georges J. Antoun	52	Chief Operating Officer
Joseph G. Kishkill	50	Chief Commercial Officer
Paul J. Kaleta	59	Executive Vice President and General Counsel

James A. Hughes joined First Solar in March 2012 as Chief Commercial Officer and was appointed Chief Executive Officer in May 2012. Prior to joining First Solar, Mr. Hughes served, from October 2007 until April 2011, as Chief Executive Officer and Director of AEI Services LLC, which owned and operated power distribution, power generation (both thermal and renewable), natural gas transportation and services, and natural gas distribution businesses in emerging markets worldwide. From 2004 to 2007, he engaged in principal investing with a privately held company based in Houston, Texas that focused on micro-cap investments in North American distressed manufacturing assets. Previously, he served, from 2002 until March 2004, as President and Chief Operating Officer of Prisma Energy International, which was formed out of former Enron interests in international electric and natural gas utilities. Prior to that role, Mr. Hughes spent almost a decade with Enron Corporation in positions that included President and Chief Operating Officer of Enron Global Assets, President and Chief Operating Officer of Enron Asia, Pacific Africa and China and as Assistant General Counsel of Enron International. Mr. Hughes is a Non-Executive Director of APR Energy plc, a London Stock Exchange-listed energy company participating in the global market for gas and diesel fired temporary power plants. He is Chairman of the Board of Directors of the Los Angeles branch of the Federal Reserve Bank of San Francisco. Mr. Hughes holds a juris doctor degree from the University of Texas at Austin School of Law, a Certificate of Completion in international business law from Queen Mary’s College, University of London, and a bachelor’s degree in business administration from Southern Methodist University.

Mark R. Widmar joined First Solar in April 2011 as Chief Financial Officer. Mr. Widmar has also served as First Solar's Chief Accounting Officer since February 1, 2012. Prior to joining First Solar, Mr. Widmar served as Chief Financial Officer of GrafTech International Ltd., a leading global manufacturer of advanced carbon and graphite materials, from May 2006 through March 2011, as well as President, Engineered Solutions from January 2011 through March 2011. Prior to joining GrafTech, Mr. Widmar served as Corporate Controller of NCR Inc. from 2005 to 2006, and was a Business Unit Chief Financial Officer for NCR from November 2002 to his appointment as Controller. He also served as a Division Controller at Dell, Inc. from August 2000 to November 2002 prior to joining NCR. Mr. Widmar also held various financial and managerial positions with Lucent Technologies Inc., Allied Signal, Inc., and Bristol Myers/Squibb, Inc. Mr. Widmar holds a B.S. in Business Accounting and a Masters of Business Administration from Indiana University.

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Georges J. Antoun joined First Solar in July 2012 as the company's Chief Operating Officer. Mr. Antoun has over 20 years of operational and technical experience, including leadership positions at several global technology companies. Mr. Antoun most recently served as Venture Partner at Technology Crossover Ventures ("TCV"), a private equity and venture firm that he joined in July 2011. Prior to joining TCV, Mr. Antoun was the Head of Product Area IP & Broadband Networks for Ericsson, based in San Jose, California. Mr. Antoun joined Ericsson in 2007, when Ericsson acquired Redback Networks, a telecommunications equipment company, where Mr. Antoun served as the Senior Vice President of World Wide Sales & Operations. After the acquisition, Mr. Antoun was promoted to Chief Executive Officer of the Redback Networks subsidiary. Prior to Redback Networks, Mr. Antoun spent five years at Cisco Systems, where he served as Vice President of Worldwide Systems Engineering and Field Marketing, Vice President of Worldwide Optical Operations, and Vice President of Carrier Sales. He has also held senior management positions at Newbridge Networks, a data and voice networking company, and NYNEX (now Verizon Communications), where he was part of its Science and Technology Division. Mr. Antoun is a member of the Board of Directors of Ruckus Wireless, Inc. and Violin Memory, Inc., both publicly-traded companies. Mr. Antoun earned a Bachelor of Science degree in Engineering from the University of Louisiana at Lafayette and a Master's degree in Information Systems Engineering from NYU Poly.

Joseph G. Kishkill joined First Solar in September 2013 as Chief Commercial Officer. Prior to joining First Solar, Mr. Kishkill served as President, Eastern Hemisphere Operations, for Exterran Energy Solutions, L.P. and Senior Vice President of Exterran Holdings, Inc., a global provider of natural gas, petroleum and water treatment production services. Prior to that, he led Exterran's business in the Latin America region. Prior to joining Exterran's predecessor company in 2002, Mr. Kishkill held positions of increasing responsibility with Enron Corporation from 1990 to 2001, advancing to Chief Executive Officer for South America. During his career, Mr. Kishkill has been based in Dubai, Brazil and Argentina and has provided management services for energy projects and pipelines throughout South America. Mr. Kishkill holds a Master in Business Administration degree from the Harvard Graduate School of Business Administration and holds a Bachelor of Science degree in Electrical Engineering from Brown University.

Paul J. Kaleta joined First Solar in March 2014 as Executive Vice President & General Counsel. Prior to joining First Solar, Mr. Kaleta was Executive Vice President, General Counsel, Shared Services & Secretary, and Chief Compliance Officer, for NV Energy, Inc. Before that, he was Vice President and General Counsel for Koch Industries, Inc. He also served in a number of legal and other leadership roles for Koch companies. Before joining Koch, he was Vice President and General Counsel of Niagara Mohawk Power Corporation (now part of National Grid), and was a partner at the former law firm Swidler Berlin LLP and an associate at the law firm Skadden, Arps, Slate, Meagher & Flom LLP. He also served as a federal judicial clerk. Mr. Kaleta holds a juris doctor degree from Georgetown University Law Center and a bachelor's degree from Hamilton College.

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Item 1A: Risk Factors

An investment in our stock involves a high degree of risk. You should carefully consider the following information, together with the other information in this Annual Report on Form 10-K, before buying shares of our stock. If any of the following risks or uncertainties occur, our business, financial condition, and results of operations could be materially and adversely affected and the trading price of our stock could decline.

Risks Related to Our Markets and Customers

Competition at the systems level can be intense, thereby potentially exerting downward pressure on systems level profit margins industry-wide, which could reduce our net sales, profitability and adversely affect our results of operations.

The significant decline in PV module prices over the last several years has and continues to create a challenging environment for module manufacturers, but it has also increased interest in solar electricity worldwide by eroding one of the primary historical constraints to widespread solar market penetration, namely its affordability. Aided by such lower module prices, competitors have in many cases been willing and able to bid aggressively for new projects and PPAs, using low cost assumptions for modules, BoS components, installation, maintenance and other costs as the basis for such bids. Relatively low barriers to entry for competitors have led to, depending on the market and other factors, intense competition at the systems level. Intense competition at the systems level can result in an environment in which systems level pricing falls rapidly, thereby further increasing demand for solar solutions but constraining the ability for project developers, EPC companies and/or vertically-integrated solar companies such as First Solar to sustain meaningful and consistent profitability. Accordingly, while we believe our systems offerings and experience are positively differentiated in many cases from that of our competitors, we may fail to correctly identify our competitive position, we may be unable to develop or maintain a sufficient magnitude of new systems projects worldwide at economically attractive rates of return, and we may not otherwise be able to achieve meaningful profitability under our Long Term Strategic Plan.

Depending on the market opportunity, we may be at a disadvantage compared to potential systems-level competitors. For example, certain of our competitors may have a stronger and/or more established localized business presence in a particular geographic region. Certain of our competitors may be larger entities that have greater financial resources and greater overall brand name recognition than we do and, as a result, may be better positioned to impact customer behavior or adapt to changes in the industry or the economy as a whole. Certain competitors may also have direct or indirect access to sovereign capital and/or other incentives, which could enable such competitors to operate at minimal or negative operating margins for sustained periods of time.

Additionally, large-scale solar systems are still in their relatively early stages of existence, and, depending on the geographic area, many potential customers are still in the process of educating themselves about the points of differentiation among various available providers of PV solar solutions, including a company’s proven overall experience and bankability, system design and optimization expertise, grid interconnection and stabilization expertise, and proven O&M capabilities. If we are unable over time to meaningfully differentiate our offerings at scale, from the viewpoint of our potential customer base, our business, financial condition and results of operations could be adversely affected.

An increased global supply of PV modules has caused and may continue to cause structural imbalances in which global PV module supply exceeds demand, which could have a material adverse effect on our business, financial condition and results of operations

Solar manufacturers have significant aggregate installed production capacity in relation to global demand. We believe the solar industry will continue to 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. During the past several years, industry average sales prices per watt ("ASPs") have declined significantly both at the module and system levels, as competitors reduced ASPs to sell-through inventories worldwide. If our competitors reduce module pricing to levels near or below their manufacturing costs, or are able to operate at minimal or negative operating margins for sustained periods of time, or if demand for PV modules does not grow sufficiently to justify the current production supply, our business, financial condition and results of operations could be adversely affected.

If PV technology is not suitable for widespread adoption at economically attractive rates of return, or if sufficient additional demand for solar modules does not develop or takes longer to develop than we anticipate, our net sales and profit may flatten or decline and we may be unable to sustain profitability.

The solar energy market is at a relatively early stage of development, in comparison to fossil fuel-based electricity generation. If PV technology proves unsuitable for widespread adoption at economically attractive rates of return or if additional demand for solar modules and systems fails to develop sufficiently or takes longer to develop than we anticipate, we may be unable to grow

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our business or generate sufficient net sales to sustain profitability. In addition, demand for solar modules and systems in our targeted markets may develop to a lesser extent than we anticipate. Many factors may affect the viability of widespread adoption of PV technology and demand for solar modules and systems, including the following:

- cost-effectiveness of the electricity generated by PV power systems compared to conventional energy sources, such as natural gas and coal (which fuel sources may be subject to significant price swings from time to time), and other non-solar renewable energy sources, such as wind;
- performance, reliability, and availability of energy generated by PV systems compared to conventional and other non-solar renewable energy sources and products, particularly conventional energy generation capable of providing 24-hour, non-intermittent baseload power;
- success of other renewable energy generation technologies, such as hydroelectric, tidal, wind, geothermal, solar thermal, concentrated PV, and biomass;
- fluctuations in economic and market conditions that affect the price of, and demand for, conventional and non-solar renewable energy sources, such as increases or decreases in the price of natural gas, coal, oil, and other fossil fuels;
- fluctuations in capital expenditures by end-users of solar modules and systems which tend to decrease when the economy slows and when interest rates increase; and
- availability, substance, and magnitude of support programs including government targets, subsidies, incentives, and renewable portfolio standards to accelerate the development of the solar energy industry.

Reduced growth in or the reduction, elimination, or expiration of government subsidies, economic incentives, renewable energy targets and other support for on-grid solar electricity applications, or increase in protectionist or other adverse public policies, could reduce demand and/or price levels for our solar modules, and limit our growth or lead to a reduction in our net sales, and adversely impact our operating results.

Although our Long Term Strategic Plan provides for First Solar to transition over time toward operating in sustainable markets that do not require solar specific government subsidies or support programs, and it is our belief that solar PV will experience widespread adoption in those applications where it competes economically with traditional forms of energy without any support programs, in the near-term our net sales and profits remain subject to variability based on the availability and size of government subsidies and economic incentives. Federal, state, and local governmental bodies in many countries have provided subsidies in the form of FiTs, rebates, tax incentives, and other incentives to end-users, distributors, systems integrators, and manufacturers of PV products. Many of these support programs expire, phase out over time, require renewal by the applicable authority, or may be amended. In particular, the step-down of the U.S. federal investment tax credit from 30% to 10% scheduled for the end of 2016 poses significant uncertainties regarding U.S. PV solar market demand. A summary of recent developments in the major government support programs that can impact our business appears under Item 1: “Business – Support Programs.” To the extent these support programs are reduced earlier than previously expected, or are changed retroactively, or free-field or conversion land applications are disadvantaged, such changes could reduce demand and/or price levels for our solar modules and systems, lead to a reduction in our net sales, and adversely impact our operating results. While the expected potential of the markets we are targeting is significant, policy promulgation and market development are especially vulnerable to governmental inertia, political instability, geopolitical risk, fossil fuel subsidization, potentially stringent localization requirements and limited available infrastructure.

Our ability to pursue an expansion strategy in India could be adversely affected by protectionist or other adverse public policies.

Under Phase I of the National Solar Mission, India required developers of solar PV projects employing crystalline silicon technology to use solar cells and modules manufactured in India. First Solar modules were not impacted by this restriction. However, in its policy guideline for Batch I Phase II of the National Solar Mission, India has set aside 375 MW of the 750 MW program for domestically manufactured cells and modules irrespective of the technology used (crystalline silicon or thin film). This set-aside effectively cuts the ability of First Solar to compete in the Batch I, Phase II program in half. In February 2013, the United States Government announced that it would expand its previously requested World Trade Organization dispute settlement consultations with the Government of India on Phase I local content requirements ("LCRs") to include consultations on the LCRs in Phase II. The outcome of the consultation is still pending.

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We could be adversely affected by any violations of the U.S. Foreign Corrupt Practices Act ("FCPA"), the U.K. Bribery Act and other foreign anti-bribery laws.

The FCPA generally prohibits companies and their intermediaries from making improper payments to non-U.S. government officials for the purpose of obtaining or retaining business. Other countries in which we operate also have anti-bribery laws, some of which prohibit improper payments to government and non-government persons and entities, and some of which (e.g., the FCPA and the UK Bribery Act) extend their application to activities outside of their country of origin. Our policies mandate compliance with all applicable anti-bribery laws. We currently operate in, and pursuant to our Long Term Strategic Plan intend to further expand into, many parts of the world that have experienced governmental corruption to some degree and, in certain circumstances, strict compliance with anti-bribery laws may conflict with local customs and practices. In addition, due to the level of regulation in our industry, our operation in certain jurisdictions, including India, China, South America and the Middle East, requires substantial government contact where norms can differ from U.S. standards. Although we have implemented policies and procedures designed to facilitate compliance with these anti-bribery laws, our employees, subcontractors, agents and partners (such as joint venture partners) may take actions in violation of our policies and anti-bribery laws. Any such violation, even if prohibited by our policies, could subject us to criminal and/or civil penalties or other sanctions, which could have a material adverse effect on our business, financial condition, cash flows and reputation.

We may be unable to fully execute on our Long Term Strategic Plan, which could have a material adverse effect on our business, results of operations or financial condition.

We face numerous difficulties in executing our Long Term Strategic Plan, particularly in new foreign jurisdictions, including the following:

- difficulty in accurately prioritizing geographic markets which we can most effectively and profitably serve with our PV offerings, including miscalculations in overestimating or underestimating our addressable market demand;
- difficulty in overcoming the inertia involved in changing local electricity ecosystems as necessary to accommodate large-scale PV solar deployment and integration;
- protectionist or other adverse public policies in countries we operate in and/or are pursuing, including local content requirements or capital investment requirements;
- business climates, such as that in China, that may have the effect of putting foreign companies at a disadvantage relative to domestic companies;
- unstable economic, social and/or operating environments in foreign jurisdictions, including social unrest and currency, inflation and interest rate uncertainties;
- the possibility of applying an ineffective commercial approach to targeted markets, including product offerings that may not meet market needs;
- difficulty in generating sufficient sales volumes at economically sustainable profitability levels;
- difficulty in timely identifying, attracting training and retaining qualified sales, technical and other personnel in geographies targeted for expansion;
- the possibility of having insufficient capital resources necessary to achieve an effective localized business presence in targeted jurisdictions;

- difficulty in maintaining proper controls and procedures as we expand our business operations both in terms of complexity and geographical reach, including transitioning certain business functions to low-cost geographies, with any material control failure potentially leading to reputational damage and loss of confidence in our financial reporting accuracy;

- difficulty in competing against competitors who may have greater financial resources and/or a more effective or established localized business presence and/or be willing and able to operate with little or no operating margins for sustained periods of time;

- difficulty in competing against competitors who may gain in profitability and financial strength over time by successfully participating in the global rooftop PV solar market, which is a segment in which we do not have deep historical experience;

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- difficulty in establishing and implementing a commercial and operational approach adequate to address the specific needs of the markets we are pursuing;

- difficulty in identifying the right local partners and developing any necessary partnerships with local businesses, on commercially acceptable terms; and

- difficulty in balancing market demand and manufacturing production in an efficient and timely manner, potentially causing us to be manufacturing capacity constrained in some future periods or over-supplied in others.

In addition, please see the Risk Factors entitled “Our substantial international operations subject us to a number of risks, including unfavorable political, regulatory, labor, and tax conditions in foreign countries,” and “Reduced growth in or the reduction, elimination, or expiration of government subsidiaries, economic incentives, and other support for on-grid solar electricity, could reduce demand and/or price levels for our solar modules, and limit our growth or lead to a reduction in our net sales, and adversely impact our operating results.”

We may be unable to profitably provide new solar offerings or achieve sufficient market penetration with such offerings.

We are in the process of expanding our line-up of offerings to include solutions that build upon our core competencies but for which we have not had significant historical experience with, including the AC Power Block, and offerings related to fuel displacement, commercial and industrial and distributed generation for restricted spaces, off-grid and energy access. We cannot be certain that we will be able to ascertain and allocate the appropriate financial and human resources necessary to grow these business areas. We could invest considerable capital into growing these businesses but fail to address market or customer needs or otherwise not experience a satisfactory level of financial return. Also, in expanding into these areas, we may be competing against companies that previously have not been significant competitors, such as companies that currently have substantially more experience than we do in the rooftop or other targeted segments. If we are unable to achieve growth in these areas, our overall growth and financial performance may be limited relative to our competitors and our operating results could be adversely impacted.

An increase in interest rates or lending rates or tightening of the supply of capital in the global financial markets (including a reduction in total tax equity availability) could make it difficult for customers to finance the cost of a PV system and could reduce the demand for our solar systems or modules and/or lead to a reduction in the average selling price for PV modules.

Many of our customers and our systems business depend on debt and/or equity financing to fund the initial capital expenditure required to develop, build and/or purchase a PV system. As a result, an increase in interest rates or lending rates, or a reduction in the supply of project debt financing or tax equity investments, could reduce the number of solar projects that receive financing or otherwise make it difficult for our customers or our systems business to secure the financing necessary to develop, build, purchase or install a PV system on favorable terms, or at all, and thus lower demand for our solar modules which could limit our growth or reduce our net sales. In addition, we believe that a significant percentage of our end-users install PV systems as an investment, funding the initial capital expenditure through a combination of equity and debt. An increase in interest rates and/or lending rates could lower an investor’s return on investment in a PV system, increase equity return requirements or make alternative investments more attractive relative to PV systems, and, in each case, could cause these end-users to seek alternative investments.

Risks Related to Regulations

Existing regulations and policies, changes thereto, and new regulations and policies may present technical, regulatory, and economic barriers to the purchase and use of PV products or systems, which may significantly reduce demand for our solar modules, systems or services.

The market for electricity generation products is heavily influenced by foreign, federal, state, and local government regulations and policies concerning the electric utility industry, as well as policies promulgated by electric utilities. These regulations and policies often relate to electricity pricing and technical interconnection of customer-owned electricity generation. In the United States and in a number of other countries, these regulations and policies have been modified in the past and may be modified again in the future. These regulations and policies could deter end-user purchases of PV products and investment in the research and development of PV technology. For example, without a mandated regulatory exception for PV systems, utility customers are often charged interconnection or standby fees for putting distributed power generation on the electric utility grid. If these interconnection standby fees were applicable to PV systems, it is likely that they would increase the cost of using PV systems to our end-users, which could make them less desirable, thereby adversely affecting our business, prospects, results of operations, and financial condition. In addition, with respect to utilities that utilize a peak hour pricing policy or time-of-use pricing methods whereby the price of electricity is adjusted based on electricity supply and demand, electricity generated by PV systems currently benefits from

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competing primarily with expensive peak hour electricity, rather than the less expensive average price of electricity. Modifications to the peak hour pricing policies of utilities, such as to a flat rate for all times of the day, would require PV systems to achieve lower prices in order to compete with the price of electricity from other sources and would adversely impact our operating results.

Our solar systems, modules and services (such as O&M) are subject to oversight and regulation in accordance with national and local ordinances relating to building codes, safety, environmental protection, utility interconnection and metering, and other matters. It is a complex task to track the requirements of individual jurisdictions. Any new government regulations or utility policies pertaining to our solar modules, systems or services may result in significant additional expenses to us or our customers and, as a result, could cause a significant reduction in demand for our solar modules, systems or services. In addition, any regulatory compliance failure could result in significant management distraction, unplanned costs and/or reputational damage.

Environmental obligations and liabilities could have a substantial negative impact on our financial condition, cash flows, and profitability.

Our operations involve the use, handling, generation, processing, storage, transportation, and disposal of hazardous materials and are subject to extensive environmental laws and regulations at the national, state, local, and international levels. These environmental laws and regulations include those governing the discharge of pollutants into the air and water, the use, management, and disposal of hazardous materials and wastes, the cleanup of contaminated sites, and occupational health and safety. As we execute our Long Term Strategic Plan and expand our business into foreign jurisdictions worldwide, our environmental compliance burden will continue to increase both in terms of magnitude and complexity. We have incurred and will continue to incur significant costs and capital expenditures in complying with these laws and regulations. In addition, violations of, or liabilities under, environmental laws or permits may result in restrictions being imposed on our operating activities or in our being subjected to substantial fines, penalties, criminal proceedings, third-party property damage or personal injury claims, cleanup costs, or other costs. Such solutions could also result in substantial delay or termination of projects under construction within our systems business, which could adversely impact our results of operations. While we believe we are currently in substantial compliance with applicable environmental requirements, future developments such as more aggressive enforcement policies, the implementation of new, more stringent laws and regulations, or the discovery of presently unknown environmental conditions may require expenditures that could have a material adverse effect on our business, results of operations, and financial condition.

Our CdTe solar modules contain cadmium telluride and cadmium sulfide. Elemental cadmium and certain of its compounds are regulated as hazardous materials due to the adverse health effects that may arise from human exposure. Based on existing research, the risks of exposure to cadmium telluride are not believed to be as serious as those relating to exposure to elemental cadmium. In our manufacturing operations, we maintain engineering controls to minimize our associates' exposure to cadmium or cadmium compounds and require our associates who handle cadmium compounds to follow certain safety procedures, including the use of personal protective equipment such as respirators, chemical goggles, and protective clothing. Relevant studies and third-party peer review of our technology have concluded that the risk of exposure to cadmium or cadmium compounds from our end-products is negligible. In addition, the risk of exposure is further minimized by the encapsulated nature of these materials in our products and the physical properties of cadmium compounds used in our products and the recycling or responsible disposal of First Solar's modules. While we believe that these factors and procedures are sufficient to protect our associates, end-users, and the general public from adverse health effects that may arise from cadmium exposure, we cannot ensure that human or environmental exposure to cadmium or cadmium compounds used in our products will not occur. Any such exposure could result in future third-party claims against us, as well as damage to our reputation and heightened regulatory scrutiny of our products, which could limit or impair our ability to sell and distribute our products. The occurrence of future events such as these could have a material adverse effect on our business, financial condition, or

results of operations.

The use of cadmium in various products is also subject to governmental regulation in several countries. More restrictive regulation in this area and/or expansion of such regulation to additional countries could impact the manufacture, sale, collection, and recycling of solar modules and could require us to make unforeseen environmental expenditures or limit our ability to sell and distribute our products.

As an owner and operator of certain PV solar power systems that are delivering electricity to the grid, certain of our indirect affiliates are regulated as public utilities under U.S. federal and state law, which could adversely affect the cost of doing business and limit our growth.

As an owner and operator of certain PV solar power systems that are delivering electricity to the grid, certain of our indirectly-owned operating affiliates are considered to be public utilities for purposes of the Federal Power Act, as amended (the "FPA") and public utility companies for purposes of the Public Utility Holding Company Act of 2005 ("PUHCA 2005"), and are subject to regulation by the FERC, as well as various local and state regulatory bodies. We currently have three such operating affiliates that are delivering electricity to the grid: SG2 Imperial Valley, LLC ("SG2"); Maryland Solar, LLC ("MD Solar"); and Barilla Solar,

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LLC (first project phase); and two that are under construction (Lost Hills Solar, LLC and Blackwell Solar, LLC (collectively "Lost Hills")), which are deemed public utilities by the FERC.

SG2 and Lost Hills are "exempt wholesale generators," or "EWGs," and as such are exempt from regulation under PUHCA 2005. MD Solar is a "qualifying facility," or "QF," under the Public Utility Regulatory Policies Act of 1978, as amended ("PURPA") and is also exempt from PUHCA 2005. In addition, MD Solar is exempt from most provisions of the FPA, as well as state laws regarding the financial or organizational regulation of public utilities. We will also be exempt from regulation under PUHCA 2005 so long as SG2 and Lost Hills remain EWGs, and so long as MD Solar remains a QF, and the regulation does not change. We are not directly subject to FERC regulation under the FPA. However, we are considered to be a "holding company" for purposes of Section 203 of the FPA, which regulates certain transactions involving public utilities, and such regulation could adversely affect our ability to grow the business through acquisitions. Likewise, investors seeking to acquire our public utility subsidiaries or acquire ownership interests in our securities sufficient to give them control over us and our public utility subsidiaries may require prior FERC approval to do so. Such approval could result in transaction delays or uncertainties.

Public utilities under the FPA are required to obtain FERC acceptance of their rate schedules for wholesale sales of electricity and to comply with various regulations. The FERC has granted SG2 and Lost Hills the authority to sell electricity at market-based rates, and has granted them certain regulatory waivers, such as waivers from compliance with FERC's accounting regulations. These FERC orders reserve the right to revoke or revise market-based sales authority if the FERC subsequently determines that SG2 and Lost Hills or their affiliates can exercise market power in the sale of generation products, the provision of transmission services, or if it finds that any of them can create barriers to entry by competitors. In addition, if they fail to comply with certain reporting obligations, the FERC may revoke their power sales tariffs. Finally, if they were deemed to have engaged in manipulative or deceptive practices concerning their power sales transactions, they would be subject to potential fines, disgorgement of profits, and/or suspension or revocation of their market-based rate authority. If our indirect subsidiaries were to lose their market-based rate authority, such companies would be required to obtain the FERC's acceptance of a cost-of-service rate schedule and could become subject to the accounting, record-keeping, and reporting requirements that are imposed on utilities with cost-based rate schedules, which would impose cost and compliance burdens on us and could have an adverse effect on our results of operations. In addition to the risks described above, we would be subject to additional regulatory regimes at the state and foreign levels to the extent we own and operate PV power plants in the future in other states or foreign jurisdictions, such as our 1.4 MW DC plant in Kitakyushu-shi, Japan.

Risks Related to our Operations, Manufacturing, and Technology

Our operating history to date may not serve as an adequate basis to judge our future prospects and results of operations.

Our historical operating results may not provide a meaningful basis for evaluating our business, financial performance, and prospects. We may be unable to achieve similar growth, or grow at all, in future periods. Our ability to achieve similar growth in future periods is also affected by current economic conditions. Our past results occurred in an environment where, among other things, capital was at times more accessible to our customers to finance the cost of developing solar projects and economic incentives for solar power in certain markets (such as the German FiT) were more favorable. Accordingly, you should not rely on our results of operations for any prior period as an indication of our future performance.

We face intense competition from manufacturers of crystalline silicon solar modules, as well as thin-film solar modules and solar thermal and concentrated PV systems; if global supply exceeds global demand, it could lead to a reduction in the average selling price for PV modules, which could reduce our net sales and adversely affect our results of operations.

The solar energy and renewable energy industries are highly competitive and continually evolving as participants strive to distinguish themselves within their markets and compete with the larger electric power industry. Within the global PV industry, we face competition from crystalline silicon solar module manufacturers, other thin-film solar module manufacturers and companies developing solar thermal and concentrated PV technologies. Existing or future solar manufacturers might be acquired by larger companies with significant capital resources, thereby intensifying competition with us. In addition, the introduction of a low cost disruptive technology, such as commercially viable energy storage, could adversely affect our ability to compete, which could reduce our net sales and adversely affect our results of operations.

Even if demand for solar modules continues to grow, the rapid manufacturing capacity expansion undertaken by many solar module manufacturers, particularly manufacturers of crystalline silicon solar modules, has created and may continue to cause periods of structural imbalance during which supply exceeds demand. See “An increased global supply of PV modules has caused and may continue to cause structural imbalances in which global PV module supply exceeds demand, which could have a material adverse effect on our business, financial condition and results of operations.” In addition, we believe any significant decrease in

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the cost of silicon feedstock could provide further reductions in the manufacturing cost of crystalline silicon solar modules and lead to further pricing pressure for solar modules and potentially the oversupply of solar modules.

During any such period, our competitors could decide to reduce their sales prices in response to competition, even below their manufacturing costs, in order to generate sales. Other competitors may have direct or indirect access to sovereign capital, which could enable such competitors to operate at minimal or negative operating margins for sustained periods of time. As a result, we may be unable to sell our solar modules or systems at attractive prices, or for a profit, during any period of excess supply of solar modules, which would reduce our net sales and adversely affect our results of operations. Also, we may decide to lower our average selling price to certain customers in certain markets in response to competition.

Thin-film solar technology has a limited field history. As a result, and despite our efforts, our solar modules and systems may perform below expectations; problems with product quality or performance may cause us to incur significant and/or unexpected warranty and related expenses, damage our market reputation, and prevent us from maintaining or increasing our market share.

We perform a variety of module quality and life tests under different conditions upon which we base our assessments and warranty of module performance over its expected useful life. However, if our thin-film technology, high efficiency crystalline technology, and solar modules perform below expectations, we could lose customers, face substantial warranty expense, and face potential liability under certain EPC and O&M contracts for damages related to loss of revenue from energy production below expectation. With respect to our modules, we provide a limited warranty against defects in materials and workmanship under normal use and service conditions for 10 years following delivery to the owners of our solar modules. We also typically warrant to our owners that solar modules installed in accordance with agreed-upon specifications will produce at least 97% of their labeled power output rating during the first year, with the warranty coverage reducing to 0.7% every year thereafter throughout the 25 year performance warranty. Prior to 2014, we typically warranted to our owners that solar modules installed in accordance with agreed-upon specifications would produce at least 90% of their labeled power output rating during the first 10 years following their installation and at least 80% of their labeled power output rating during the following 15 years. As a result, we bear the risk of extensive warranty claims long after we have sold our solar modules and recognized net sales. As an alternative to our module power output warranty, we have offered a system level module performance warranty for a limited number of our recent sales. As of December 31, 2014, our accrued warranty liability was $223.1 million, of which $69.7 million was classified as current and $153.4 million was classified as noncurrent.

We have historically estimated our product warranty liability for power output and defects in materials and workmanship under normal use and service conditions to have an estimated warranty return rate of approximately 3% of modules covered under warranty. A 1% change in the estimated warranty return rate would change our estimated product warranty liability by approximately $60.4 million.

If any of our assumptions used in estimating the above referenced warranty or manufacturing excursion costs prove incorrect, we could be required to accrue additional expenses, which could adversely impact our financial position, operating results and cash flows. Although we have taken significant corrective actions to avoid a manufacturing excursion from occurring, any future manufacturing excursions including any commitments made by us to take remediation actions in respect of affected modules beyond our limited warranty, could adversely impact our business reputation, financial position, operating results, and cash flows.

Although our power output warranty extends for 25 years, our oldest solar modules manufactured during the qualification of our pilot production line have only been in use since 2001. As a result, our warranty is based on a variety of quality and life tests that enable predictions of durability and future performance. These predictions, however, could prove to be materially different from the actual performance over the full life of our solar modules,

causing us to incur substantial expense to repair or replace defective solar modules in the future. For example, our glass-on-glass solar modules could suffer various failure modes including breakage, delamination, corrosion, or experience power degradation in excess of expectations, and our manufacturing operations or supply chain could be subject to materials or process variations that could cause affected modules to fail or underperform compared to our expectations. These risks could be amplified as we implement design and process changes in connection with our efforts to improve our product, accelerate module conversion efficiency, energy density, and manufacturing production throughput improvements as part of our Long Term Strategic Plan. In addition, as we increase the number of installations in extreme climates, in accordance with our Long Term Strategic Plan, we may experience increased failure rates due to deployment into such field conditions. Any widespread product failures may damage our market reputation, cause our sales to decline, require us to repair or replace the defective modules, and cause us to take voluntary remedial measures beyond those required by our standard warranty terms to enhance customer satisfaction, which could have a material adverse effect on our financial results.

Additionally, we now offer a standard tracker mounting system warranty for a duration of 1 - 5 years. As with our modules, our tracker system warranty is based on a variety of quality and life tests that enable predictions of durability and future performance.

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These predictions, however, could prove to be materially different from the actual performance over the full life or our tracker mounting systems, causing us to incur substantial expense to repair or replace defective structures in the future.

In addition to our solar module and tracker system warranty described above, for solar power plants built by our systems business, we typically provide a limited warranty on the balance of the system against defects in engineering design, installation, and workmanship for a period of one to two years following the substantial completion of a phase or the entire solar power plant. Failures of solar power plants built by us could result in significant increases to warranty expense, damage our market reputation, or cause our sales to decline, cause us to incur unexpected costs to remedy defects or otherwise negatively affect our results of operations.

In addition, as part of our systems business, we conduct performance testing of the solar power plant prior to substantial completion to confirm the power plant meets operational and capacity expectations noted in the EPC agreement. In addition, we may provide an energy generation performance test during the first year of the solar power plant's operation. Such a test is designed to demonstrate that the actual energy generation for the first year meets or exceeds the modeled energy expectation, after certain adjustments and exclusions. If there is an underperformance event, determined at the end of the first year after substantial completion, we may incur liquidated damages as a percentage of the EPC contract price. In some instances, a bonus payment may be received at the end of the first year if the power plant performs above a certain level. In limited cases, a similar energy generation test is offered as part of our operations and maintenance service, up to a maximum of five years. In such a case, liquidated damages are incurred at the lost energy price noted in the PPA.

If our estimates regarding the future cost of collecting and recycling solar CdTe modules covered by our collection and recycling program are incorrect, we could be required to accrue additional expenses at and from the time we realize our estimates are incorrect and face a significant unplanned cash burden.

Prior to 2013, we have historically pre-funded, and may need to continue to pre-fund in certain circumstances, our estimated future obligation for collecting and recycling CdTe solar modules covered by our collection and recycling program based on the present value of the expected future cost of collecting and recycling the CdTe solar modules, which includes estimates for the cost of packaging the CdTe solar modules for transport, the cost of freight from the CdTe 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 our estimate on our experience collecting and recycling CdTe solar modules that do not pass our quality control tests and CdTe solar modules returned under our warranty, and on our expectations about future developments in recycling technologies and processes and economic conditions at the time the CdTe solar modules are expected to be collected and recycled. If our estimates prove incorrect, we could be required to accrue additional expenses at and from the time we realize our estimates are incorrect and could also face a significant unplanned cash burden at the time we realize our estimates are incorrect or end-users return their CdTe solar modules, which could harm our operating results. In addition, participating end-users can return their CdTe solar modules covered under the collection and recycling program at any time. As a result, we could be required to collect and recycle covered CdTe solar modules earlier than we expect.

Our failure to further refine our technology, reduce module manufacturing and BoS costs and develop and introduce improved PV products could render our solar modules or systems uncompetitive and reduce our net sales, profitability, and/or market share.

We need to continue to invest significant financial resources in research and development to continue to improve our module conversion efficiency, lower the LCOE of our PV systems, and otherwise keep pace with technological advances in the solar energy industry. However, research and development activities are inherently uncertain, and we

could encounter practical difficulties in commercializing our research results. We seek to continuously improve our products and processes, and the resulting changes carry potential risks in the form of delays, additional costs, or other unintended contingencies. In addition, our significant expenditures on research and development may not produce corresponding benefits. Other companies are developing a variety of competing PV technologies, including advanced multi-crystalline silicon cells, PERC or advanced p-type crystalline silicon cells, high efficiency n-type crystalline silicon cells, copper indium gallium diselenide, and amorphous silicon thin films, which could produce solar modules or systems that prove more cost-effective or have better performance than our solar modules or systems. In addition, other companies could potentially develop a highly reliable renewable energy system that mitigates the intermittent power production drawback of many renewable energy systems, or offers other value-added improvements from the perspective of utilities and other system owners, in which case such companies could compete with us even if the LCOE associated with such new system is higher than that of our systems. As a result, our solar modules or systems may be negatively differentiated or rendered obsolete by the technological advances of our competitors, which would reduce our net sales, profitability and/or market share.

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In addition, we often forward price our products and services in anticipation of future cost reductions and technology improvements, and thus an inability to further refine our technology and execute our conversion efficiency roadmap and our long-term manufacturing cost, BoS cost and LCOE reduction objectives could adversely affect our margins and operating results.

Our failure to protect our intellectual property rights may undermine our competitive position and litigation to protect our intellectual property rights or defend against third-party allegations of infringement may be costly.

Protection of our proprietary processes, methods, and other technology is critical to our business. Failure to protect and monitor the use of our existing intellectual property rights could result in the loss of valuable technologies. We rely primarily on patents, trademarks, trade secrets, copyrights, and contractual restrictions to protect our intellectual property. We regularly file patent applications to protect inventions arising from our research and development, and are currently pursuing such patent applications in various countries in accordance with our strategy for intellectual property in that jurisdiction. Our existing patents and future patents could be challenged, invalidated, circumvented, or rendered unenforceable. Our pending patent applications may not result in issued patents, or if patents are issued to us, such patents may not be sufficient to provide meaningful protection against competitors or against competitive technologies.

We also rely upon unpatented proprietary manufacturing expertise, continuing technological innovation, and other trade secrets to develop and maintain our competitive position. Although we generally enter into confidentiality agreements with our associates and third parties to protect our intellectual property, such confidentiality agreements are limited in duration and could be breached and may not provide meaningful protection for our trade secrets or proprietary manufacturing expertise. Adequate remedies may not be available in the event of unauthorized use or disclosure of our trade secrets and manufacturing expertise. In addition, others may obtain knowledge of our trade secrets through independent development or legal means. The failure of our patents or confidentiality agreements to protect our processes, equipment, technology, trade secrets, and proprietary manufacturing expertise, methods, and compounds could have a material adverse effect on our business. In addition, effective patent, trademark, copyright, and trade secret protection may be unavailable or limited in some foreign countries, especially any developing countries into which we may expand our operations. In some countries we have not applied for patent, trademark, or copyright protection.

Third parties may infringe or misappropriate our proprietary technologies or other intellectual property rights, which could have a material adverse effect on our business, financial condition, and operating results. Policing unauthorized use of proprietary technology can be difficult and expensive. Also, litigation may be necessary to enforce our intellectual property rights, protect our trade secrets, or determine the validity and scope of the proprietary rights of others. We cannot assure you that the outcome of such potential litigation will be in our favor. Such litigation may be costly and may divert management attention and other resources away from our business. An adverse determination in any such litigation may impair our intellectual property rights and may harm our business, prospects, and reputation. In addition, we have no insurance coverage against such litigation costs and would have to bear all costs arising from such litigation to the extent we are unable to recover them from other parties.

Some of our key raw materials and components are either single-sourced or sourced from a limited number of third-party suppliers and their failure to perform could cause manufacturing delays and impair our ability to deliver solar modules to customers in the required quality and quantities and at a price that is profitable to us.

Our failure to obtain raw materials and components that meet our quality, quantity, and cost requirements in a timely manner could interrupt or impair our ability to manufacture our solar modules or increase our manufacturing cost. Some of our key raw materials and components are either single-sourced or sourced from a limited number of third-party suppliers. As a result, the failure of any of our suppliers to perform could disrupt our supply chain and

impair our operations. In addition, some of our suppliers are small companies that may be unable to supply our increasing demand for raw materials and components as we continue to expand rapidly. We may be unable to identify new suppliers or qualify their products for use on our production lines in a timely manner and on commercially reasonable terms. A constraint on our production may cause us to be unable to meet our capacity ramp plan and/or our obligations under our customer contracts, which would have an adverse impact on our financial results.

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A disruption in our supply chain for cadmium telluride, our CdTe semiconductor material, could interrupt or impair our ability to manufacture solar modules and could adversely impact our profitability and long-term growth prospects.

A key raw material we use in our CdTe module production process is a cadmium telluride compound. Tellurium, one of the main components of cadmium telluride, is mainly produced as a by-product of copper refining and, therefore, its supply is largely dependent upon demand for copper. Our supply of cadmium telluride could be limited if any of our current suppliers or any of our future suppliers are unable to acquire an adequate supply of tellurium in a timely manner or at commercially reasonable prices. If our competitors begin to use or increase their demand for cadmium telluride, supply could be reduced and prices could increase. If our current suppliers or any of our future suppliers cannot obtain sufficient tellurium, they could substantially increase prices or be unable to perform under their contracts. We may be unable to pass increases in the cost of our raw materials through to our customers. A substantial increase in tellurium prices could adversely impact our profitability and long-term growth objectives.

Our TetraSun module offering may not be able to achieve profitable commercial scale, which could adversely impact our operating results and our future growth strategy with respect to PV solar in restricted spaces.

In 2013, we acquired TetraSun, Inc., a development stage company with high efficiency crystalline silicon technology. We expect our high-power density TetraSun modules to offer advantages relative to our CdTe modules in commercial & industrial, rooftop and other space constrained applications. Although we began manufacturing TetraSun modules during the fourth quarter of 2014, we are not experienced with crystalline silicon module manufacturing compared to many of our competitors, and accordingly we face numerous risks and uncertainties. Many of these risks are inherent in PV module manufacturing generally, or otherwise similar to risks involved in our CdTe PV module manufacturing operations, and are discussed elsewhere in Item 1A: “Risk Factors.”

Additionally, scaling of high-volume TetraSun module manufacturing could present supply chain, timing and other challenges. Contrasted with our largely automated CdTe manufacturing lines, our TetraSun module manufacturing operations involve a batch process and will not be fully-integrated from initial feedstock to final module, potentially resulting in timing, cost, supply and other constraints. We will be outsourcing module assembly to a third party, and any constraints such party faces in meeting our volume or quality requirements would negatively impact our ability to deliver modules to our customers. TetraSun cells will be manufactured using n-type mono-crystalline wafers. We currently do not have polysilicon contracts in place and will rely on our wafer suppliers to contract feedstock in sufficient volumes to meet our demand. Market-driven increases in polysilicon prices realized by our wafer suppliers or increases in wafer prices generally would increase First Solar's manufacturing costs and negatively impact margins on TetraSun modules.

If we are able to achieve high-volume manufacturing of TetraSun modules, we may not have an adequate sales channel for such modules and/or the prevailing average selling price or conversion efficiency of PV modules in general may have changed in such a manner as to make our TetraSun modules uncompetitive. If our TetraSun modules are unable to achieve profitable commercial scale, we may have to write down all or a portion of the assets related to this business area, and our future growth strategy with respect to PV solar in restricted spaces could be adversely impacted, which outcomes could have an adverse effect on our business, financial condition or results of operations.

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.

Our future success depends on our ability to effectively balance manufacturing production with market demand and increase both our manufacturing capacity and production throughput over time in a cost-effective and efficient manner. If we cannot do so, we may be unable to expand our business, decrease our manufacturing cost per watt, maintain our competitive position, satisfy our contractual obligations, or sustain profitability. See “An increased global supply of PV modules has caused and may continue to cause structural imbalances in which global PV module supply exceeds demand, which could have a material adverse effect on our business, financial condition and results of operations.” Our ability to expand production capacity is subject to significant risks and uncertainties, including the

following:

- making changes to our production process that are not properly qualified or that may cause problems with the quality of our solar modules;

- delays and cost overruns as a result of a number of factors, many of which may be beyond our control, such as our inability to secure successful contracts with equipment vendors;

- our custom-built equipment taking longer and costing more to manufacture than expected and not operating as designed;

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- delays or denial of required approvals by relevant government authorities;
- being unable to hire qualified staff;
- failure to execute our expansion plans effectively;
- manufacturing concentration risk resulting from a majority of production lines worldwide being located in one geographic area, Malaysia, and the possible inability to meet customer demand in the event of compromises to shipping processes, supply chain or other aspects of such facility;
- difficulty in balancing market demand and manufacturing production in an efficient and timely manner, potentially causing us to be manufacturing capacity constrained in some future periods or over-supplied in others; and
- incurring manufacturing asset write-downs, write-offs and other charges and costs, which may be significant, during those periods in which we idle, slow down or shut down manufacturing capacity.

If any future production lines that we may build in the future 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.

If we are unable to systematically replicate our production lines as necessary over time and achieve and sustain similar operating metrics in our future production lines as we have achieved at our existing production lines, our manufacturing capacity could be substantially constrained, our manufacturing costs per watt could increase, and this may impair our growth plans and/or cause us to lose customers, resulting in lower net sales, higher liabilities, and lower net income than we anticipate. For instance, future production lines could produce solar modules that have lower conversion efficiencies, higher failure rates, and higher rates of degradation than solar modules from our existing production lines, and we could be unable to determine the cause of the lower operating metrics or develop and implement solutions to improve performance.

Some of our manufacturing equipment is customized and sole sourced. If our manufacturing equipment fails or if our equipment suppliers fail to perform under their contracts, we could experience production disruptions and be unable to satisfy our contractual requirements.

Some of our manufacturing equipment is customized to our production lines based on designs or specifications that we provide to the equipment manufacturer, which then undertakes a specialized process to manufacture the custom equipment. As a result, the equipment is not readily available from multiple vendors and would be difficult to repair or replace if it were to become damaged or stop working. If any piece of equipment fails, production along the entire production line could be interrupted. In addition, the failure of our equipment suppliers to supply equipment in a timely manner or on commercially reasonable terms could delay our expansion plans and otherwise disrupt our production schedule or increase our manufacturing costs, all of which would adversely impact our financial results.

We may be unable to manage the expansion of our operations effectively.

We expect to continue to expand our business in order to provide utility-scale PV generation to existing and new geographic markets and to maintain or increase market share. To manage the continued expansion of our operations, we will be required to continue to improve our operational and financial systems, procedures and controls, and expand, train, manage and retain our growing associate base. Our management will also be required to maintain and expand our relationships with customers, suppliers, and other third parties and attract new customers and suppliers. In

addition, our current and planned operations, personnel, systems, and internal controls and procedures might be inadequate to support our future growth. The effectiveness of our controls and procedures could be adversely impacted as we transfer more business functions to lower cost geographies as part of our cost reduction initiatives. If we cannot manage our growth effectively, we may be unable to take advantage of market opportunities, execute our business strategies or respond to competitive pressures.

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Our substantial international operations subject us to a number of risks, including unfavorable political, regulatory, labor, and tax conditions in foreign countries.

We have significant marketing, distribution, and manufacturing operations both within and outside the United States. We expect to continue to expand our operations worldwide; as a result, we will be subject to the legal, political, social, tax, and regulatory requirements, and economic conditions of many jurisdictions. Risks inherent to international operations, include, but are not limited to, the following:

- difficulty in enforcing agreements in foreign legal systems;
- difficulty in forming appropriate legal entities to conduct business in foreign countries in the required time frame and the associated costs of forming those legal entities;
- varying degrees of protection afforded to foreign investments in the countries in which we operate, and irregular interpretations and enforcement of laws and regulations in these jurisdictions;
- foreign countries may impose additional income and withholding taxes or otherwise tax our foreign operations, impose tariffs, or adopt other restrictions on foreign trade and investment, including currency exchange controls;
- fluctuations in exchange rates may affect demand for our products and services and may adversely affect our profitability and cash flow in U.S. dollars to the extent that our equity investments, revenues or our costs are denominated in a foreign currency and the cost associated with hedging the dollar equivalent of such exposures is prohibitive; the longer the duration of such foreign currency exposure, the greater the risk;
- anti-corruption compliance issues, including the costs related to the mitigation of such risk;
- inability to obtain, maintain, or enforce intellectual property rights;
- risk of nationalization or other expropriation of private enterprises;
- changes in general economic and political conditions in the countries in which we operate, including changes in the government incentives we are relying on;
- unexpected adverse changes in foreign laws or regulatory requirements, including those with respect to environmental protection, export duties, and quotas;
- opaque approval processes in which the lack of transparency may cause delays and increase the uncertainty of project approvals;
- difficulty in staffing and managing widespread operations;
- difficulty in repatriating earnings;
- difficulty in negotiating a successful collective bargaining agreement in applicable foreign jurisdictions;
- trade barriers such as export requirements, tariffs, taxes, local content requirements, anti-dumping regulations and requirements, and other restrictions and expenses, which could increase the price of our solar modules and make us less competitive in some countries; and

- difficulty of, and costs relating to, compliance with the different commercial and legal requirements of the overseas countries in which we offer and sell our solar modules.

Our business in foreign markets requires us to respond to rapid changes in market conditions in these countries. Our overall success as a global business depends, in part, on our ability to succeed in differing legal, regulatory, economic, social, and political conditions. We may not be able to develop and implement policies and strategies that will be effective in each location where we do business.

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Risks Related to Our Systems Business

Project development or construction activities may not be successful and projects under development may not receive required permits, real property rights, PPAs, interconnection and transmission arrangements or financing or construction may not commence or proceed as scheduled, which could increase our costs and impair our ability to recover our investments.

The development and construction of solar power electric generation facilities and other energy infrastructure projects involve numerous risks. We may be required to spend significant sums for land and interconnection rights, preliminary engineering, permitting, legal, and other expenses before we can determine whether a project is feasible, economically attractive, or capable of being built. Success in developing a particular project is contingent upon, among other things:

- obtaining financeable land rights, including land rights for the project site, transmission lines, and environmental mitigation;
- receipt from governmental agencies of required land use and construction permits and approvals;
- negotiation of development agreements, public benefit agreements, and other agreements to compensate local governments for project impacts;
- receipt of rights to interconnect the project to the electric grid or to transmit energy;
- negotiation of satisfactory EPC agreements;
- entering into financeable arrangements for the purchase of the electrical output and renewable energy attributes generated by the project;
- securing necessary rights of way for access and transmission lines;
- securing appropriate title coverage, including coverage for mineral rights, mechanics' liens, etc.;
- obtaining construction financing, including debt, equity and funds associated with the monetization of tax credits and other tax benefits;
- payment of PPA, interconnection and other deposits (some of which are non-refundable); and
- timely implementation and satisfactory completion of construction.

Successful completion of a particular project may be adversely affected, delayed and/or rendered infeasible by numerous factors, including:

- delays in obtaining and maintaining required governmental permits and approvals, including appeals of approvals obtained;
- potential permit and litigation challenges from project stakeholders, including local residents, environmental organizations, labor organizations, and others who may oppose the project;
-

in connection with any such permit and litigation challenges, grant of injunctive relief to stop development and/or construction of a project;

- unforeseen engineering problems;
- construction delays and contractor performance shortfalls;
- work stoppages;
- cost over-runs;
- labor, equipment and materials supply shortages or disruptions;

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- additional complexities when conducting project development or construction activities in foreign jurisdictions (either on a stand-alone basis or in collaboration with local business partners), including operating in accordance with the U.S. Foreign Corrupt Practices Act and applicable local laws and customs;
- unfavorable tax treatment;
- adverse weather conditions;
- water shortages;
- adverse environmental and geological conditions; and
- force majeure and other events out of our control.

If we are unable to complete the development of a solar power facility, we fail to meet one or more agreed target construction milestone dates, any agreed upon system-level capacity or energy output guarantees or warranties (including, for some projects, twenty-five year energy performance or system-level module degradation warranties), or other contract terms, or our projects cause grid interference or other damage, we may be subject to forfeiture of significant deposits under PPAs or interconnection agreements or termination of such agreements, significant liquidated damages, penalties and/or other obligations under the EPC agreement or other agreements relating to the project (including obligations to repair, replace and/or supplement additional modules and balance of system materials for the project), particularly if our liabilities are not capped under the terms of such agreement, and we typically will not be able to recover our investment in the project. Some of these penalties might require us to repurchase the project from the buyer or to down-size the project, under certain circumstances. If we were required to repurchase a project, we may have insufficient cash or capital resources necessary to make the repurchase payment or we may be unable to resell the project in a timely manner or on terms commercially satisfactory to us, which would adversely impact our results of operations. Some of these investments are included as assets on our consolidated balance sheet under the line item “Project assets.” If we are unable to complete the development of a solar power project, we may write-down or write-off some or all of these capitalized investments, which would have an adverse impact on our net income in the period in which the loss is recognized. In 2015, we expect to invest a significant amount of capital to develop projects owned by us or third parties, which may limit the availability of capital to use for other purposes, such as contract damages or repurchase payments.

We may enter into fixed-price EPC contracts in which we act as the general contractor for our customers in connection with the installation of their solar power systems. All essential costs are estimated at the time of entering into the EPC contract for a particular project, and these are reflected in the overall fixed-price that we charge our customers for the project. These cost estimates are preliminary and may or may not be covered by contracts between us or the subcontractors, suppliers, and other parties to the project. In addition, we require qualified, licensed subcontractors to install most of our systems. Shortages of such skilled labor could significantly delay a project or otherwise increase our costs. Should miscalculations in planning a project occur (including those due to unexpected increases in inflation, commodity prices or labor costs) or delays in execution occur and we are unable to increase commensurately the EPC sales price, we may not achieve our expected margins or we may be required to record a loss in the relevant fiscal period.

We may be unable to acquire or lease land, obtain necessary interconnection and transmission rights, and/or obtain the approvals, licenses, permits and electric transmission grid interconnection and transmission rights necessary to build and operate PV power plants in a timely and cost effective manner, and regulatory agencies, local communities, labor unions or other third parties may delay, prevent, or increase the cost of construction and operation of the PV plants we intend to build.

In order to construct and operate our PV plants, we need to acquire or lease land and rights of way, obtain interconnection rights, and obtain all necessary local, county, state, federal, and foreign approvals, licenses, and permits, as well as rights to interconnect the plants to the transmission grid and transmit energy generated from the plant. We may be unable to acquire the land or lease interests needed, may not obtain satisfactory interconnection rights, may not receive or retain the requisite approvals, permits, licenses and interconnection and transmission rights, or may encounter other problems which could delay or prevent us from successfully constructing and operating PV plants.

Many of our proposed PV plants are located on or require access through public lands administered by federal and state agencies pursuant to competitive public leasing and right-of-way procedures and processes. The authorization for the use, construction, and operation of PV plants and associated transmission facilities on federal, state, and private lands will also require the assessment and evaluation of mineral rights, private rights-of-way, and other easements; environmental, agricultural, cultural, recreational, and aesthetic impacts; and the likely mitigation of adverse impacts to these and other resources and uses. The inability to obtain the required permits and, potentially, excessive delay in obtaining such permits due, for example, to litigation or third-

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party appeals, could prevent us from successfully constructing and operating PV plants in a timely manner and could result in a potential forfeiture of any deposit we have made with respect to a given project. Moreover, project approvals subject to project modifications and conditions, including mitigation requirements and costs, could affect the financial success of a given project.

In addition, local labor unions may increase the cost of, and/or lower the productivity of, project development in California and elsewhere. We may also be subject to labor unavailability and/or increased union labor requirements due to multiple simultaneous projects in a geographic region.

Lack of transmission capacity availability, potential upgrade costs to the transmission grid, and other systems constraints could significantly impact our ability to build PV plants and generate solar electricity power sales.

In order to deliver electricity from our PV plants to our customers, our projects generally need to connect to the transmission grid. The lack of available capacity on the transmission grid could substantially impact our projects and cause reductions in project size, delays in project implementation, increases in costs from transmission upgrades, and potential forfeitures of any deposit we have made with respect to a given project. These transmission issues, as well as issues relating to the availability of large systems such as transformers and switch gear, could significantly impact our ability to build PV plants and generate solar electricity sales.

Our systems business is largely dependent on us and third parties arranging financing from various sources, which may not be available or may only be available on unfavorable terms or in insufficient amounts.

The construction of the large utility-scale solar power projects under development by us is expected in many cases to require project financing, including non-recourse project debt financing in the bank loan market and institutional debt capital markets. Uncertainties exist as to whether our projects will be able to access the debt markets in a magnitude sufficient to finance their construction. If we are unable to arrange such financing or if it is only available on unfavorable terms, we may be unable to fully execute our systems business plan. In addition, we generally expect to sell our projects by raising project equity capital from tax- oriented, strategic industry, and other equity investors. Such equity sources may not be available or may only be available in insufficient amounts, in which case our ability to sell our projects may be delayed or limited and our business, financial condition, or results of operations may be adversely affected. Even if such financing sources are available, the counterparty to many of our fixed-price EPC contracts, which own the project we are constructing, are often special purpose vehicles that do not have significant assets other than their interests in the project and have pledged all or substantially all of these assets to secure the project-related debt and certain other sources of financing. If the owner defaults on its payment or other obligations to us, we may face difficulties in collecting payment of amounts due to us for the costs previously incurred or for the amounts previously expended or committed to be expended to purchase equipment or supplies (including intercompany purchases of PV modules), or for termination payments we are entitled to under the terms of the related EPC contract. If we are unable to collect the amounts owed to us, or are unable to complete the project because of an owner default, we may be required to record a charge against earnings related to the project, which could result in a material loss.

In addition, for projects to which we provide EPC services but are not the project developer, our EPC activities are in many cases dependent on the ability of third parties to finance their PV plant projects, which, in turn, is dependent on their ability to obtain financing for such purchases on acceptable terms. Depending on prevailing conditions in the credit markets, interest rates and other factors, such financing may not be available or may only be available on unfavorable terms or in insufficient amounts. If third parties are limited in their ability to access financing to support their purchase of PV power plant construction services from us, we may not realize the cash flows that we expect from such sales, and this could adversely affect our ability to invest in our business and/or generate revenue. See also the risk factor above entitled “An increase in interest rates or lending rates or tightening of the supply of capital in the

global financial markets (including a reduction in total tax equity availability) could make it difficult for end-users to finance the cost of a PV system and could reduce the demand for our solar modules and/or lead to a reduction in the average selling price for PV modules."

Developing solar power projects may require significant upfront investment prior to the signing of an EPC contract and commencing construction, which could adversely affect our business and results of operations.

Our solar power project development cycles, which span the time between the identification of land and the commercial operation of a PV power plant project, vary substantially and can take many months or years to mature. As a result of these long project cycles, we may need to make significant upfront investments of resources (including, for example, payments for land rights, large transmission and PPA deposits or other payments, which may be non-refundable) in advance of the signing of EPC contracts and commencing construction and the receipt of any revenue, much of which is not recognized for several additional months or years following contract signing. Our potential inability to enter into sales contracts with potential customers after making such upfront investments could adversely affect our business and results of operations. Furthermore, we may become

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constrained in our ability to simultaneously fund our other business operations and these systems investments through our long project development cycles.

Our liquidity may be adversely affected to the extent the project sale market weakens and we are unable to sell our solar projects on pricing, terms and timing commercially acceptable to us. In such a scenario, we may choose to continue to own and operate certain solar power plants for a period of time, after which the project assets may be sold to third parties. In such cases, the delayed disposition of projects could require us to recognize a gain on the sale of assets instead of recognizing revenue.

We may not be able to obtain long-term contracts for the sale of power produced by our projects at prices and on other terms favorable to attract financing and other investments.

Obtaining long-term contracts for the sale of power produced by the projects at prices and on other terms favorable to us is essential for obtaining financing and commencing construction of our projects. We must compete for PPAs against other developers of solar and renewable energy projects. Further, other sources of power, such as natural gas-fired power plants, have historically been cheaper than the cost of solar power and power from certain types of projects, such as natural gas-fired power plants, can be delivered on a firm basis. The inability to compete successfully against other power producers or otherwise enter into PPAs favorable to us would negatively affect our ability to develop and finance our projects and negatively impact our revenue. In addition, the availability of PPAs is a function of a number of economic, regulatory, tax and public policy factors. In addition, certain of our projects may be scheduled for substantial completion prior to the commencement of a long-term PPA with a major off-taker, in which case we would be required to enter into a stub-period PPA for the intervening time period or sell down the project. We may not be able to do either on terms that are commercially attractive to us.

We may be subject to unforeseen costs, liabilities or obligations when providing O&M services.

We may provide ongoing O&M services to system owners under fixed-price long-term service agreements, pursuant to which we generally perform all scheduled and unscheduled maintenance for the system, perform operating and other asset management services for the system and provide an availability guarantee for the system. Our costs to perform these services are estimated at the time of entering into the O&M agreement for a particular project, and these are reflected in the fixed-price that we charge our customers under the O&M agreement. We do not have extensive experience in performing O&M services for PV solar power plants in foreign jurisdictions in which we plan to offer PV systems solutions as part of our Long Term Strategic Plan (i.e., outside of the United States, Canada, and Australia), including estimating actual costs for such jurisdictions under our O&M agreements relative to the price that we charge our customers. Should miscalculations in estimating these costs occur (including those due to unexpected increases in inflation or labor or BoS costs), our growth strategy and results of operations could be adversely affected. Because of the long-term nature of these O&M agreements, the adverse impacts on results of operations could be significant, particularly if our liabilities are not capped or subject to an above-market liability cap under the terms of the O&M agreement. We also could be subject to substantial costs, liabilities or obligations in the event our solar systems do not meet any agreed-upon system-level availability or performance warranties.

Our systems business is subject to regulatory oversight and liability if we fail to operate our solar systems in compliance with electric reliability rules.

The ongoing O&M services that we provide for system owners may subject us to regulation by the North American Electric Reliability Corporation (“NERC”), or its designated regional representative, as a “generator operator,” or “GOP,” under electric reliability rules filed with FERC. Our failure to comply with the reliability rules applicable to GOPs could subject us to substantial fines by NERC, subject to FERC’s review. In addition, the system owners that receive our O&M services may be regulated by NERC as “generator owners,” or “GOs” and we may incur liability for GO

violations and fines levied by NERC, subject to FERC's review, based on the terms of our O&M agreements. Finally, as a systems owner and operator, we may in the future be subject to regulation by NERC as a GO.

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Other Risks

We may not realize the anticipated benefits of past or future business combinations or transactions, and integration of these business combinations may disrupt our business and management.

We have made several acquisitions in the last several years, and in the future we may acquire additional companies, project pipelines, products, or technologies or enter into joint ventures or other strategic initiatives, such as the potential joint venture YieldCo transaction described under Item 7: “Management’s Discussion and Analysis of Financial Condition and Results of Operations – Certain Trends and Uncertainties – YieldCo”. We may not realize the anticipated benefits of a business combination, and each transaction has numerous risks. These risks include the following:

- difficulty in assimilating the operations and personnel of the acquired or partner company;
- difficulty in effectively integrating the acquired technologies or products with our current products and technologies;
- difficulty in achieving profitable commercial scale from acquired technologies;
- difficulty in maintaining controls, procedures, and policies during the transition and integration;
- disruption of our ongoing business and distraction of our management and associates from other opportunities and challenges due to integration issues;
- difficulty integrating the acquired or partner company’s accounting, management information, and other administrative systems;
- inability to retain key technical and managerial personnel of the acquired business;
- inability to retain key customers, vendors, and other business partners of the acquired business;
- inability to achieve the financial and strategic goals for the acquired and combined businesses, as a result of insufficient capital resources or otherwise;
- incurring acquisition-related costs or amortization costs for acquired intangible assets that could impact our operating results;
- potential impairment of our relationships with our associates, customers, partners, distributors, or third-party providers of technology or products;
- potential failure of the due diligence processes to identify significant issues with product quality, legal and financial liabilities, among other things;
- potential inability to assert that internal controls over financial reporting are effective;
- potential inability to obtain, or obtain in a timely manner, approvals from governmental authorities, which could delay or prevent such acquisitions; and
- potential delay in customer purchasing decisions due to uncertainty about the direction of our product offerings.

Mergers and acquisitions of companies are inherently risky, and ultimately, if we do not complete the integration of acquired businesses successfully and in a timely manner, we may not realize the anticipated benefits of the acquisitions to the extent anticipated, which could adversely affect our business, financial condition, or results of operations.

We may be unable to successfully form the previously announced YieldCo vehicle; the proposed initial public offering of the YieldCo vehicle may not occur on favorable terms or at all; and even if the proposed initial public offering is completed, we may not achieve the expected benefits.

On February 23, 2015, we announced that we were in advanced negotiations with SunPower Corporation ("SunPower") to form a joint venture YieldCo vehicle (the "YieldCo") into which we and SunPower each expect to contribute a portfolio of selected solar generation assets from our existing portfolios of assets. Upon execution of a master formation agreement, we and SunPower

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intend to file a registration statement with the SEC for an initial public offering of limited partner interests in the YieldCo (the "IPO"). We and SunPower may not successfully form the YieldCo, which is subject to each party's board and regulatory approval and execution of definitive documentation as well as the completion of the proposed IPO. In addition, the completion of the proposed IPO is itself subject to numerous conditions, including market conditions, and may not occur on favorable terms or at all.

Our stock price could fluctuate significantly in response to developments relating to the proposed IPO or other action or market speculation regarding the proposed IPO. In addition, the IPO process will divert the attention of management and will result in a substantial increase in general and administrative expense for third-party consultants and advisors (including legal counsel and accountants). If the proposed IPO is not completed, we will have expended management's time and incurred significant expenses for which we will not receive any benefit.

If the proposed IPO is completed, we may not be able to achieve the full strategic and financial benefits expected to result from the proposed YieldCo, on a timely basis or at all. We believe that the viability of the YieldCo strategy will depend, among other things, on our ability to continue to develop revenue-generating solar assets, which is subject to the same project-level, business, and industry risks described in this "Risk Factors" section and elsewhere in this Annual Report on Form 10-K. Furthermore, if the IPO is completed, the value of our investment in the YieldCo will fluctuate and may decline. As a result, we may never recover the value of the assets we expect to contribute to the YieldCo, and we may realize less of a return on such contribution than if we had retained or operated these assets. If we are unable to complete the proposed IPO or if we are unable to achieve the strategic and financial benefits expected to result from the proposed IPO, our business, financial condition, and results of operations could be materially adversely affected.

Our future success depends on our ability to retain our key associates and to successfully integrate them into our management team.

We are dependent on the services of our executive officers and other members of our senior management team. The loss of one or more of these key associates or any other member of our senior management team could have a material adverse effect on us. We may not be able to retain or replace these key associates, and we may not have adequate succession plans in place. Several of our current key associates including our executive officers are subject to employment conditions or arrangements that contain post-employment non-competition provisions. However, these arrangements permit the associates to terminate their employment with us upon little or no notice and the enforceability of the non-competition provisions in certain jurisdictions is uncertain.

If we are unable to attract, train, and retain key personnel, our business may be materially and adversely affected.

Our future success depends, to a significant extent, on our ability to attract, train, and retain management, operations, sales, training and technical personnel, including in foreign jurisdictions as we continue to execute on our Long Term Strategic Plan. Recruiting and retaining capable personnel, particularly those with expertise in the PV industry across a variety of technologies, are vital to our success. There is substantial competition for qualified technical personnel and while we continue to benchmark our organization against the broad spectrum of business in our market space to remain economically competitive, there can be no assurances that we will be able to attract and retain our technical personnel. If we are unable to attract and retain qualified associates, or otherwise experience unexpected labor disruptions within our business, we may be materially and adversely affected.

Labor used on some of our job sites that are completed or under construction are subject to the Davis-Bacon Act. The Davis-Bacon Act requires that personnel assigned to the project be paid at least the prevailing wage and fringe benefits, as established by and in accordance with the regulations promulgated by the U.S. Department of Labor ("DOL"). We have an established policy pursuant to which we evaluate Davis-Bacon Act requirements in conjunction with our subcontractors on the project and ensure our collective compliance with these requirements. If it was

ultimately determined that any person working under Davis-Bacon requirements on First Solar projects was not properly classified, was being paid the incorrect prevailing wage, or had not been paid fringe benefits to which he was entitled, we could incur additional liability with respect to such worker. For example, the Agua Caliente project we recently concluded in southwestern Arizona has been undergoing a DOL Davis-Bacon Act compliance review. The ultimate outcome of that compliance review is uncertain at this time. Any such liability incurred above our anticipated costs for these services could have an adverse effect on our financial condition and results of operations.

We may be exposed to infringement or misappropriation claims by third parties, which, if determined adversely to us, could cause us to pay significant damage awards or prohibit us from the manufacture and sale of our solar modules or the use of our technology.

Our success depends largely on our ability to use and develop our technology and know-how without infringing or misappropriating the intellectual property rights of third parties. The validity and scope of claims relating to PV technology patents

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involve complex scientific, legal, and factual considerations and analysis and, therefore, may be highly uncertain. We may be subject to litigation involving claims of patent infringement or violation of intellectual property rights of third parties. The defense and prosecution of intellectual property suits, patent opposition proceedings, and related legal and administrative proceedings can be both costly and time consuming and may significantly divert the efforts and resources of our technical and management personnel. An adverse determination in any such litigation or proceedings to which we may become a party could subject us to significant liability to third parties, require us to seek licenses from third parties, which may not be available on reasonable terms, or at all, or pay ongoing royalties, require us to redesign our solar module, or subject us to injunctions prohibiting the manufacture and sale of our solar modules or the use of our technologies. Protracted litigation could also result in our customers or potential customers deferring or limiting their purchase or use of our solar modules until the resolution of such litigation.

Currency translation and transaction risk may negatively affect our net sales, cost of sales, and gross margins and could result in exchange losses.

Although our reporting currency is the U.S. dollar, we conduct our business and incur costs in the local currency of most countries in which we operate. As a result, we are subject to currency translation and transaction risk. For example, 5% and 4% of our net sales were denominated in euros for 2014 and 2013, respectively, and we expect more than a minor percentage of our net sales to be outside the United States and denominated in foreign currencies in the future. In addition, our operating expenses for our manufacturing plants located outside the U.S. and our operations for our systems business in foreign countries will generally be denominated in the local currency. Joint ventures or other business arrangements with strategic partners outside of the United States have and are expected in the future to involve significant investments denominated in the local currency. Changes in exchange rates between foreign currencies and the U.S. dollar could affect our net sales, cost of sales, and equity investments and could result in exchange gains or losses. We cannot accurately predict the impact of future exchange rate fluctuations on our results of operations.

We could also expand our business into emerging markets, many of which have an uncertain regulatory environment relating to currency policy. Conducting business in such emerging markets could cause our exposure to changes in exchange rates to increase, due to the relatively high volatility associated with emerging market currencies and potentially longer payment terms for our proceeds.

Our ability to hedge foreign currency exposure is dependent on our credit profile with the banks that are willing and able to do business with us. Deterioration in our credit position or a significant tightening of the credit market conditions could limit our ability to hedge our foreign currency exposure; and therefore, result in exchange gains or losses.

Sustained declines in worldwide oil prices could adversely affect trading prices of our common shares.

Worldwide oil prices have recently declined. Oil is used as a fuel for electricity generation in only a small percentage of applications worldwide, compared to natural gas or coal-fired electricity generation and other forms of electricity generation, and accordingly, fluctuations in oil prices generally do not have a significant direct causal effect on prevailing competitive electricity prices, including electricity from solar sources. Nonetheless, there can be an observed market correlation effect between declining oil prices and depressed equity valuations of solar companies. If oil prices remain low or continue to decline, the trading price of our common shares may suffer.

Global sovereign debt issues could adversely impact our business.

Potential sovereign debt issues in Europe, emerging markets, and other regions and their impact on the balance sheets and lending practices of global banks in particular could negatively impact our access to, and cost of, capital, and

therefore could have an adverse effect on our business, results of operations, financial condition and competitive position. It could also similarly affect our customers and therefore limit the sales of our modules and demand for our systems business as well. Sovereign debt problems may also cause governments to reduce, eliminate or allow to expire government subsidies and economic incentives for solar energy, which could limit our growth or cause our net sales to decline and materially and adversely affect our business, financial condition, and results of operations.

We are subject to litigation risks, including securities class actions and stockholder derivative actions, which may be costly to defend and the outcome of which is uncertain.

From time to time, we are subject to legal claims, with and without merit, that may be costly and which may divert the attention of our management and our resources in general. In addition, our projects may be subject to litigation or other adverse proceedings that may adversely impact our ability to proceed with construction or sell a given project, which would adversely affect our ability to recognize revenue with respect to such project. The results of complex legal proceedings are difficult to predict. Moreover,

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many of the complaints filed against us do not specify the amount of damages that plaintiffs seek, and we therefore are unable to estimate the possible range of damages that might be incurred should these lawsuits be resolved against us. Certain of these lawsuits assert types of claims that, if resolved against us, could give rise to substantial damages, and an unfavorable outcome or settlement of one or more of these lawsuits, or any future lawsuits, could have a material adverse effect on our business, financial condition, or results of operations. Even if these lawsuits, or any future lawsuits, are not resolved against us, the costs of defending such lawsuits, may be costly, and may not be covered by our insurance policies. Because the price of our common stock has been, and may continue to be, volatile, we can provide no assurance that additional securities litigation will not be filed against us in the future. For more information on our legal proceedings, including our securities class action and derivative actions, see "Note 16 "Commitments and Contingencies," under the heading "Legal Proceedings" of our consolidated financial statements for the year ended December 31, 2014 included in this Annual Report on Form 10-K.

Our largest stockholder has significant influence over us and its interests may conflict with or differ from interests of other stockholders.

Our largest stockholder, consisting collectively of JCL FSLR Holdings, LLC and its beneficiaries and JTW Trust No. 1 UAD 9/19/02 and its beneficiaries, each affiliated in the past with the former Estate of John T. Walton (collectively, the "Significant Stockholder"), owned approximately 27% of our outstanding common stock at December 31, 2014. As a result, the Significant Stockholder has substantial influence over all matters requiring stockholder approval, including the election of our directors and the approval of significant corporate transactions such as mergers, tender offers, and the sale of all or substantially all of our assets. The interests of the Significant Stockholder could conflict with or differ from interests of other stockholders. For example, the concentration of ownership held by the Significant Stockholder could delay, defer or prevent a change of control of our company or impede a merger, takeover, or other business combination which a majority of stockholders may view favorably.

If our goodwill and other intangible assets or project assets become impaired, we may be required to record a significant charge to earnings.

We may be required to record a significant charge to earnings in our financial statements should we determine that our goodwill, other intangible assets (e.g., in process research and development ("IPR&D")) or project assets are impaired. Such a charge might have a significant impact on our financial position and results of operations.

As required by accounting rules, we review our goodwill for impairment at least annually in the fourth quarter or more frequently 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. Factors that may be considered a change in circumstances indicating that the carrying value of our goodwill might not be recoverable include a significant decline in our stock price and market capitalization, a significant decline in projections of future cash flows and lower future growth rates in our industry. We review IPR&D for impairment on a quarterly basis to determine if the project has been abandoned. If the project has been determined to be abandoned or not recoverable, we would be required to impair the respective IPR&D project. We review project assets for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. We consider a project commercially viable and recoverable if it is anticipated to be sellable for a profit once it is either fully developed or fully constructed. If our projects are not considered commercially viable, we would be required to impair the respective project assets.
Unanticipated changes in our tax provisions, the adoption of a new U.S. tax legislation, or exposure to additional income tax liabilities could affect our profitability.

We are subject to income taxes in the United States and the foreign jurisdictions in which we operate. Our tax liabilities are affected by the amounts we charge for inventory, services, licenses, funding, and other items in inter-company transactions. We are subject to potential tax examinations in these various jurisdictions. Tax authorities

may disagree with our inter-company charges, cross-jurisdictional transfer pricing or other tax positions and assess additional taxes. We regularly assess the likely outcomes of these examinations in order to determine the appropriateness of our tax provision. However, there can be no assurance that we will accurately predict the outcomes of these potential examinations, and the amounts ultimately paid upon resolution of examinations could be materially different from the amounts previously included in our income tax expense and therefore, could have a material impact on our tax provision, net income, and cash flows. In addition, our future effective tax rate could be adversely affected by changes to our operating structure, loss of our Malaysian tax holiday, changes in the mix of earnings in countries with tax holidays or differing statutory tax rates, changes in the valuation of deferred tax assets and liabilities, changes in tax laws, and the discovery of new information in the course of our tax return preparation process. A number of proposals for broad reform of the corporate tax system in the U.S. are under evaluation by various legislative and administrative bodies, but it is not possible to determine accurately the overall impact of such proposals on our effective tax rate at this time.

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Cyber attacks or other breaches of our information systems, or those of third parties with which we do business, could have a material adverse effect on our results of operations and financial condition.

Our operations rely on our computer systems, hardware, software and networks, as well as those of the third parties with which we do business, to securely process, store and transmit proprietary, confidential and other information, including intellectual property. Such information systems may be compromised by cyber attacks, computer viruses and other events that put the security of our information, and that of the third parties with which we do business, at risk of misappropriation or destruction. Such cyber incidents have become increasingly frequent and sophisticated, targeting or otherwise affecting a wide range of companies, in recent years. While we have instituted security measures to minimize the likelihood and impact of a cyber incident, there is no assurance that these measures, or those of the third parties with which we do business, will be adequate in the future. If these measures fail, valuable information may be lost, our manufacturing, construction, O&M and other operations may be disrupted and our reputation may suffer. We may also be subject to litigation, regulatory action, remedial expenses and financial losses beyond the scope or limits of our insurance coverage. These consequences of a failure of security measures could, individually or in the aggregate, have a material adverse affect on our results of operations and financial condition.

Our credit agreements contain covenant restrictions that may limit our ability to operate our business.

We may be unable to respond to changes in business and economic conditions, engage in transactions that might otherwise be beneficial to us, and obtain additional financing, if needed, because our Revolving Credit Facility and our Malaysian facility agreements contain, and any of our other future debt agreements may contain, covenant restrictions that limit our ability to, among other things:

- incur additional debt, assume obligations in connection with letters of credit, or issue guarantees;
- create liens;
- enter into certain transactions with our affiliates;
- sell certain assets; and
- declare or pay dividends, make other distributions to stockholders, or make other restricted payments.

Under our Revolving Credit Facility and our Malaysian facility agreements, we are also subject to certain financial covenants. Our ability to comply with covenants under our credit agreements is dependent on our future performance, which will be subject to many factors, some of which are beyond our control, including prevailing economic conditions. In addition, our failure to comply with these covenants could result in a default under these agreements and any of our other future debt agreements, which if not cured or waived, could permit the holders thereof to accelerate such debt and could cause cross-defaults under our other facility agreements and the possible acceleration of debt under such other facility agreements, as well as cross-defaults under certain of our key project and operational agreements and could also result in requirements to post additional security instruments to secure future obligations. In addition, we cannot assure you that events that occur within the Company, or in the industry or the economy as a whole, will not constitute material adverse effects under these agreements. If it is determined that a material adverse effect has occurred, the lenders can, under certain circumstances, restrict future borrowings or accelerate the due date of outstanding loan balances. If any of our debt is accelerated, we may in the future not have sufficient funds available to repay such debt, and we may experience cross-defaults under our other debt agreements or project and key operational agreements, which could materially and negatively affect our business, financial condition and results of operations.

Item 1B: Unresolved Staff Comments

None.

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Item 2: Properties

Our principal properties consisted of the following:

Nature	Primary Segment(s) Using Property	Location	Held	Major Encumbrances
Manufacturing Plant, Research and Development Facility and Administrative Offices	Components	Perrysburg, Ohio, United States	Own	n/a
Manufacturing Plants and Administrative Offices	Components	Kulim, Kedah, Malaysia	Lease Land/Own Buildings	Malaysian Ringgit Facility Agreement (1)
Administrative Office	Components & Systems	Georgetown, Penang, Malaysia	Lease	n/a
Manufacturing Plants (2)	Components	Frankfurt/Oder, Germany	Own	n/a
Manufacturing Plant (3)	Components	Ho Chi Minh City, Vietnam	Lease Land/Own Building	n/a
Corporate Headquarters	Components & Systems	Tempe, Arizona, United States	Lease	n/a
Administrative Office	Systems	Bridgewater, New Jersey, United States	Lease	n/a
Administrative Office	Systems	San Francisco, California, United States	Lease	n/a
Research and Development Facility	Components	Santa Clara, California, United States	Lease	n/a
Administrative Office	Components & Systems	Mainz, Germany	Lease	n/a
Administrative Office	Systems	New Delhi, India	Lease	n/a
Administrative Office	Systems	Sydney, Australia	Lease	n/a
Administrative Office	Systems	Dubai, United Arab Emirates	Lease	n/a
Administrative Office	Systems	Santiago, Chile	Lease	n/a
Administrative Office	Systems	Cape Town, South Africa	Lease	n/a
Administrative Office	Systems	Tokyo, Japan	Lease	n/a

(1) See Note 15 “Debt,” to our consolidated financial statements for the year ended December 31, 2014 included in this Annual Report on Form 10-K for additional information on property encumbrances.

(2) Manufacturing ceased in December 2012 and such property is being actively marketed for sale.

(3) We did not proceed with our previously announced 4-line plant in Vietnam and such property is being actively marketed for sale.

In addition, we lease small amounts of office and warehouse space in several other U.S. and international locations.

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Item 3: Legal Proceedings

In the ordinary conduct of our business, we are subject to periodic lawsuits, investigations, and claims, including, but not limited to, routine employment matters. Although we cannot predict with certainty the ultimate resolution of lawsuits, investigations, and claims asserted against us, we do not believe that any currently pending legal proceeding to which we are a party will have a material adverse effect on our business, results of operations, cash flows, or financial condition.

See Note 16 “Commitments and Contingencies,” under the heading “Legal Proceedings” of our consolidated financial statements for the year ended December 31, 2014 included in this Annual Report on Form 10-K for information regarding legal proceedings and related matters.

Item 4: Mine Safety Disclosures

None.

PART II

Item 5: Market for Registrant’s Common Equity, Related Stockholder Matters, and Issuer Purchases of Equity Securities

Price Range of Common Stock

Our common stock has been listed on The NASDAQ Global Select Market under the symbol “FSLR” since November 17, 2006. Prior to this time, there was no public market for our common stock. The following table sets forth the range of high and low closing prices per share as reported on The NASDAQ Global Select Market for the periods indicated.

	High	Low
Fiscal Year 2014		
First Quarter	$73.87	$47.73
Second Quarter	$73.34	$58.63
Third Quarter	$72.78	$61.45
Fourth Quarter	$64.10	$40.90
Fiscal Year 2013		
First Quarter	$36.13	$24.70
Second Quarter	$56.40	$26.10
Third Quarter	$50.27	$36.47
Fourth Quarter	$64.28	$41.60

The closing sales price of our common stock on The NASDAQ Global Select Market was $49.02 per share on February 20, 2015. As of February 20, 2015, there were 20 record holders of our common stock. This figure does not reflect the beneficial ownership of shares held in nominee names.

Dividend Policy

We have never paid, and it is our present intention for the foreseeable future not to pay, dividends on our common stock. Our Revolving Credit Facility imposes restrictions on our ability to declare or pay dividends. The declaration and payment of dividends is subject to the discretion of our board of directors and depends on various factors, including the continued applicability of the above-referenced restrictions under our Revolving Credit Facility, our net

income, financial condition, cash requirements, future prospects, and other factors deemed relevant by our board of directors.

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Equity Compensation Plans

The following table sets forth certain information, as of December 31, 2014, concerning securities authorized for issuance under the 2010 Omnibus Incentive Compensation Plan of our company:

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options and Rights (a)(1)	Weighted-Average Exercise Price of Outstanding Options and Rights (b)(2)	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (a))(c)
Equity compensation plans approved by our stockholders	4,106,359	$—	3,383,172
Equity compensation plans not approved by our stockholders	—	$—	—
Total	4,106,359		3,383,172

(1) Includes 4,106,359 shares issuable upon vesting of restricted stock units ("RSUs") granted under the 2010 Omnibus Incentive Compensation Plan.

(2) The weighted average exercise price does not take into account the shares issuable upon vesting of outstanding RSUs, which have no exercise price.

See Note 18 "Share-Based Compensation," to our consolidated financial statements for the year ended December 31, 2014 included in this Annual Report on Form 10-K for further discussion on the Equity Compensation Plans.

Stock Price Performance Graph

The following graph compares the cumulative 5-year total return on our common stock relative to the cumulative total returns of the S&P 500 Index and the Guggenheim Solar ETF, which represents a peer group of solar companies. In the stock price performance graph included below, an investment of $100 (with reinvestment of all dividends) is assumed to have been made in our common stock, the S&P 500 Index, and the Guggenheim Solar ETF on December 26, 2009, and its relative performance is tracked through December 31, 2014. No cash dividends have been declared on shares of our common stock. This performance graph is not "soliciting material," is not deemed filed with the SEC, and is not to be incorporated by reference in any filing by us under the Securities Act of 1933, as amended (the "Securities Act"), or the Exchange Act, whether made before or after the date hereof, and irrespective of any general incorporation language in any such filing. The stock price performance shown on the graph represents past performance and should not be considered an indication of future price performance.

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Recent Sales of Unregistered Securities

None.

Purchases of Equity Securities by the Issuer and Affiliate Purchases

None.

Item 6: Selected Financial Data

The following table sets forth our selected consolidated financial data for the periods and at the dates indicated.

The selected consolidated financial information from the consolidated statements of operations and consolidated statements of cash flows for the fiscal years ended December 31, 2014, 2013, and 2012 and the selected consolidated financial data from the consolidated balance sheets for the fiscal years ended December 31, 2014 and 2013 has been derived from the audited consolidated financial statements included in this Annual Report on Form 10-K. The selected consolidated financial data from the consolidated balance sheets for the fiscal years ended December 31, 2012, 2011 and 2010 and selected consolidated financial information from the consolidated statements of operations and consolidated statements of cash flows for the fiscal years ended December 31, 2011 and 2010 have been derived from audited consolidated financial statements not included in this Annual Report on Form 10-K. The information presented below should be read in conjunction with Item 7: “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” and our consolidated financial statements and the related notes thereto.

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	Years Ended				
	December 31, 2014	December 31, 2013	December 31, 2012	December 31, 2011	December 31, 2010
	(In thousands, except per share amounts)				
Statement of Operations Data:					
Net sales	$3,391,814	$ 3,308,989	$ 3,368,545	$ 2,766,207	$ 2,563,515
Cost of sales	2,564,709	2,446,235	2,515,796	1,794,456	1,378,669
Gross profit	827,105	862,754	852,749	971,751	1,184,846
Research and development	143,969	134,300	132,460	140,523	94,797
Selling, general and administrative	253,827	270,261	280,928	412,541	321,704
Production start-up	5,146	2,768	7,823	33,620	19,442
Goodwill impairment	—	—	—	393,365	—
Restructuring and asset impairments	—	86,896	469,101	60,366	—
Operating income (loss)	424,163	368,529	(37,563)	(68,664)	748,903
Foreign currency (loss) gain, net	(3,017)	(259)	(2,122)	995	(3,468)
Interest income	18,030	16,752	12,824	13,391	14,375
Interest expense, net	(1,982)	(1,884)	(13,888)	(100)	(6)
Other (expense) income, net	(5,203)	(4,758)	945	665	2,273
Income tax (expense) benefit	(30,124)	(25,179)	(56,534)	14,220	(97,876)
Equity in earnings of unconsolidated affiliates, net of tax	(4,949)	(163)	—	—	—
Net income (loss)	$396,918	$ 353,038	$ (96,338)	$ (39,493)	$ 664,201
Net income (loss) per share data:					
Basic net income (loss) per share:					
Net income (loss) per share	$3.97	$ 3.77	$ (1.11)	$ (0.46)	$ 7.82
Weighted average shares	100,048	93,697	86,860	86,067	84,891
Diluted net income (loss) per share:					
Net income (loss) per share	$3.91	$ 3.70	$ (1.11)	$ (0.46)	$ 7.68
Weighted average shares	101,643	95,468	86,860	86,067	86,491
Cash dividends declared per common share	$—	$ —	$ —	$ —	$ —

	Years Ended				
	December 31, 2014	December 31, 2013	December 31, 2012	December 31, 2011	December 31, 2010
	(In thousands)				
Cash Flow Data:					
Net cash provided by (used in) operating activities	$680,989	$ 856,126	$ 762,209	$ (33,463)	$ 705,492
Net cash used in investing activities	(511,879)	(537,106)	(383,732)	(676,457)	(742,085)
Net cash provided by (used in) financing activities	7,359	101,164	(89,109)	571,218	150,451

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	Years Ended				
	December 31, 2014	December 31, 2013	December 31, 2012	December 31, 2011	December 31, 2010
	(In thousands)				
Balance Sheet Data:					
Cash and cash equivalents	$ 1,482,054	$ 1,325,072	$ 901,294	$ 605,619	$ 765,689
Marketable securities, current and noncurrent	509,032	439,102	102,578	182,338	348,160
Total assets	6,724,439	6,883,502	6,348,692	5,777,614	4,380,403
Total long-term debt	216,921	223,323	562,572	663,648	237,391
Total liabilities	1,696,952	2,380,385	2,743,166	2,133,751	925,458
Total stockholders' equity	5,027,487	4,503,117	3,605,526	3,643,863	3,454,945

Item 7: Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and the related notes thereto included in this Annual Report on Form 10-K. Unless expressly stated or the context otherwise requires, the terms "we," "our," "us," and "First Solar" refer to First Solar, Inc. and its subsidiaries. In addition to historical consolidated financial information, the following discussion and analysis contains forward-looking statements that involve risks, uncertainties, and assumptions as described under the "Note Regarding Forward-Looking Statements," that appears earlier in this Annual Report on Form 10-K. Our actual results could differ materially from those anticipated by these forward-looking statements as a result of many factors, including those discussed under Item 1A: "Risk Factors," and elsewhere in this Annual Report on Form 10-K.

Unit of Power

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.

Executive Overview

We are a global provider of solar energy solutions, focused on providing power solutions across key market segments. We design, manufacture, and sell PV solar modules with an advanced thin-film semiconductor technology, and we develop, design, construct, and sell PV solar power solutions that primarily use the solar modules we manufacture. We also manufacture crystalline silicon solar modules with proprietary high-power density, mono-crystalline technology, and we provide single-axis mounting systems with proprietary tracking capabilities. Additionally, we provide O&M services to plant 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 systems 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 developments include:

- Net sales for 2014 increased by 3% to $3.4 billion compared to $3.3 billion in 2013. The increase was driven by higher systems business project revenue, partially offset by lower third-party module net sales. The increase in systems business project revenue was primarily attributable to higher revenue from the partial sale of our Solar Gen 2 project, the sale of our Campo Verde and Macho Springs projects, and the commencement of construction and related

revenue recognition on multiple projects in California and our Nyngan project in Australia. These increases were partially offset by decreases in systems business project revenue resulting from our Desert Sunlight project as it nears substantial completion, our completed first phase of the Imperial Valley Energy Center South project, our completed Amherstburg, Belmont, and Walpole projects, and the completion of the Agua Caliente project. The decrease in third-party module net sales was due to a 26% reduction in the volume of watts sold and a 19% decrease in the average selling price per watt.

Gross profit decreased 1.7 percentage points to 24.4% during 2014 from 26.1% during 2013, primarily due to a mix of lower gross profit projects sold and under construction in 2014 and an adjustment for lower estimated recycling costs recorded in 2013. These decreases in gross profit were partially offset by favorable changes in estimated costs on systems

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projects accounted for under the percentage-of-completion method, a lower volume of third-party module net sales, which generally have margins less than systems business projects, and higher capacity utilization of our manufacturing facilities.

- As of December 31, 2014, we had 30 installed production lines with an annual global manufacturing capacity of approximately 2.7 GW at our manufacturing facilities in Perrysburg, Ohio and Kulim, Malaysia. We produced 1.8 GW DC of solar modules during 2014 which represented a 13% increase from 2013. The increase in production was primarily driven by higher module efficiency. We expect to produce approximately 2.5 GW of solar modules during 2015.

- During 2014, we ran our manufacturing facilities at approximately 81% capacity utilization, which represented a 4 percentage point increase from 2013.

- The average conversion efficiency of our modules was 14.0% in 2014, which was an improvement of 0.8 percentage points from our average conversion efficiency of 13.2% in 2013.

Market Overview

The solar industry continues to be characterized by intense pricing competition, both at the module and system levels. In the aggregate, we believe manufacturers of solar modules and cells have installed significant production capacity in relation to global demand. We believe the solar industry will continue to 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. Additionally, intense competition at the systems level can result in an environment in which pricing falls rapidly, thereby further increasing demand for solar solutions but constraining the ability for project developers, EPC companies, and/or vertically-integrated solar companies such as First Solar to sustain meaningful and consistent profitability. In light of such market realities, we continue to execute our Long Term Strategic Plan described below under which we are focusing on our competitive strengths. A key core strength is our differentiated, vertically integrated business model that enables us to provide utility-scale PV generation solutions to sustainable geographic markets that have an immediate need for mass-scale PV electricity.

Solar markets worldwide 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, and we have continued to develop our localized presence and expertise in these markets. We are developing, constructing, or operating multiple solar projects around the world, many of them the largest or among the largest in their regions, including:

- our 141 MW AC Luz del Norte PV power plant under construction near Copiapó, Chile, which upon completion will be the largest solar plant in the region and the biggest solar power facility in the world to sell electricity on an open contract basis;

- a 53 MW AC solar plant in Jordan, which upon completion will be the largest PV power plant in the Middle East;

- a 45 MW AC project located at two sites in the state of Telangana, India; and

- the 102 MW AC Nyngan and 53 MW AC Broken Hill solar plants, located in New South Wales, Australia, which upon completion will be Australia’s largest utility-scale solar facilities.

In North America, we continue to execute on our advanced-stage utility-scale project pipeline. We continue to make construction progress on what are currently or will be among the world’s largest PV solar power systems. We expect a

substantial portion of our consolidated net sales, operating income, and cash flows through the end of 2016 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, and we continue to develop our early-to-mid stage project pipeline and evaluate acquisitions of projects to continue to add to 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 could adversely affect our results of operations. If competitors reduce pricing to levels below their costs, bid aggressively low prices for 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. We continue to mitigate this uncertainty in part by executing on and building our advanced-stage utility-scale systems pipeline, executing on our module efficiency improvement and BoS cost reduction roadmaps to maintain

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and increase our competitiveness, profitability, and capital efficiency, adjusting our production plans and capacity utilization, and continuing the development of worldwide geographic markets.

In the components business, we continue to face intense competition from manufacturers of crystalline silicon solar modules and other types of solar modules and PV systems. Solar module manufacturers compete with one another in several product performance attributes, including reliability and selling price per watt, and, with respect to solar power systems, net present value ("NPV"), return on equity ("ROE"), and levelized cost of electricity ("LCOE"), meaning the net present value of total life cycle costs of the solar power project divided by the quantity of energy which is expected to be produced over the system's life. 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 PV solar power systems to compete favorably. Our cost competitiveness is based in large part on our proprietary technology (which enables conversion efficiency improvements and enables us to produce a module in less than 2.5 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 polysilicon 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, contributing to a decline in our manufacturing cost competitiveness over traditional crystalline silicon module manufacturers. Given the lower conversion efficiency and smaller size (sometimes referred to as form factor) of our modules compared to certain types of crystalline silicon modules, there may be higher BoS costs associated with systems using our modules. Thus, to compete effectively on the basis of LCOE, our modules need to maintain a certain cost advantage per watt compared to crystalline silicon-based modules with higher conversion efficiencies. We continue to focus on reducing BoS costs associated with PV solar power systems using our modules. We believe we can continue to reduce BoS costs by improving module conversion efficiency, leveraging volume procurement around standardized hardware platforms, using innovative installation techniques and know how, and accelerating installation times to reduce labor costs. BoS costs can represent a significant portion of the costs associated with the construction of a typical utility-scale PV solar power system.

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 solar modules and PV solar power systems, erosion in our market share for modules and PV solar power systems, decreases in the rate of net sales growth, and/or declines in overall net sales. We have taken, and continue to take, various actions to mitigate the potential impact resulting from competitive pressures, including accelerating progress along our module efficiency improvement and BoS cost reduction roadmaps and further focusing our research and development on increasing the conversion efficiency of our solar modules.

As we continue to expand our systems business into sustainable markets, we can offer value beyond the solar module, reduce our exposure to module-only competition, provide differentiated product offerings to minimize the impact of solar module commoditization, and provide comprehensive utility-scale PV solar power system solutions that significantly reduce solar electricity costs. Thus, our systems business allows us to play a more active role than many of our competitors in managing the demand for our solar modules. Finally, we continue to form and develop strong relationships with our customers and strategic partners around the world and continue to develop our range of product offerings, including EPC capabilities and O&M services, in order to enhance the competitiveness of systems using our solar modules. For example, we have and expect in the future to form joint ventures or other business arrangements with project developers in certain strategic markets in order to provide our modules and potential systems business PV

generation solutions to the projects developed by such ventures.

Certain Trends and Uncertainties

We believe that our continuing operations may be favorably or unfavorably impacted by the following trends and uncertainties that may affect our financial condition and results of operations. See Item 1A: “Risk Factors” and elsewhere in this Annual Report on Form 10-K for a discussion of other risks that may affect our financial condition and results of operations.

Long Term Strategic Plan

In executing our Long Term Strategic Plan we are focusing on providing solar PV generation solutions using our modules to sustainable geographic markets that we believe have a compelling need for mass-scale PV electricity, including markets throughout the Americas, Asia, Australia, the Middle East, and Africa. As part of our Long Term Strategic Plan, we are focusing on opportunities in which our solar PV generation solutions can compete directly with fossil fuel offerings on an LCOE or similar basis, or complement such fossil fuel electricity generations. Execution of the Long Term Strategic Plan entails a reallocation of resources

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around the globe, in particular, dedicating resources to regions such as Latin America, Asia, the Middle East, and Africa. We are evaluating and closely managing the appropriate level of resources required as we transition into and penetrate these specific markets. We have and intend to continue to dedicate significant capital and human resources to reduce the total installed cost of solar PV generation, to optimize the design and logistics around our solar PV generation 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 will come from solar offerings in the sustainable 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 expand resources globally, including the appointment of country heads, business development, sales personnel, and other supporting professional staff in target sustainable markets. Accordingly, we are shifting current costs and expect to incur additional costs over time as we establish a localized business presence in these regions.

Joint ventures or other business arrangements with strategic partners are a key part of our Long Term Strategic Plan, and we use such arrangements to expedite our penetration of various markets and establish relationships with potential customers and policymakers. Some of these business arrangements involve and are expected in the future to involve significant investments or other allocations of capital. We continue to develop relationships with policymakers, regulators, and end customers in each of these markets with a view to creating markets for utility scale PV solar power systems. We sell solar power solutions directly to end customers, including independent power producers, utilities, retail electricity providers, and commercial and industrial customers. Depending on the market opportunity, our sales offerings 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 sales offerings to continue to evolve over time as we work with our customers to optimize how our PV solar generation solutions can best meet our customers' energy and economic needs. In addition to our utility-scale power plant offerings, we have fuel displacement, commercial, industrial, and off-grid and energy access offerings.

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 offering compared with other energy solutions, fossil fuel based or otherwise, that are available to potential customers.

We expect to use our working capital, the availability under our Revolving Credit Facility, or non-recourse or limited-recourse project financing to finance the construction of certain of our PV solar power systems, if the sale of such systems prior to the commencement of construction does not meet our economic return expectations or we cannot sell under terms and conditions that are favorable to us. From time to time, we may own and operate certain PV solar power systems, often with the intention to sell at a later date. The ability to do so allows us to gain control of the sales process, provide a lower risk profile to a future buyer of a PV solar power system, and improve our ability to drive higher eventual sale values. We may also elect to construct and retain ownership interests in power plants 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 plant in a competitive wholesale market. We continue to pursue strategic partnerships that open up new geographic markets. We also continue to assess and pursue other business arrangements that provide access to a lower cost of capital and optimize the value of our projects. Business arrangements that can lower the cost of capital and provide other benefits relating to the project sales process, such as YieldCo arrangements (as described below and under the

heading “Liquidity and Capital Resources”), have been used increasingly by renewable energy companies. Additionally, our joint ventures and other business arrangements with strategic partners have and may in the future result in us temporarily retaining a minority or 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 and/or unconsolidated separate entity.

YieldCo

On February 23, 2015, we and SunPower announced that we are in advanced negotiations to form a joint YieldCo to which the parties each expect to contribute a portfolio of selected solar generation assets from their existing portfolios of assets. Upon the execution of a master formation agreement, the parties intend to file a registration statement with the Securities and Exchange Commission for an initial public offering of limited partner interests in the YieldCo. Formation of the YieldCo and completion of

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the IPO are subject to, among other things, the execution of definitive documentation, each party's board approval, and regulatory approval. There is no assurance that the YieldCo will be formed or that the IPO will be consummated or that any other transaction will occur.

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

We continue to execute on our advanced-stage utility-scale project pipeline. We expect a substantial portion of our consolidated net sales, operating income, and cash flows through 2016 to be derived from several large projects, including the following projects which will be among the world's largest PV solar power systems: the 250 MW McCoy Solar Energy Project, located in Riverside County, California; the 250 MW Silver State South project, located near Primm in Clark County, Nevada; and the 150 MW Imperial Solar Energy Center West project, located in Imperial County, California, which are all under contract, and the following projects which are not yet sold or contracted: the 300 MW Stateline project, located in San Bernardino County, California; the 280MW California Flats project, located in Monterey County, California; the 250 MW Moapa project, located in Clark County, Nevada; and the 141 MW Luz del Norte project located near Copiapó, Chile. 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 of these projects is subject to risks and delays as described in the Risk Factors. Revenue recognition for these and other systems projects is in many cases not linear in nature due to the timing of when all revenue recognition criteria have been or are expected to be met, and consequently period-over-period comparisons of results of operations may not be meaningful. As we progress construction towards substantial completion of these PV solar power systems, we may have a larger portion of our net sales, operating income, and cash flows come from future sales of solar offerings outside of North America, pursuant to our Long Term Strategic Plan described above. North America, however, will continue to represent a meaningful portion of our net sales, operating income, and cash flows through 2016 as a significant portion of our advanced-stage project pipeline, excluding the projects above, is also comprised of projects in North America.

Systems Project Pipeline

The following tables summarize, as of February 24, 2015, our approximately 3.2 GW systems business advanced-stage project pipeline. As of December 31, 2014, for the Projects Sold/ Under Contract in our advanced-stage project pipeline of approximately 1.5 GW, we have recognized revenue with respect to the equivalent of approximately 0.2 GW. Such MW equivalent amount refers to the ratio of revenue recognized for the Projects Sold/ Under Contract in our advanced-stage project pipeline compared to total contracted revenue for such projects, multiplied by the total MW for such projects. The remaining revenue to be recognized subsequent to December 31, 2014 for the Projects Sold/ Under Contract in our advanced-stage project pipeline is expected to be approximately $3.0 billion. The substantial majority of this amount is expected to be recognized as revenue through the later of the substantial completion or project closing dates of the Projects Sold/ Under Contract. 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 1.4. 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 completed construction and after all revenue has been recognized.

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. From February 26, 2014 through February 24, 2015, we acquired 1.4 MW of advanced-stage projects, and we expect to acquire additional advanced-stage projects when such acquisitions meet our strategic and/or our return on investment requirements.

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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 December 31, 2014	
Project/Location	Project Size in MW AC (2)	PPA Contracted Partner	Third-Party Owner/Purchaser	Expected Year Revenue Recognition Will Be Completed By	Percentage Complete	Percentage of Revenue Recognized
McCoy, California	250	SCE	NextEra (3)	2016	2%	2%
Silver State South, Nevada	250	SCE	NextEra	2016	9%	9%
Southern California	175	Various	Various (3)	2016	—%	—%
AGL, Australia	155	AGL	AGL (3) (8)	2015	43%	43%
Imperial Energy Center West, California	150	SDG&E	Tenaska (3)	2016	2%	2%
Taylor, Georgia	130	Various	Southern Company (3)	2016	—%	—%
Decatur Parkway Solar, Georgia	83	Georgia Power	Southern Company (3)	2015	—%	—%
California (Multiple Locations) (11)	79	PG&E/SCE	Various (3)	2015	95%	95%
Copper Mountain 2, Nevada	58	PG&E	Sempra (3)	2015 (4)	58%	58%
Shams Ma'an, Jordan	53	NEPCO (13)	Various (3)	2016	—%	—%
Seville, California	52	Seville Solar	Seville Solar (3)	2015	—%	—%
CID Solar and Cottonwood, California	43	PG&E/Marin Clean Energy	EDF Renewable Energy (3)	2015	55%	55%
Elm City, North Carolina	40	UOG (5)	Duke (3)	2015	—%	—%
PNM3, New Mexico	23	UOG (5)	PNM (3)	2015	77%	77%
Total	1,541					

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Projects with Executed PPA - Not Sold/ Not Contracted (1)

Project/Location	Fully Permitted	Project Size in MW AC (2)	PPA Contracted Partner	Expected or Actual Substantial Completion Year	As of December 31, 2014 Percentage Complete
Tribal Solar (16)	No	310	SCE	2019	10%
Stateline, California	Yes	300	SCE	2016	15%
California Flats, California	No	280	PG&E/Apple Inc. (6)	2016 (7)	—%
Moapa, Nevada	Yes	250	LADWP	2015	14%
India (Multiple Locations)	No	145	TSSPDCL / APSPDCL (14)	2016	—%
Luz del Norte, Chile	Yes	141	(12)	2015	23%
North Star, California	Yes	60	PG&E	2015	42%
Cuyama, California	Yes	40	PG&E	2015/2016 (7)	9%
Kingbird, California	Yes	40	SCPPA (10)/ City of Pasadena	2015	5%
Lost Hills, California	Yes	32	PG&E	2015 (9)	76%
Portal Ridge, California	Yes	31	PG&E/SCE (15)	2015	—%
Barilla, Texas	Yes	30	(17)	2015	73%
Total		1,659			

Key:

(1) Includes projects with no PPA, but for which electricity will be sold in a competitive wholesale market

(2) The volume of modules installed in MW DC (“direct current”) will be higher than the MW AC (“alternating current”) size pursuant to a DC-AC ratio typically ranging from 1.2 to 1.4; such ratio varies across different projects due to various system design factors

(3) Represents an EPC contract or partner developed project

(4) First 92 MW AC phase was completed in 2012; remaining phase is 58 MW AC for which substantial completion is expected in 2015

(5) UOG is defined as Utility Owned Generation

(6) PG&E 150 MW AC and Apple Inc. 130 MW AC

(7) PG&E PPA term does not begin until 2019

(8) First Solar will own five percent of projects (102 MW AC Nyngan and 53 MW AC Broken Hill)

(9) Project has short-term PPA that begins in 2015 with PG&E PPA beginning in 2019

(10) SCPPA is defined as Southern California Public Power Authority; SCPPA 20 MW AC and City of Pasadena 20 MW AC

(11) Kent South (Kings County), Kansas (Kings County), Adams East (Fresno County), and Old River (Kern County)

(12) No PPA - Electricity sold in competitive wholesale market

(13) 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

(14) TSSPDCL is defined as Southern Power Distribution Company of Telangana State Ltd and consists of a 65 MW project with expected completion in 2015; and APSPDCL is defined as Andhra Pradesh Southern Power Distribution Company Ltd and consists of a 80 MW project with expected completion in 2016

(15) PG&E 11 MW AC and SCE 20 MW AC

(16) Tribal Solar located on tribal land

(17) Short term PPA with MP2 Energy LLC for approximately 40% of the output from the first 22 MW AC phase of the project

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Results of Operations

The following table sets forth our consolidated statements of operations as a percentage of net sales for the years ended December 31, 2014, 2013, and 2012:

	Years Ended December 31,		
	2014	2013	2012
Net sales	100.0 %	100.0 %	100.0 %
Cost of sales	75.6 %	73.9 %	74.7 %
Gross profit	24.4 %	26.1 %	25.3 %
Research and development	4.2 %	4.1 %	3.9 %
Selling, general and administrative	7.5 %	8.2 %	8.3 %
Production start-up	0.2 %	0.1 %	0.2 %
Restructuring and asset impairments	— %	2.6 %	13.9 %
Operating income (loss)	12.5 %	11.1 %	(1.1)%
Foreign currency loss, net	(0.1)%	— %	(0.1)%
Interest income	0.5 %	0.5 %	0.4 %
Interest expense, net	(0.1)%	(0.1)%	(0.4)%
Other (expense) income, net	(0.2)%	(0.1)%	— %
Income tax expense	(0.9)%	(0.8)%	(1.7)%
Equity in earnings of unconsolidated affiliates, net of tax	(0.1)%	— %	— %
Net income (loss)	11.7 %	10.7 %	(2.9)%

Segment Overview

We operate our business in two segments. Our components segment involves the design, manufacture, and sale of solar modules which convert sunlight into electricity. We primarily manufacture CdTe modules and have also begun manufacturing high-efficiency crystalline silicon modules. Third-party customers of our components segment include project developers, system integrators, and owners and operators of PV solar power systems.

Our second segment is our fully integrated 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, (iii) O&M services, and (iv) project finance expertise. 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 such products and services are sold directly to investor owned utilities, independent power developers and producers, commercial and industrial companies, and other system owners. Additionally, within our systems segment, we may hold and operate certain of our PV solar power systems 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 24 “Segment and Geographical Information,” to our consolidated financial statements for the year ended December 31, 2014 included in this Annual Report on Form 10-K.

See also Item 7: “Management’s Discussion and Analysis of Financial Condition and Results of Operations — Systems Project Pipeline” for a description of the projects in our advanced-stage project pipeline. Due to the distinct size,

profitability, and terms of the underlying sales arrangements for each project under construction, the timing of meeting all revenue recognition criteria may create uneven net sales and gross profit patterns, making year over year comparisons less meaningful.

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Product Revenue

The following table sets forth the total amounts of solar modules and solar power systems net sales for the years ended December 31, 2014, 2013, and 2012. For the purpose of the following table, (a) Solar module revenue is composed of total net sales from the sale of solar modules to third parties, and (b) Solar power system revenue is composed of total net sales from the sale of PV solar power systems and related services and solutions including the solar modules installed in the PV solar power systems we develop and construct along with revenue generated from our PV solar power systems (in thousands):

	2014	2013	2012
Solar module revenue	$228,319	$380,869	$325,427
Solar power system revenue	3,163,495	2,928,120	3,043,118
Net sales	$3,391,814	$3,308,989	$3,368,545

Solar module revenue to third parties decreased by $152.6 million during 2014 compared to 2013 due to a 26% reduction in the volume of watts sold and a 19% decrease in the average selling price per watt.

Solar power system revenue increased by $235.4 million during 2014 compared to 2013 primarily as a result of the number and size of projects under construction between these periods as well as the timing of when all the revenue recognition criteria have been met. Specifically, the increase was attributable to higher revenue from the partial sale of our Solar Gen 2 project, the sale of our Campo Verde and Macho Springs projects, and the commencement of construction and related revenue recognition on multiple projects in California and our AGL Nyngan project in Australia. These increases were partially offset by decreases in systems business project revenue resulting from our Desert Sunlight project as it nears substantial completion, our completed first phase of the Imperial Valley Energy Center South project, our completed Amherstburg, Belmont, and Walpole projects, and the completion of the Agua Caliente project.

Solar module revenue to third parties increased by $55.4 million during 2013 compared to 2012 due to an increase in the volume of watts sold of 39%, partially offset by a 15% decrease in the average selling price per watt.

Solar power system revenue decreased by $115.0 million for 2013 compared to 2012 primarily due to the number and size of projects under construction between these periods as well as the timing of when all the revenue recognition criteria have been met. Solar power system revenue included decreases in net sales from our AV Solar Ranch One, Copper Mountain 2, and Topaz projects, which are at various points of completion, combined with reductions in net sales for the substantially completed Agua Caliente, Alpine, Silver State North, Avra Valley, and Greenough River projects. These decreases were partially offset by increases in net sales from the initial revenue recognition for our Desert Sunlight, PNM, and DEWA projects combined with increases in net sales from our completed first phase of the Imperial Energy Center South project and our projects in Canada, including Amherstburg, Belmont, and Walpole.

Net sales

Components Business

We generally price and sell our solar modules per watt of name plate power. During 2014, a significant portion of net sales from the components business related to modules included in our PV solar power systems described below under “Net Sales — Systems Business.” Other than the modules included in our PV solar power systems, we sold the majority of our solar modules to PV solar power system project developers, system integrators, and operators who own, operate, or construct solar projects in India, Great Britain, Israel, and the United States.

From time to time we enter into module sales agreements with customers worldwide for specific projects or volumes of modules. Such agreements are generally not long-term in nature. During the years ended December 31, 2014 and 2013, 39% and 48%, respectively, of our components business net sales, excluding modules included in our PV solar power systems, were denominated in Euros and were subject to fluctuations in the exchange rate between the Euro and U.S. dollar.

Under our typical customer sales contracts for solar modules, we transfer title and risk of loss to the customer and recognize revenue upon shipment. Pricing is typically fixed or determinable at the time of shipment, and our customers do not typically have extended payment terms. Customers do not have rights of return under these contracts. Our revenue recognition policies for the components business are described further in Note 2 “Summary of Significant Accounting Policies,” to our consolidated financial statements for the year ended December 31, 2014 included in this Annual Report on Form 10-K.

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During 2014, Southern Company, MidAmerican Energy Company, and NextEra Energy, Inc. individually accounted for more than 10% of our components segment's net sales, which includes the solar modules used in our systems projects.

Systems Business

Through our fully integrated systems business, we provide a complete turn-key solar power system solution using our solar modules, which may include project development, EPC services, O&M services, and project finance expertise. Additionally, from time to time we may own and operate PV solar power systems, which will be included within our systems business. Revenue recognition for our systems projects are 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. 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, but we only apply this method after all revenue recognition criteria have been met. There are also many instances in which we recognize revenue only after a project has been completed, primarily due to a project not being sold prior to completion or because all revenue recognition criteria are not met until the project is completed. Our revenue recognition policies for the systems business are described in further detail in Note 2 "Summary of Significant Accounting Policies," to our consolidated financial statements for the year ended December 31, 2014 included in this Annual Report on Form 10-K.

During 2014, 2013, and 2012, the majority of our systems segment net sales were generated in North America.

During 2014, the principal customers of our systems segment were Southern Company, NextEra Energy, Inc., and MidAmerican Energy Company, each of which accounted for more than 10% of our systems segment sales.

The following table shows net sales by reportable segment for the years ended December 31, 2014, 2013, and 2012:

	Years Ended			Change					
(Dollars in thousands)	2014	2013	2012	2014 over 2013			2013 over 2012		
Components	$1,102,674	$1,173,947	$1,185,958	$(71,273)	(6	)%	$(12,011)	(1	)%
Systems	2,289,140	2,135,042	2,182,587	154,098	7	%	(47,545)	(2	)%
Net sales	$3,391,814	$3,308,989	$3,368,545	$82,825	3	%	$(59,556)	(2	)%

The 3% increase in net sales during the year ended December 31, 2014 compared with the year ended December 31, 2013 was primarily due to a 7% increase in net sales from our systems segment, partially offset by a 6% decrease in net sales from our components segment.

Net sales from our components segment, which includes solar modules used in our systems projects, decreased by $71.3 million due to a 12% decrease in average selling prices, partially offset by a 7% increase in the volume of watts sold.

Net sales from our systems segment, which excludes solar modules used in our systems projects, increased by $154.1 million, primarily as a result of the number and size of projects under construction between these periods as well as the timing of when all the revenue recognition criteria have been met. Specifically, the increase was attributable to higher revenue from the partial sale of our Solar Gen 2 project, the sale of our Campo Verde and Macho Springs projects, and the commencement of construction and related revenue recognition on multiple projects in California and our AGL Nyngan project in Australia. These increases were partially offset by decreases in systems business project revenue resulting from our Desert Sunlight project as it nears substantial completion, our completed first phase of the Imperial Valley Energy Center South project, our completed Amherstburg, Belmont, and Walpole projects, and the completion of the Agua Caliente project.

The 2% decrease in net sales during 2013 compared with 2012 was primarily due to a 2% decrease in net sales from our systems segment and a 1% decrease in net sales from our components segment.

Net sales from our components segment, which includes solar modules used in our systems projects, decreased by $12.0 million due to a 17% decrease in average selling prices, partially offset by a 19% increase in the volume of watts sold.

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Net sales from our systems segment, which excludes solar modules used in our systems projects, decreased by $47.5 million, primarily due to the number and size of projects under construction between these periods as well as the timing of when all revenue recognition criteria have been met. Net sales from our systems segment included decreases in net sales from our AV Solar Ranch One, Copper Mountain 2, and Topaz projects, which are at various points of completion combined with reductions in net sales for the substantially completed Agua Caliente, Alpine, Silver State North, Avra Valley, and Greenough River projects. These decreases were partially offset by increases in net sales from initial revenue recognition for our Desert Sunlight, PNM, and DEWA projects combined with increases in net sales from our completed first phase of the Imperial Energy Center South project and our projects in Canada, including Amherstburg, Belmont, and Walpole.

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. Our cost of sales also 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, and procurement costs. Cost of sales also includes depreciation of manufacturing plant and equipment and facility-related expenses. In addition, we record shipping, warranty, and the majority of our obligation for solar module collection and recycling costs within cost of sales.

As further described in Note 24 “Segment and Geographical Information,” to our consolidated financial statements for the year ended December 31, 2014 included within this Annual Report on Form 10-K, at the time when all revenue recognition criteria are met, we include the sale of our 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 at that time.

Systems Business

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

The following table shows cost of sales by reportable segment for the years ended December 31, 2014, 2013, and 2012:

	Years Ended			Change			
(Dollars in thousands)	2014	2013	2012	2014 over 2013		2013 over 2012	
Components	$1,009,164	$1,085,441	$1,130,196	$(76,277)	(7)%	$(44,755)	(4)%
Systems	1,555,545	1,360,794	1,385,600	194,751	14 %	(24,806)	(2)%
Cost of sales	$2,564,709	$2,446,235	$2,515,796	$118,474	5 %	$(69,561)	(3)%
% of net sales	75.6 %	73.9 %	74.7 %				

Our cost of sales increased by $118.5 million, or 5%, and increased by 1.7 percentage points as a percentage of net sales when comparing 2014 with 2013. The increase in cost of sales was driven by a $194.8 million increase in our systems segment cost of sales primarily for BoS components and other construction and development costs related to the number of projects and the timing of when all revenue recognition criteria were met along with a mix of higher cost projects. These increases were partially offset by a $76.3 million reduction in cost of sales in our components

segment primarily due to the following:

•Continued manufacturing cost reductions of $164.9 million and
•Lower inventory write-off and asset impairment charges of $16.8 million; partially offset by
•Higher costs of $67.9 million associated with increased solar modules sales volumes and
•The downward change in estimate of $43.3 million on our future recycling costs recorded during 2013.

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Our costs of sales decreased by $69.6 million, or 3%, and declined 0.8 percentage points as a percentage of net sales when comparing 2013 with 2012. The decrease in cost of sales was primarily due to a $44.8 million reduction in cost of sales in our components segment and can largely be attributed to the following 2012 expenses that substantially did not occur in 2013:

- Decreased expenses of $39.5 million associated with the voluntary remediation efforts for our 2008-2009 manufacturing excursion;
- Accelerated depreciation expense of $24.8 million for certain manufacturing equipment that was replaced as part of our planned equipment upgrade programs;
- Lower expenses of $27.5 million associated with inventory write-downs to lower of cost or market and other adjustments primarily as a result of favorable fluctuations in inventory market pricing;
- Reduced expenses of $15.8 million related to our voluntary remediation efforts for workmanship issues affecting a limited number of solar modules manufactured between October 2008 and June 2009.

In addition, in 2013, the adjustment to lower our module and collection and recycling liability was $17.9 million higher than the prior year resulting in a reduction to cost of sales. These decreases in our cost of sales were partially offset by a $45.6 million increase associated with growth in the volume of solar modules sold, net of cost reductions in our manufacturing process and module efficiency improvements. Also, our cost of sales was unfavorably impacted by lower utilization of our manufacturing capacity due to the temporary idling of production lines in Perrysburg, Ohio and Kulim, Malaysia causing a $23.6 million increase in cost of sales. Additionally, cost of sales decreased by $24.8 million in our systems segment primarily for BoS components and other construction costs related to the relative number and size of various utility-scale solar power systems under construction and the progress on such construction between the periods as well as the timing of when all revenue recognition criteria were met.

Gross profit

Gross profit is affected by numerous factors, including our module and system average selling prices, our manufacturing costs, BoS costs, project development costs, the effective utilization of our production capacity and 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 sales and cost of sales for solar modules used in our systems projects which we include in the gross profit of our components business. As we move to a higher mix of third-party EPC only contracts, the gross profit on those contracts could be lower than gross profit on our self developed contracts.

The following table shows gross profit for the years ended December 31, 2014, 2013, and 2012:

	Years Ended			Change			
(Dollars in thousands)	2014	2013	2012	2014 over 2013		2013 over 2012	
Gross profit	$827,105	$862,754	$852,749	$(35,649)	(4)%	$10,005	1 %
% of net sales	24.4 %	26.1 %	25.3 %				

Gross profit as a percentage of net sales decreased by 1.7 percentage points during 2014 compared with 2013 primarily due to a mix of lower gross profit projects sold and under construction in 2014 and an adjustment for lower estimated recycling costs recorded in 2013. These decreases in gross profit were partially offset by favorable changes in estimated costs on systems projects accounted for under the percentage-of-completion method, a lower volume of third-party module net sales, which generally have margins less than systems business projects, and higher capacity utilization of our manufacturing facilities.

Gross profit as a percentage of net sales increased by 0.8 percentage points during 2013 compared with 2012 primarily due to the following: (i) a 1.2 percentage point increase related to lower expense associated with voluntary

remediation efforts for our 2008-2009 manufacturing excursion; (ii) a 0.6 percentage point increase related to lower module collection and recycling liability; (iii) a 0.7 percentage point increase due to lower accelerated depreciation expense for certain manufacturing equipment that have been replaced as part of our planned upgrade programs; (iv) a 0.8 percentage point increase related to lower inventory write-down expense ; and (v) a 0.5 percentage point increase due to lower costs associated with voluntary remediation efforts for workmanship issues affecting a limited number of solar modules manufactured between October 2008 and June 2009. These increases were partially offset by a 1.7 percentage point gross profit decrease in systems segment due to the mix of lower gross profit projects under construction between the periods and a 1.3 percentage point decrease due to lower gross profit for modules sold in our components segment primarily due to increased underutilization and lower average selling prices compared to module production costs between periods.

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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 intangible assets. We acquire equipment for general use in our process and product development and record the depreciation of this equipment as research and development expense. Currently, the substantial majority of our research and development expenses are 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 years ended December 31, 2014, 2013, and 2012:

	Years Ended			Change					
(Dollars in thousands)	2014	2013	2012	2014 over 2013			2013 over 2012		
Research and development	$143,969	$134,300	$132,460	$9,669	7	%	$1,840	1	%
% of net sales	4.2 %	4.1 %	3.9 %						

The overall increase in our research and development expense during 2014 compared with 2013 primarily resulted from additional costs related to the development of our next-generation CdTe solar modules, our joint collaboration agreement with GE to further advance our CdTe solar technology, and higher employee compensation costs. During 2014, we continued the development of our solar modules with increased efficiencies at converting sunlight into electricity and increased the average conversion efficiency of our solar modules from 13.2% in 2013 to 14.0% in 2014.

The overall increase in our research and development expense during 2013 compared with 2012 primarily resulted from costs related to the improvement of our current generation modules, integration of our module and BoS technology into our PV power plants, and the development of our next generation CdTe and crystalline silicon solar cells. The increase in research and development expense of $1.8 million year over year was primarily related to our acquisition of CdTe PV intellectual property assets and solar manufacturing processes from GE and an acquisition of crystalline silicon technology from TetraSun. In connection with the GE acquisition, we entered into a joint collaboration agreement with GE to collaborate on future technology development to further advance CdTe solar technology. Research and development expense increased $5.8 million as a result of TetraSun acquisition primarily due to incremental increases in labor, facility, and depreciation expenses as well as additional costs related to testing of the TetraSun cell manufacturing technology and the development of crystalline silicon solar cells. These increases were partially offset by a $3.2 million decrease in personnel-related expenses resulting from lower employee compensation. During 2013, we continued the development of our solar modules with increased efficiencies at converting sunlight into electricity and increased the average conversion efficiency of our solar modules from 12.6% in 2012 to 13.2% in 2013.

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 has certain of its own dedicated administrative key functions, such as accounting, legal, finance, project finance, human resources, procurement, and marketing. Costs for these functions are recorded and included within selling, general and administrative costs of the respective segment. Our corporate key functions consist primarily of company-wide corporate tax, corporate treasury, corporate accounting/finance,

corporate legal, investor relations, corporate communications,government relations, and executive management functions. 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.

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The following table shows selling, general and administrative expense for the years ended December 31, 2014, 2013, and 2012:

	Years Ended			Change			
(Dollars in thousands)	2014	2013	2012	2014 over 2013		2013 over 2012	
Selling, general and administrative	$253,827	$270,261	$280,928	$(16,434)	(6)%	$(10,667)	(4)%
% of net sales	7.5%	8.2%	8.3%				

Our selling, general and administrative expenses decreased by $16.4 million, or 6%, and were 7.5% and 8.2% as a percentage of net sales, when comparing 2014 with 2013, respectively. The most significant items affecting our selling, general and administrative costs during 2014 and 2013 are as follows:

- Lower depreciation and amortization expense of $14.4 million primarily due to accelerated deprecation for certain leasehold improvements and the sale of our Mesa facility in 2013;
- Lower employee compensation and benefits expense of $5.4 million primarily as a result of lower incentive and share-based compensation; partially offset by
- Higher business development expense of $4.0 million driven by our continued expansion into certain strategically targeted sustainable markets.

Our selling, general and administrative expenses decreased by $10.7 million, or 4%, and were 8.2% and 8.3% as a percentage of net sales, when comparing 2013 with 2012, respectively. The most significant items affecting our selling, general and administrative costs during 2013 and 2012 are as follows:

- A $15.9 million reduction in expense related to the 2008-2009 manufacturing excursion, which was recorded in 2012;
- Lower infrastructure expenses of $7.1 million primarily due to an early exit from certain administrative office leases in 2012 and a reduction in telecommunication spending; and
- Decreased depreciation and amortization expense of $6.4 million mainly due to the acceleration of expense for certain leasehold improvements in 2012 and lower depreciation expense related to our Mesa facility; partially offset by
- Increased project, business development, legal, and professional services fees of $14.5 million largely due to additional business development activity and the continued expansion of our systems business into sustainable markets and
- Higher salary and benefit expenses of $5.6 million in connection with an increase in share-based compensation of $26.1 million, partially offset by a decrease in salaries of $20.5 million due to headcount reductions and lower incentive compensation. Share based compensation expense increased primarily as a result of the impact of a change in our estimated forfeiture rate for share-based compensation awards in 2012, partially offset by a change in 2013. Our 2012 restructuring activities resulted in an increase in actual forfeitures and thus lower share based compensation expense compared with historical experience prior to such restructuring activities.

Production start-up

Production start-up expense consists primarily of salaries and personnel-related costs and the cost of operating a production line before it has been qualified for full production, including the cost of raw materials for solar modules run through the production line during the qualification phase. It also includes all expenses related to the selection of a new site, the related legal and regulatory costs, and the costs to maintain our plant replication program, 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 years ended December 31, 2014, 2013, and 2012:

	Years Ended			Change				
(Dollars in thousands)	2014	2013	2012	2014 over 2013		2013 over 2012		
Production start-up	$5,146	$2,768	$7,823	$2,378	86 %	$(5,055)	(65)	%
% of net sales	0.2 %	0.1 %	0.2 %					

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During 2014, 2013, and 2012 we incurred $5.1 million, $2.8 million, and $7.8 million, respectively, of production start-up expenses. In 2014, expenses primarily related to the start-up of our TetraSun operations. Expenses for 2013 and 2012 are primarily for global manufacturing personnel dedicated plant expansion, new equipment installation, equipment upgrades, and process improvements for both new and existing plants.

Restructuring and asset impairments

Restructuring and asset impairment expense includes those expenses incurred related to material restructuring initiatives and include severance and employee termination costs that are directly related to our restructuring initiatives, costs associated with contract terminations, and other restructuring related costs. These restructuring initiatives are intended to align the organization with current business conditions (including expected sustainable market opportunities) and to reduce costs.

The following table shows restructuring and asset impairments expense for the years ended December 31, 2014, 2013, and 2012:

	Years Ended			Change			
(Dollars in thousands)	2014	2013	2012	2014 over 2013		2013 over 2012	
Restructuring and asset impairments	$—	$86,896	$469,101	$(86,896)	(100)%	$(382,205)	(81)%
% of net sales	— %	2.6 %	13.9 %				

During 2013 and 2012 our restructuring and asset impairment charges included $5.2 million and $469.1 million, respectively, related to restructuring initiatives announced in 2012 for charges associated with the closure of our German manufacturing plants and our decision not to move forward with our previously planned four-line manufacturing plant in Vietnam. Additionally, during 2013 we recorded asset impairment expense of $56.5 million related to the agreement to sell our Mesa, Arizona facility and an additional $25.2 million impairment charge to adjust the carrying value of our plant in Vietnam. The effect of these asset impairments reduced the book value of both our Mesa, Arizona facility and Vietnam plant to fair value, less costs to sell. See Note 4 “Restructuring and Asset Impairments,” to our consolidated financial statements for the year ended December 31, 2014 included in this Annual Report on Form 10-K 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 for the years ended December 31, 2014, 2013, and 2012:

	Years Ended			Change			
(Dollars in thousands)	2014	2013	2012	2014 over 2013		2013 over 2012	
Foreign currency loss, net	$(3,017)	$(259)	$(2,122)	$(2,758)	1,065 %	$1,863	(88)%

Foreign currency loss increased during 2014 compared with 2013, and decreased during 2013 compared with 2012, primarily due to differences between our economic hedge positions and the underlying exposure along with changes in the associated exchange rates.

Interest income

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

The following table shows interest income for the years ended December 31, 2014, 2013, and 2012:

	Years Ended			Change					
(Dollars in thousands)	2014	2013	2012	2014 over 2013			2013 over 2012		
Interest income	$18,030	$16,752	$12,824	$1,278	8	%	$3,928	31	%

Interest income in 2014 was consistent with interest income in 2013.

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Interest income increased by $3.9 million during 2013 compared with 2012 primarily due to interest earned on notes receivable from affiliates of $1.4 million combined with increased interest earned on higher average balances of our cash, cash equivalents, marketable securities, and other notes receivable.

Interest expense, net

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

The following table shows interest expense, net for the years ended December 31, 2014, 2013, and 2012:

	Years Ended			Change			
(Dollars in thousands)	2014	2013	2012	2014 over 2013		2013 over 2012	
Interest expense, net	$(1,982)	$(1,884)	$(13,888)	$(98)	5%	$12,004	(86)%

Interest expense, net of amounts capitalized in 2014 was consistent with interest expense, net of amounts capitalized in 2013.

Interest expense, net of amounts capitalized, decreased during 2013 compared with 2012 primarily as a result of $4.7 million in expense during 2012 associated with the repayment of a German credit facility agreement. The remaining decrease in interest expense, net is primarily related to lower average outstanding debt balances between the periods, partially offset by a decrease in capitalized interest during the period.

Other (expense) income, net

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

The following table shows other (expense) income, net for the years ended December 31, 2014, 2013, and 2012:

	Years Ended			Change			
(Dollars in thousands)	2014	2013	2012	2014 over 2013		2013 over 2012	
Other (expense) income, net	$(5,203)	$(4,758)	$945	$(445)	9%	$(5,703)	(603)%

Other (expense) income, net in 2014 was consistent with other (expense) income, net in 2013.

Other (expense) income, net increased during 2013 compared with 2012 as a result of a $4.5 million gain on the settlement of long-term debt recognized during 2012. In addition, our financing fees, including letter of credit and commitment fees based on the average daily unused commitments under our Revolving Credit Facility, increased by $0.4 million year over year.

Income (loss) before taxes and equity in earnings of unconsolidated affiliates

The following table shows income (loss) before income taxes and equity in earnings of unconsolidated affiliates for the years ended December 31, 2014, 2013, and 2012:

	Years Ended			Change			
(Dollars in thousands)	2014	2013	2012	2014 over 2013		2013 over 2012	
Components	$(107,088)	$(222,382)	(687,767)	$115,294	(52)%	$465,385	(68)%
Systems	539,079	600,762	647,963	(61,683)	(10)%	(47,201)	(7)%

Total	$431,991	$378,380	$(39,804)	$53,611	14	%	$418,184	(1,051)%

Components segment loss before income taxes and equity in earnings of unconsolidated affiliates decreased by $115.3 million during 2014 compared with 2013 primarily as a result of lower restructuring and asset impairment charges related to the sale of our facility in Mesa, Arizona and a decrease in selling, general and administrative expense mainly driven by less depreciation and amortization expense for certain leasehold improvements and our Mesa facility. These reductions were partially offset by an adjustment for lower estimated recycling costs recorded during 2013.

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Systems segment income before income taxes and equity in earnings of unconsolidated affiliates decreased by $61.7 million during 2014 compared with 2013 due to a mix of lower gross profit projects sold and under construction in 2014 and higher selling, general and administrative expense attributable to increased headcount and higher development and consulting expenses from expanding into new markets. These items were partially offset by favorable changes in estimated costs on systems projects accounted for under the percentage-of-completion method.

Components segment loss before income taxes and equity in earnings of unconsolidated affiliates decreased by $465.4 million, during 2013 compared with 2012 primarily due to higher net sales related to an increase in the volume of modules sold and lower restructuring expenses partially offset by higher asset impairment expenses. In addition, our components segment cost of sales decreased 4% during 2013 compared with 2012, primarily due to (i) a decrease in module collection and recycling liability; (ii) a decrease in costs associated with voluntary remediation efforts for our 2008-2009 manufacturing excursion; (iii) lower accelerated depreciation expense for certain manufacturing equipment that was replaced as part of our planned equipment upgrade programs; (iv) lower inventory write-down expense primarily as a result of favorable fluctuations in inventory market pricing; and (v) a decrease in costs associated with voluntary remediation efforts for workmanship issues affecting a limited number of solar modules manufactured between October 2008 and June 2009. These decreases were partially offset by higher cost of sales associated with growth in the volume of solar modules sold and underutilization charges.

Systems segment loss before income taxes and equity in earnings of unconsolidated affiliates decreased $47.2 million during 2013 compared with 2012 primarily due to the difference in project gross profit mix for which revenue was recognized during 2013 compared with 2012.

Income tax expense

Income taxes are imposed on our taxable income by taxing authorities in the various jurisdictions in which we operate, principally the United States, Germany, and Malaysia. The statutory federal corporate income tax rate in the United States is 35.0%, while the tax rates in Germany and Malaysia are approximately 30.2% 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 income tax expense for the years ended December 31, 2014, 2013, and 2012:

	Years Ended			Change	
(Dollars in thousands)	2014	2013	2012	2014 over 2013	2013 over 2012
Income tax expense	$(30,124)	$(25,179)	$(56,534)	$(4,945) 20%	$31,355 (55)%
Effective tax rate	7.0%	6.7%	(142.0)%		

Income tax expense increased by $4.9 million during 2014 compared with 2013. The increase in income tax expense was primarily attributable to an increase in pretax book income earned in higher tax jurisdictions in 2014, partially offset by a discrete tax benefit of $26.2 million due to the expiration of the statute of limitations for various uncertain tax positions. See Note 20 “Income Taxes,” to our consolidated financial statements for the year ended December 31, 2014 included in this Annual Report on Form 10-K for additional information.

Income tax expense decreased by $31.4 million during 2013 compared with 2012, primarily due to a reduction in valuation allowance recorded year over year, offset by an increase in pre-tax book income. See Note 20 “Income Taxes,” to our consolidated financial statements for the year ended December 31, 2014 included in this Annual Report on Form 10-K for additional information.

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 and 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 years ended December 31, 2014, 2013, and 2012:

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	Years Ended			Change				
(Dollars in thousands)	2014	2013	2012	2014 over 2013		2013 over 2012		
Equity in earnings of unconsolidated affiliates, net of tax	(4,949)	(163)	—	$(4,786)	2,936 %	$(163)	(100)%	

Losses from unconsolidated affiliates increased during 2014 compared to 2013 primarily due to the impairment of certain of our equity method investments. Additionally, during the period, we increased strategic investments in certain third-parties to develop, construct, or operate solar power projects, and a small portion of the increase in 2014 related to our corresponding share of these entities' operating losses. These types of ventures are core to our business and long-term strategy related to providing solar solutions using our modules to sustainable geographic markets. Losses from unconsolidated affiliates in 2013 were consistent with 2012.

Liquidity and Capital Resources

As of December 31, 2014, 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 and capital expenditure needs for at least the next 12 months. We intend to continue to carefully manage credit and market risk.

Cash generated from operations, including the contracted portion of our advanced-stage project pipeline, is our primary source of operating liquidity, and we believe that internally generated cash flows combined with our existing cash and cash equivalents, marketable securities, and availability under our Revolving Credit Facility considering minimum liquidity covenant requirements, are sufficient to support day-to-day business operations. We monitor our working capital to ensure we have adequate liquidity, both domestically and internationally.

In June 2013, we sold 9.7 million shares of common stock for proceeds of $428.2 million, net of issuance costs. In July 2013, we entered into an amendment to our Revolving Credit Facility, which extended $450.0 million in availability through July 2018. Additionally, we have an active shelf registration statement filed with the SEC for issuance of debt or equity securities if needed.

We intend to maintain appropriate debt levels based upon cash flow expectations, the overall cost of capital and expected cash requirements for operations, capital expenditures, and discretionary strategic spending. In the future, we may also engage in one or more debt or equity financings, potentially including project specific non-recourse 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 December 31, 2014, we had $2.0 billion in cash, cash equivalents, and marketable securities compared with $1.8 billion as of December 31, 2013. Cash, cash equivalents, and marketable securities as of December 31, 2014 increased primarily as the result of cash generated from operating activities, partially offset by the repayment of long-term debt and project acquisitions. As of December 31, 2014 and 2013, $1.4 billion and $1.2 billion, respectively, of our cash, cash equivalents, and marketable securities were held by foreign subsidiaries and are 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.

Our expanding systems business requires 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 PV solar power systems as of December 31, 2014 was $583.8 million. Solar power project development and construction cycles, which span the time between the identification of a site location to the commercial operation of a PV solar power system, vary substantially and can take many years to mature. As a result of these long project cycles, we may need to make significant up-front investments of resources in advance of the receipt of any cash from the sale of such PV solar power systems. These amounts include payment of interconnection and other deposits (some of which are non-refundable), posting of letters of credit, and incurring engineering, permitting, legal, and other expenses. Additionally, we may choose to use, and from time to time have used, our working capital, the availability under our Revolving Credit Facility, or enter into non-recourse or limited recourse project financing to finance the construction of our systems projects, if such projects cannot be sold before construction begins. Depending upon the size and number of projects that we are developing and self-financing the construction of, the systems business has and is

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expected in the future to require significant liquidity. For example, we may have to 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 which we are self-financing may also impact our liquidity. We have historically financed these up-front investments for project development and when necessary, construction, primarily using working capital.

We are partnering with local developers on project development in new 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 are exploring local financing alternatives. Should these financing alternatives be unavailable or too cost prohibitive, our liquidity and exposure to significant currency risk could be adversely impacted.

Additionally, our evolving flexible business model allows us to retain ownership of certain of our systems projects for a period of time after they become operational up to the useful life of the PV solar power system 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 own and operate such systems project, generally until such time that we can sell a project on economically attractive terms. As with traditional electricity generating assets, the selling price of a solar power plant could be higher post-completion to reflect the elimination of construction and performance risk and other uncertainties. The decision to own and operate a PV solar power system impacts liquidity depending upon the size and cost of the project. We may elect to enter into temporary or long-term non-recourse project financing to reduce the impact on our liquidity and working capital. We are considering entering into YieldCo or similar arrangements with respect to ownership interests in certain of our projects, which could cause the economics of such arrangements to be recognized over the project's life, such as the potential joint venture YieldCo transaction described under "Management's Discussion and Analysis of Financial Condition and Results of Operations – Certain Trends and Uncertainties – YieldCo." We define YieldCo as an entity that owns cash-generating infrastructure assets including solar power plants and, similar to REITs or MLPs, spins out ownership to the public markets.

The following considerations have impacted or are expected to impact our liquidity in 2015 and beyond:

- The amount of accounts receivable, unbilled and retainage as of December 31, 2014 was $77.0 million. Included in accounts receivable, unbilled and retainage as of December 31, 2014 was $41.9 million of accounts receivable, unbilled. Accounts receivable, unbilled represents 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 twelve 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. Included in accounts receivable, unbilled and retainage as of December 31, 2014, was $35.1 million of current accounts receivable, retainage. Accounts receivable, retainage 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.

- The amount of finished goods inventory ("solar module inventory") and BoS parts as of December 31, 2014 was $567.5 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 the normal construction cycle, we typically must manufacture modules or acquire the necessary BoS parts for construction activities in advance of receiving payment for such materials. Once solar modules and BoS parts are installed in a project, such installed amounts are classified as either project assets, deferred project costs, 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. Accordingly, as of any balance sheet date, our solar module inventory represents solar modules that will be installed in our advanced-stage project pipeline or that we expect to sell to third parties.

There may be a delay in when our solar module inventory and BoS parts can be converted into cash compared to a typical third-party module sale. Such timing differences temporarily reduce our liquidity to the extent that we have already paid for our BoS parts or the underlying costs to produce our solar module inventory. As previously announced, we have adjusted, and will in the future adjust, as necessary, our manufacturing capacity and planned solar module production levels, to match expected market demand. Any decrease in planned production reduces our risk and the impact on liquidity of having excess solar module inventories that we must sell to third parties while responding to market pricing uncertainties for solar modules. Our solar module inventory as of December 31, 2014 is expected to primarily support our systems business, including our advanced-stage project pipeline, with the remaining amounts being used to support expected near

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term demand for third-party module sales. As of December 31, 2014, approximately $191 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.

- We expect to commit working capital during 2015 and beyond to acquire solar power projects in various stages of development including advanced-stage projects with PPAs and 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 business arrangements with strategic partners are a key part of our strategy. We have begun initiatives in several markets to expedite our penetration of those markets and establish relationships with potential strategic partners, customers, and policymakers. Many of these business arrangements are expected to involve a significant cash investment or other allocation of working 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 minority or non-controlling ownership interest in the 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 2015, we expect to spend between $225 million to $275 million for capital expenditures, including expenditures for upgrades to existing machinery and equipment, which we believe will increase our solar module efficiencies. A majority of our capital expenditures for 2015 are expected to be in foreign currencies and are therefore subject to fluctuations in currency exchange rates.

- 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 power 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 a 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.

The unprecedented disruption in the credit markets that began in 2008 had a significant adverse impact on a number of financial institutions. Global sovereign debt problems and its impact on the balance sheets and lending practices of global banks in particular could negatively impact our access to, and cost of, capital, and therefore could have an adverse effect on our business, results of operations, financial condition and competitive position. It could also similarly affect our customers and therefore limit the demand for our systems projects or solar modules. As of December 31, 2014, our liquidity and marketable securities and restricted investments have not been materially adversely impacted by the current credit environment, and we believe that they will not be materially adversely impacted in the near future. We will continue to closely monitor our liquidity and the credit markets. However, we cannot predict with any certainty the impact to us of any further disruption in the current credit environment.

Cash Flows

The following table summarizes the key cash flow metrics for the years ended December 31, 2014, 2013, and 2012 (in thousands):

	Years Ended		
	2014	2013	2012

Net cash provided by operating activities	$680,989	$856,126	$762,209
Net cash used in investing activities	(511,879)	(537,106)	(383,732)
Net cash provided by (used in) financing activities	7,359	101,164	(89,109)
Effect of exchange rate changes on cash and cash equivalents	(19,487)	3,594	6,307
Net increase in cash and cash equivalents	$156,982	$423,778	$295,675

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Operating Activities

Cash provided by operating activities was $681.0 million during 2014, $856.1 million during 2013, and $762.2 million during 2012. The decrease in operating cash flows during 2014 was primarily due to lower cash received from customers in 2014, as compared to 2013. In addition, during 2014 our operating cash flows were unfavorably impacted by higher income taxes paid of $17.0 million, compared to income taxes refunds, net of taxes paid of $1.6 million in 2013 and $21.5 million in 2012. The excess tax benefit related to share based compensation arrangements was $31.2 million for 2014, as compared to $35.1 million for 2013 and $27.4 million for 2012. The remaining decrease in cash provided by operating activities was the result of net differences in interest received, interest paid, and other operating activities in 2014 compared to 2013 and 2012. Changes in net assets and liabilities decreased our cash flow from operations by $9.2 million in 2014 versus an increase to our cash flow from operations of $186.5 million in 2013. The decrease in net assets and liabilities during 2014 of $195.7 million primarily resulted from the following:

(i) Our accounts receivable trade, unbilled and retainage, exclusive of the change in allowance for doubtful accounts and net of effects from business combinations, decreased $453.8 million during 2014 and $565.0 million during 2013. Fluctuations in our accounts receivable are primarily due to the number and size of utility-scale projects under construction, timing of billings and collections as well as timing of revenue recognition. We bill our customers once the billing criteria under a construction contract are met, generally around completion of certain project construction milestones. Decreases in our accounts receivable were driven primarily by cash collections on various large projects as well as cash collections related to module-only sales to third-party customers.

(ii) Our project assets and deferred project costs, net of effects from business combinations, decreased our cash flow from operations by $141.9 million during 2014 as compared to a $316.0 million increase during 2013. The development and construction of solar power plants require long periods of time and substantial initial investments, including costs associated with transmission deposits, land acquisition, permitting, legal and other costs and the actual costs of constructing a project. The decrease in our project assets and deferred project costs during 2014 was driven by a decrease in project assets primarily from our SolarGen 2, Macho Springs and Maryland projects, partially offset by increases in project assets from the continued development and construction of our Moapa, Lost Hills, Barilla, Luz del Norte and Stateline projects. Additionally, deferred project costs decreased primarily due to the sale of our Campo Verde project and the revenue recognition from our Desert Sunlight project.

(iii) Our accrued expenses and other liabilities, excluding the effects of business combinations, decreased $452.4 million during 2014 and $138.9 million during 2013 as compared to a $506.3 million increase in 2012. Accrued expenses and other liabilities include billings in excess of costs and estimated earnings, which represents billings made or payments received in excess of revenue recognized on contracts accounted for under the percentage-of-completion method. Typically, billings are made on the completion of certain milestones as provided for in the sales arrangement, and the timing of revenue recognition may be different from when we can bill the customer. Accrued expenses and other liabilities also includes payments and billings for deferred project costs, which represents customer payments received or customer billings made under the terms of solar power project related sales arrangements for which all revenue recognition criteria for real estate transactions have not yet been met. The decrease in our accrued expenses and other liabilities during 2014 as compared to 2013 was primarily attributed to attaining revenue recognition under the full accrual method associated with our Campo Verde project, the sale of 51% of our Solar Gen 2 project and revenue recognition of our Desert Sunlight project, partially offset by billings for our Silver State South project in excess of revenue recognized.

Investing Activities

Cash used in investing activities was $511.9 million during 2014, compared with $537.1 million during 2013 and $383.7 million during 2012. Cash used in investing activities during 2014 included capital expenditures of $257.5 million, compared to $282.6 million and $379.2 million in 2013 and 2012, respectively. The decrease can generally be attributed to increased focus on capital spending management and the impact of timing differences associated with cash payments for property, plant and equipment. Cash proceeds from the sale of property, plant, and equipment were $1.5 million during 2014, $116.4 million during 2013, primarily as a result of the Mesa sales agreement, and $5.1 million during 2012. During 2014 we provided net additional funding to affiliates of $23.2 million. During 2014 and 2013, we increased our net investments in marketable securities by $77.5 million and $341.0 million, respectively, compared to a decrease of our net investments totaling $79.5 million during 2012. We had an outflow for restricted cash of $124.1 million during 2014 compared to inflows of $5.2 million and $16.2 million in 2013 and 2012, respectively. During 2014, 2013 and 2012, we made cash investments in unconsolidated entities of $25.0 million, $17.9 million, and $5.0 million, respectively. Acquisitions, net of cash acquired, resulted in payments of $4.3 million in 2014, compared to $30.7 million in 2013 and $2.4 million in 2012. Payment for acquisitions in 2014 related primarily to our acquisition of Skytron, a European-based O&M company. Payments for acquisitions in 2013 related primarily to acquisitions of Solar Chile S.A., a Chilean-based

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solar project development company, and TetraSun, Inc., a development stage company with high efficiency crystalline silicon technology. During 2012, we made a second payment of $2.4 million under the terms of the acquisition agreement related to our acquisition of Ray Tracker, Inc. ("Ray Tracker"), a tracking technology and PV BoS company we acquired in 2011 in an all-cash transaction.

Financing Activities

Cash provided by financing activities was $7.4 million during 2014 and $101.2 million during 2013, and cash used in financing activities was $89.1 million during 2012. Cash provided by financing activities during 2014 resulted primarily from proceeds of $65.6 million from borrowings under long-term debt and excess tax benefit from share-based compensation arrangements of $31.2 million, partially offset by the repayment of long-term debt of $60.1 million and contingent consideration and other financing activities payments of $29.3 million.

Cash provided by financing activities during 2013 resulted primarily from the net cash proceeds from our June 2013 equity offering of $428.2 million, and excess tax benefit from share-based compensation arrangements of $35.1 million, partially offset by repayment of long-term debt and economic development funding of $73.3 million and net repayment of borrowings under our Revolving Credit Facility of $270.0 million.

Cash used in financing activities during 2012 resulted primarily from the repayment of long-term debt, which included our German Facility Agreement, for a total of $178.8 million and the repayment of economic development funding of $6.8 million, partially offset by net proceeds from our Revolving Credit Facility of $70.0 million and excess tax benefits from share-based compensation arrangements of $27.4 million.

Contractual Obligations

The following table presents our contractual obligations as of December 31, 2014 (in thousands), which consists of legal commitments requiring us to make fixed or determinable cash payments. We purchase raw materials for inventory or balance of systems parts, services, and manufacturing equipment from a variety of vendors. We also enter into contracts for the construction of solar power projects. During the normal course of business, in order to manage manufacturing and construction lead times and help assure adequate supply, we enter into agreements with suppliers that either allow us to procure goods and services when we choose or that establish purchase requirements each year or over the term of the agreement.

		Payments Due by Year			
Contractual Obligations	Total	Less Than 1 Year	1 - 3 Years	3 - 5 Years	More Than 5 Years
Long-term debt obligations	$223,954	$52,021	$82,315	$30,716	$58,902
Interest payments (1)	51,162	8,455	12,546	8,475	21,686
Capital lease obligations	1,855	563	1,054	238	—
Operating lease obligations	167,831	17,971	31,323	23,751	94,786
Purchase obligations (2)	406,410	296,174	65,057	13,088	32,091
Recycling obligations (3)	246,307	—	—	—	246,307
Contingent Consideration (4)	53,894	36,817	17,077	—	—
Other obligations (5)	46,907	7,989	15,982	6,912	16,024
Total	$1,198,320	$419,990	$225,354	$83,180	$469,796

(1) Includes estimated cash interest to be paid over the remaining terms of the underlying debt. Interest payments are based on fixed and floating rates in effect at December 31, 2014 and include the effect of interest rate and cross currency swap agreements.

(2) Purchase obligations are agreements to purchase goods or services that are non-cancellable, enforceable and legally binding on us and that specify all significant terms, including fixed or minimum quantities to be purchased, fixed minimum, or variable price provisions, and the approximate timing of transactions.

(3) We assume our collection and recycling obligations will be satisfied more than five years from December 31, 2014.

(4) In connection with project acquisitions we agreed to pay additional amounts to project sellers upon achievement of project related milestones such as obtaining permits, reaching certain construction stages and project completion. We recognize

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a contingent liability when we determine that such liability is both probable and reasonably estimable. See Note 16 "Commitments and Contingencies," to our consolidated financial statements for the year ended December 31, 2014 included in this Annual Report on Form 10-K for further information about our contingent consideration.

(5) Includes expected letter of credit fees and unused revolver fees.

In addition to the amounts shown in the table above, we have recorded $126.0 million of unrecognized tax benefits as liabilities in accordance with ASC 740, Income Taxes, and we are uncertain as to if or when such amounts may be settled.

Debt and Credit Sources

As of December 31, 2014, we had $224.0 million in outstanding long-term debt, excluding amounts related to capital leases and unamortized discount, and $202.5 million in outstanding letters of credit and bank guarantees. Our long-term debt consisted of the following at December 31, 2014 and December 31, 2013 (in thousands):

Type	December 31, 2014	December 31, 2013
Revolving Credit Facility	$ —	$ —
Project Construction Credit Facilities	75,418	—
Malaysian Ringgit Facility Agreement	88,606	117,630
Malaysian Euro Facility Agreement	34,112	49,699
Malaysian Facility Agreement	25,818	55,637
Capital lease obligations	1,558	2,041
	225,512	225,007
Less unamortized discount	(8,591)	(1,684)
Total long-term debt	216,921	223,323
Less current portion	(51,918)	(60,543)
Noncurrent portion	$ 165,003	$ 162,780

At December 31, 2014, future principal payments on our long-term debt, excluding amounts related to capital leases and unamortized discounts were due as follows (in thousands):

2015	$52,021
2016	37,565
2017	44,750
2018	28,691
2019	2,025
Thereafter	58,902
Total long-term debt future principal payments	$223,954

Revolving Credit Facility

Our credit agreement with several financial institutions as lenders, JP Morgan Securities LLC and Bank of America Securities LLC as joint-lead arrangers and bookrunners and JP Morgan Chase Bank, N.A. as administrative agent ("Revolving Credit Facility") provides us with a senior secured credit facility with an aggregate available amount of $600.0 million, with the right to request an increase up to $750.0 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 by us. These margins are subject to adjustments depending on our consolidated leverage ratio. As of December 31, 2014 and 2013, we had no borrowings under our Revolving Credit Facility, respectively. We had

$202.5 million and $158.6 million of letters of credit using availability under our Revolving Credit Facility, leaving $397.5 million and $441.4 million of availability at December 31, 2014 and 2013, respectively. We believe that when necessary, we will have adequate access to capital markets, but there may be circumstances in the future related to macroeconomic conditions or factors specific to us that could limit, or increase the cost of, capital from such markets.

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In addition to paying interest on outstanding principal under the Revolving Credit Facility, we are required to pay a commitment fee, currently at the 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 equal to the applicable margin for Eurocurrency revolving loans on the face amount of each letter of credit and a fronting fee of 0.125%.

On July 15, 2013, we entered into the fourth amendment to the amended and restated revolving credit facility (the "Amendment"). The Amendment provided for, among other things, the division of the Revolving Credit Facility into Tranche A commitments in an aggregate amount equal to $450.0 million and Tranche B commitments in an aggregate amount equal to $150.0 million and the extension of the maturity date of the Tranche A loans until July 15, 2018. The maturity date of the Tranche B loans and commitment is October 15, 2015 and is unchanged. The Amendment also contained certain covenant changes.

In connection with the Amendment, we entered into an Amended and Restated Guarantee and Collateral Agreement. Loans and letters of credit issued under the Revolving Credit Facility are jointly and severally, unconditionally and irrevocably guaranteed by First Solar Inc., First Solar Electric, LLC, First Solar Electric (California), Inc. and First Solar Development, LLC and are secured by security interests in substantially all of the grantors' tangible and intangible assets other than certain excluded assets.

The Revolving Credit Facility contains financial covenants including: a leverage ratio covenant, a minimum EBITDA covenant, and a minimum liquidity covenant. We are also subject to customary non-financial covenants. We were in compliance with these covenants as of December 31, 2014, and expect to remain in compliance with these covenants for at least the next twelve months.

See Note 15 "Debt," to our consolidated financial statements for the year ended December 31, 2014 included in this Annual Report on Form 10-K for further information about our long-term debt facilities.

Off-Balance Sheet Arrangements

We have no off-balance sheet debt or similar obligations, other than financial assurance instruments and operating leases, that are not classified as debt. We do not guarantee any third-party debt. See Note 15 "Commitments and Contingencies," to our consolidated financial statements for the year ended December 31, 2014 included in this Annual Report on Form 10-K for further information about our financial assurance instruments.

Recent Accounting Pronouncements

See Note 3 "Recent Accounting Pronouncements," to our consolidated financial statements for the year ended December 31, 2014 included in this Annual Report on Form 10-K for a summary of recent accounting pronouncements.

Critical Accounting Estimates

In preparing our financial statements in conformity with generally accepted accounting principles in the United States ("GAAP"), we make estimates and assumptions about future events that affect the amounts of reported assets, liabilities, revenues, and expenses, as well as the disclosure of contingent liabilities in our financial statements and the related notes thereto. Some of our accounting policies require the application of significant judgment by management 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. Our significant accounting policies are described in Note 2 "Summary of

Significant Accounting Policies," to our consolidated financial statements for the year ended December 31, 2014 included in this Annual Report on Form 10-K.

Our critical accounting estimates, which require the most significant management estimates and judgment in determining amounts reported in our consolidated financial statements included in this Annual Report on Form 10-K, are as follows:

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 ASC 605, Accounting for Long-term Construction Contracts or, for arrangements which include land or land rights, ASC 360, Accounting for Sales of Real Estate.

For systems business sales arrangements that do not include land or land rights and thus are accounted for under ASC 605, we use the percentage-of-completion method, as described further below, using actual costs incurred over total estimated costs to develop and construct a project (including module costs) as our standard accounting policy, unless we cannot make reasonably dependable estimates of the costs to complete the contract, in which case we would use the completed contract method.

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For systems business sales arrangements that are accounted for under ASC 360 where we convey control of land or land rights, we record the sale as revenue using one of the following revenue recognition methods, based upon evaluation of the substance and form of the terms and conditions of such real estate sales arrangements:

(i) We apply the percentage-of-completion method, as further described below, to certain real estate sales arrangements where 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. The initial and continuing investment requirements, which demonstrate a buyer's commitment to honor their 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. 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. Prohibited forms of continuing involvement in a real estate sales arrangement may include us retaining risks or rewards associated with the project that are not customary with the range of risks or rewards that an engineering, procurement, and construction ("EPC") contractor may assume.

(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.

(iii) We may also record revenue for certain sales arrangements after construction of discrete portions of a project or after the entire project is substantially complete, we have transferred the usual risks and rewards of ownership to the buyer, and we have received substantially all payments due from the buyer or the initial and continuing investment criteria have been met.

For any systems business sales arrangements containing multiple deliverables (including our solar modules) not required to be accounted for under ASC 360 (real estate) or ASC 605 (long-term construction contracts), we analyze each activity within the sales arrangement to ensure that we adhere to the separation guidelines of ASC 605 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 estimated costs to complete (including module costs) in order to estimate the progress towards completion to determine the amount of revenue and profit to recognize. Incurred costs include all installed direct materials, installed solar modules, labor, subcontractor costs, and those indirect costs related to contract performance, such as indirect labor, supplies, and tools. We recognize direct material and solar module costs as incurred costs when the direct materials and solar modules have been installed in the project. When contracts specify that title to direct materials and solar modules 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 direct materials and solar modules to be installed when they are permanently placed or affixed to the solar power system as required by engineering designs. Solar modules manufactured by us that will be used in our solar power systems, which we still hold title to, remain within inventory until such modules are installed in a solar power system.

The percentage-of-completion method of revenue recognition requires us to make estimates of contract revenues and costs to complete our projects. In making such estimates, management judgments are required to evaluate significant

assumptions including the cost of materials and labor, expected labor productivity, the impact of potential variances in schedule completion, the amount of net contract revenues, and the impact of any penalties, claims, change orders, or performance incentives.

If estimated total costs on any contract are greater than the 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 contract revenues and costs to complete contracts, including penalties, incentive awards, claims, change orders, anticipated losses, and others are recorded in the period in which the revisions to estimates are identified and the loss 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.

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Accrued Solar Module Collection and Recycling Liability. At the time of sale, we recognize an expense for the estimated cost of our future obligation for collecting and recycling solar modules sold that are covered by our pre-funded 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 the solar modules for transport, 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 this estimate on (i) our experience collecting and recycling our solar modules and on our expectations about future developments in recycling technologies and processes, (ii) economic conditions at the time the solar modules will be collected and recycled, and (iii) the expected timing of when our solar modules will be returned for recycling. In the periods between the time of our sales and the settlement of our collection and recycling obligations, we accrete the carrying amount of the associated liability by applying the discount rate used for its initial measurement.

During the year ended December 31, 2014, we did not make any significant changes to our recycling technology roadmap cost estimates or inflation assumptions based on our annual cost study. As part of this study, we obtained a high volume of operational cost data that confirmed our currently estimated future collection and recycling costs remained appropriate. We will continue to evaluate our estimates as technology and cost assumptions change in the future. At December 31, 2014, our estimated liability for collecting and recycling solar modules covered by our collection and recycling program was $246.3 million. A 1% increase in the annualized inflation rate used in our estimated future collection and recycling cost per module would increase our liability by $60.6 million, and a 1% decrease in that inflation rate would decrease our liability by $49.8 million.

Product Warranties and Accrued Expense in Excess of Product Warranties. We provide a limited warranty against defects in materials and workmanship under normal use and service conditions for 10 years following delivery to the owners of our solar modules. We also typically warrant to the owners of our solar modules that modules installed in accordance with agreed-upon specifications will produce at least 90% of their labeled power output rating during the first 10 years following their installation and at least 80% of their labeled power output rating during the following 15 years. In resolving claims under both the defects and power output warranties, we have the option of either repairing or replacing the covered solar modules or, under the power output warranty, providing additional solar modules to remedy the power shortfall. We also have the option to make a payment for the then current market price of solar modules to resolve claims. Our warranties are automatically transferred from the original purchasers of our solar modules to subsequent purchasers upon resale. In 2013, we announced to our customers the availability of a new linear power output warranty for modules shipping beginning in the second quarter of 2014.

As an alternative to our module power output warranty, we have offered a system level module performance warranty for a limited number of our recent system sales. This system level module performance warranty is designed for utility scale systems and provides 25-year plant-level energy degradation protection. The system level module performance warranty is typically calculated as a percentage of a system’s expected energy production, adjusted for certain actual site conditions including weather, with the warranted level of performance declining each year in a linear fashion, but never falling below 80% during the term of the warranty. In resolving claims under the system level module performance warranty to restore the system to warranted performance levels, we first must validate that the root cause is due to module performance. For qualifying claims, we typically have the option to repair or replace modules, provide supplemental modules, or make a cash payment. Consistent with our module power output warranty, when we elect to satisfy a valid warranty claim by providing replacement or supplemental modules under the system level module performance warranty, we do not have any obligation to pay for the labor to remove or install modules.

In addition to our solar module warranty described above, for solar power plants built by our systems business, we typically provide a limited warranty on the balance of the system against defects in engineering design, installation, and workmanship for a period of one to two years following the substantial completion of a phase or the entire solar

power plant. In resolving claims under the engineering design, installation, and workmanship warranties, we have the option of remedying the defect through repair or replacement.

When we recognize revenue for module or systems project sales, we accrue a liability for the estimated future costs of meeting our limited warranty obligations. 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 BoS components, and our estimated per-module replacement cost. Such estimates have changed, and may in the future change, based primarily upon historical experience including additional information received from the evaluation of warranty claims and the complete processing of such claims.

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We also make an estimate for the costs of any voluntary remediation programs including our 2008-2009 manufacturing excursion. Our estimate for remediation costs for our 2008-2009 manufacturing excursion is based on evaluation and consideration of currently available information including the estimated number of affected modules in the field, historical experience related to our remediation efforts, customer-provided data related to potentially affected systems, the estimated costs of performing any remediation services, and the post-sale expenses covered under our remediation program. From time to time we have taken remediation actions in respect of affected modules beyond our limited warranty, and we may elect to do so in the future. In such cases, we would incur additional expenses that are beyond our limited warranty. If we commit to any such remediation actions beyond our limited warranty, developing our estimates for such remediation actions may require significant management judgment.

At December 31, 2014, our accrued liabilities for product warranties and accrued expense in excess of product warranties were $223.1 million and $30.9 million, respectively. We have historically estimated our product warranty liability for power output and defects in materials and workmanship under normal use and service conditions to have an estimated warranty return rate of approximately 3% of modules covered under warranty. A 1% change in the estimated warranty return rate would change our estimated product warranty liability by approximately $60 million.

Accounting for Income Taxes. We are subject to the income tax laws of the United States, and its states and municipalities and those of the foreign jurisdictions in which we have significant business operations. These tax laws are complex and subject to different interpretations by the taxpayer and the relevant governmental taxing authorities. We must make judgments and interpretations about the application of these inherently complex tax laws when determining our provision for income taxes and must also make estimates about when in the future certain items affect taxable income in the various tax jurisdictions. Disputes over interpretations of the tax laws may be settled with the taxing authority upon examination or audit. We regularly assess the likelihood of assessments in each of the taxing jurisdictions resulting from current and subsequent years' examinations, and we record tax liabilities as appropriate.

We establish liabilities for potential additional taxes that may arise out of tax audits. Once established, we adjust the liabilities when additional information becomes available or when an event occurs requiring an adjustment. Significant judgment is required in making these estimates and the actual cost of a legal claim, tax assessment, regulatory fine, or penalty may ultimately be materially different from our recorded liabilities, if any.

In preparing our consolidated financial statements, we calculate our income tax expense based on our interpretation of the tax laws in the various jurisdictions where we conduct business. This requires us to estimate our current tax obligations and the realizability of uncertain tax positions and to assess temporary differences between the financial statement carrying amounts and the tax basis of assets and liabilities. These temporary differences result in deferred tax assets and liabilities, the net current amount of which we show as a component of current assets or current liabilities and the net noncurrent amount of which we show as other assets or other liabilities on our consolidated balance sheets.

We must also assess the likelihood that each of our deferred tax assets will be realized. To the extent we believe that realization of any of our deferred tax assets is not more likely than not, we establish a valuation allowance. When we establish a valuation allowance or increase this allowance in a reporting period, we generally record a corresponding tax expense in our consolidated statement of operations. Conversely, to the extent circumstances indicate that a valuation allowance is no longer necessary, that portion of the valuation allowance is reversed, which generally reduces our overall income tax expense.

We also consider the earnings of our foreign subsidiaries and determine whether such amounts are indefinitely reinvested outside the United States. We have concluded that, except for the earnings of our Canadian subsidiary and with respect to previously taxed income, all such accumulated earnings are currently indefinitely reinvested. Accordingly, no additional taxes have been accrued that might be incurred if such amounts were repatriated to the

United States. If our intention to indefinitely reinvest the earnings of our foreign subsidiaries changes, additional taxes may be required to be accrued. See Note 20 “Income Taxes,” to our consolidated financial statements for the year ended December 31, 2014 included in this Annual Report on Form 10-K for additional information.

We continually explore initiatives to better align our tax and legal entity structure with the footprint of our non-U.S. operations and recognize the tax impact of these initiatives, including changes in the assessment of uncertain tax positions, indefinite reinvestment exception assertions, and the realizability of deferred tax assets, in the period when management believes all necessary internal and external approvals associated with such initiatives have been obtained, or when the initiatives are materially complete. It is possible that the completion of one or more of these initiatives may occur within the next 12 months.

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Long-Lived Asset Impairment. We are required to assess the recoverability of the carrying value of long-lived assets including “Property, plant and equipment,” “Project assets,” and “PV solar power systems” when an indicator of impairment has been identified. We review our long-lived assets each reporting period to assess whether impairment indicators are present. We must exercise judgment in assessing whether an event indicating potential impairment has occurred.

For purposes of recognition and measurement of an impairment loss, a long-lived asset is grouped with other assets and liabilities at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities. We must exercise judgment in assessing the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities.

For long-lived assets, when impairment indicators are present, we compare undiscounted future cash flows, including the eventual disposition of the asset group at market value, to the asset group’s carrying value to determine if the asset group is recoverable. This assessment requires the exercise of judgment in assessing the future use of and projected value to be derived from the assets to be held and used. Assessments also consider changes in asset group utilization, including the temporary idling of capacity and the expected timing of placing this capacity back into production.

For an asset group that fails the test of recoverability described above, the estimated fair value of long-lived assets may be determined using an “income approach,” “market approach,” “cost approach,” or a combination of one or more of these approaches as appropriate for the particular asset group being reviewed. All of these approaches start with the forecast of expected future net cash flows including the eventual disposition at market value of long-lived assets. We also utilize third-party valuations and information available regarding the current market for similar assets. If there is an impairment, a loss is recorded to reflect the difference between the asset group’s fair value and carrying value prior to impairment. This may require judgment in estimating future cash flows, relevant discount rates, and residual values applied in the income approach used in estimating the current fair value of the impaired assets to be held and used.

Goodwill. 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 in the fourth quarter. We perform impairment tests between scheduled annual tests 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.

We may first make a qualitative assessment of whether it is more likely than not that a reporting unit’s fair value is less than its carrying value to determine whether it is necessary to perform the two-step goodwill impairment test. The qualitative impairment test considers various factors including macroeconomic conditions, industry and market conditions, cost factors, a sustained share price or market capitalization decrease, and any reporting unit specific events. If it is determined through the qualitative assessment that a reporting unit’s fair value is more likely than not greater than its carrying value, the two-step impairment test is not required. If the qualitative assessment indicates it is more likely than not that a reporting unit’s fair value is not greater than its carrying value, we must perform the two-step impairment test. We may also elect to proceed directly to the two-step impairment test without considering such qualitative factors.

The first step in a two-step impairment test is the comparison of the fair value of a reporting unit with its carrying amount, including goodwill. Our reporting units consist of our fully integrated systems business, cadmium telluride module manufacturing business, and our crystalline silicon module manufacturing business from our TetraSun acquisition in 2013. In accordance with the authoritative guidance over fair value measurements, we define the fair value of a reporting unit as the price that would be received to sell the unit as a whole in an orderly transaction between market participants at the measurement date. We primarily use the income approach methodology of valuation, which includes the discounted cash flow method, to estimate the fair values of our reporting units.

Significant management judgment is required when estimating the fair value of our reporting units including the forecasting of future operating results and the selection of discount and expected future growth rates that we use in discounting cash flows. If the estimated fair value of a reporting unit exceeds its carrying value, goodwill is not impaired and no further analysis is required.

If the carrying value of a reporting unit exceeds its estimated fair value in the first step, then we are required to perform the second step of the impairment test. In this step, we assign the fair value of the reporting unit calculated in step one to all of the assets and liabilities of the reporting unit, as if a market participant just acquired the reporting unit in a business combination. The excess of the fair value of the reporting unit determined in the first step of the impairment test over the total amount assigned to the assets and liabilities in the second step of the impairment test represents the implied fair value of goodwill. If the carrying value of a reporting unit's goodwill exceeds the implied fair value of goodwill, we would record an impairment loss equal to the difference. If there is no such excess, then all goodwill for a reporting unit is considered impaired.

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Item 7A: Quantitative and Qualitative Disclosures about Market Risk

Foreign Currency Exchange Risk

Our primary foreign currency exposures are cash flow exposure, transaction exposure, and earnings translation exposure.

Cash Flow Exposure: We expect our subsidiaries to have material future cash flows, including net sales and expenses, that will be denominated in currencies other than our subsidiaries' functional currencies. Our primary cash flow exposures are cash received from customers and cash paid to suppliers and associates. Changes in the exchange rates between our subsidiaries' functional currencies 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 and cross-currency swap contracts to hedge the value of a portion of these forecasted cash flows. These foreign exchange forward and cross-currency swap contracts qualified for, and were designated as, cash flow hedges. We initially report the effective portion of the derivative's gain or loss in "Accumulated other comprehensive income (loss)," and subsequently reclassify amounts into earnings when the underlying hedged transaction is settled.

Our operations in Malaysia pay a portion of their operating expenses, such as associate wages and utilities, in Malaysian ringgit, exposing us to foreign currency exchange risk for those Malaysian ringgit expenses. As we expand into new markets worldwide, particularly emerging markets, our total foreign currency exchange risk, in terms of both size and exchange rate volatility, and the number of foreign currencies we are exposed to could increase significantly.

For additional details on our derivative hedging instruments and activities, refer to Note 10 "Derivative Financial Instruments," to our consolidated financial statements for the year ended December 31, 2014 included in this Annual Report on Form 10-K.

Our international operations accounted for 10%, 14%, and 20% of our net sales during the years ended December 31, 2014, 2013, and 2012, respectively, of which 25%, 38%, and 18% of these international sales, respectively, were denominated in euros. As a result, we have exposure to foreign currency exchange risk with respect to our net sales. Fluctuations in exchange rates, particularly in the U.S. dollar to euro and U.S. dollar to Malaysian ringgit, affect our gross profit and could result in foreign exchange and operating losses. In the past, most of our exposure to foreign currency exchange risk has related to currency gains and losses between the time we sign and settle our sales contracts denominated in euros. For the years ended December 31, 2014, 2013, and 2012, a 10% change in the euro exchange rates would have impacted our net euro sales by $8.8 million, $18.3 million, and $11.6 million, respectively, excluding the effect of our hedging activities.

Transaction Exposure: Many components of our business have assets and liabilities (primarily receivables, investments, accounts payable, debt and accrued liabilities, and solar module collection and recycling liabilities) that are denominated in currencies other than the subsidiary's functional currency. Changes in the exchange rates between our subsidiaries' functional currencies and the other currencies in which these assets and liabilities are denominated can create fluctuations in our reported consolidated financial position, results of operations, and cash flows. We may enter into foreign exchange forward contracts or other derivative instruments to economically hedge assets and liabilities against the short-term effects of currency exchange rate fluctuations. The gains and losses on these derivative instruments will offset all or part of the transaction gains and losses that we recognize in earnings on the related foreign currency assets and liabilities. These contracts typically have maturities of less than three months.

For additional details on our economic hedging instruments and activities, refer to Note 10 “Derivative Financial Instruments,” to our consolidated financial statements for the year ended December 31, 2014 included in this Annual Report on Form 10-K.

If the U.S. dollar would have weakened by 10% against the Euro, British pound, Malaysian ringgit, Chinese yuan, and Chilean peso, the impact on our income before income taxes during the year ended December 31, 2014 would have been $0.9 million (favorable).

Earnings Translation Exposure: Fluctuations in foreign currency exchange rates create volatility in our reported results of operations because we are required to translate the financial statements of our subsidiaries that do not have a U.S. dollar functional currency. We may decide to purchase forward exchange contracts or other instruments to offset this impact from currency fluctuations. These contracts would be marked-to-market on a monthly basis and any unrealized gain or loss would be recorded in earnings. We do not hedge translation exposure at this time, but may do so in the future.

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In the past, currency exchange rate fluctuations have had an impact on our business and results of operations. For example, currency exchange rate fluctuations impacted our cash flows by $19.5 million (unfavorable), $3.6 million (favorable), and $6.3 million (favorable) in the years ended December 31, 2014, 2013, and 2012, respectively. Although we cannot predict the impact of future currency exchange rate fluctuations on our business or results of operations, we believe that we will continue to have risk associated with currency exchange rate fluctuations in the future. We will continue to evaluate actions we can take to use derivative instruments to help mitigate this risk.

Interest Rate Risk

Our primary interest rate risks relate to our outstanding variable rate debt, our solar power system sales prices from the effect of interest rates on our customer's financing of such solar power systems, and our investments in marketable securities and restricted investments.

Variable Rate Debt Exposure: We are exposed to interest rate risk because our Revolving Credit Facility, Malaysian Ringgit Facility Agreement, Malaysian Euro Facility Agreement, and the floating rate portion of our Malaysian Facility Agreement have variable interest rates, exposing us to variability in interest expense and cash flows. We use interest rate and cross-currency swap contracts to mitigate our exposure to interest rate fluctuations associated with a portion of our variable rate debt instruments. We have interest rate swap contracts in place to mitigate the interest rate risk for the floating rate portion of our Malaysian Facility Agreement. We also have a cross-currency swap contract in place to mitigate the interest rate risk of our Malaysian Ringgit Facility Agreement.

For additional details on our derivative hedging instruments and activities, refer to Note 10 "Derivative Financial Instruments," to our consolidated financial statements for the year ended December 31, 2014 included in this Annual Report on Form 10-K.

An increase in the Euro Interbank Offered Rate ("EURIBOR") would impact our cost of borrowing under our Malaysian Euro Facility Agreement and an increase in the prime rate and London Interbank Offered Rate ("LIBOR") would impact our cost of borrowing under our Revolving Credit Facility. If EURIBOR changes by 100 basis points, our interest cost for the year ended December 31, 2014 would have changed by $0.4 million.

Effect of Interest Rates on our Customer's Financing of Solar Power Systems: We are exposed to interest rate risk because many of our systems business customers depend on debt and equity financing to purchase a solar power system from us. Although the useful life of a solar power system is considered to be approximately 25 years, owners of our solar power systems must pay the entire cost of the solar power system by the time such system is completed. As a result, many of our customers rely on debt financing to fund their up-front capital expenditures. An increase in interest rates available to finance such purchases could make it difficult for our customers to secure the financing and underlying interest rate necessary to purchase a system. This could lower demand or the price we can charge for our solar power systems and reduce our net sales and gross profit. In addition, we believe that a significant percentage of our customers purchase solar power systems as an investment, funding the initial capital expenditure through a combination of equity and debt. An increase in interest rates could lower an investor's return on investment in a system or make alternative investments more attractive relative to solar power systems, which, in each case, could cause these end-users to seek alternative investments that promise higher returns.

Investments in Marketable Securities and Related Investment Exposure: We invest in various debt securities, which exposes us to interest rate risk. The primary objective of our investment activities is to preserve principal and provide liquidity, while at the same time maximizing the income we receive from our investments without significantly increasing risk. Some of the securities in which we invest may be subject to market risk. This means that a change in prevailing interest rates may cause the market value of the investment to fluctuate. For example, if we hold a security that was issued with an interest rate fixed at the then-prevailing rate and the prevailing interest rate later rises, the

market value of our investment may decline.

To provide a meaningful assessment of the interest rate risk associated with our investments in marketable securities and restricted investments, we performed a sensitivity analysis to determine the impact a change in interest rates would have on the value of the investments assuming a 100 basis point shift in interest rates. During 2014, our marketable securities earned a pre-tax yield of less than 1% and had a weighted average maturity of 10 months as of December 31, 2014. Based on our investment positions as of December 31, 2014, a hypothetical 100 basis point change in interest rates would result in a $3.7 million change in the market value of our investment portfolio. As of December 31, 2013, a similar 100 basis point change in interest rates would have resulted in a $3.8 million change in the market value of our investment portfolio. As of December 31, 2014, our marketable securities were comprised of foreign debt, time deposits, U.S. debt, and U.S. government obligations.

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During December 31, 2014, our restricted investments earned a pre-tax yield of 45% and had a weighted average maturity of approximately 20 years as of December 31, 2014. Based on our investment positions as of December 31, 2014, a hypothetical 100 basis point change in interest rates would result in a $74.4 million change in the market value of our restricted investment portfolio. As of December 31, 2013, a similar 100 basis point change in interest rates would have resulted in a $59.0 million change in the market value of our restricted investment portfolio. As of December 31, 2014, all of our restricted investments were in foreign and U.S. government obligations.

Commodity and Component Risk

We are exposed to price risks for the raw materials, components, and energy costs used in the manufacture and transportation of our solar modules and BoS parts used in solar power systems. Also, some of our raw materials and components are sourced from a limited number of suppliers or a single supplier. We endeavor to qualify multiple suppliers using a robust qualification process. In some cases, we also enter into long-term supply contracts for raw materials and components. As a result, we remain exposed to price changes in the raw materials and components used in our solar modules. In addition, a failure by a key supplier could disrupt our supply chain which could result in higher prices and/or a disruption in our manufacturing or construction processes. We may be unable to pass along changes in the cost of the raw materials and components for our products and systems to our customers, and may be in default of our delivery obligations if we experience a manufacturing or construction disruption.

Credit Risk

We have certain financial and derivative instruments that subject us to credit risk. These consist primarily of cash, cash equivalents, marketable securities, restricted investments, trade accounts receivable, interest rate swap contracts, cross-currency swap contracts, 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 investments, interest rate swap contracts, cross-currency contracts, 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.

In addition, we have certain investments in debt securities related to countries in the Eurozone. These investments are for debt securities of countries with a lower likelihood of experiencing significant economic, fiscal, and/or political strains resulting in a default or severe decreases in fair value. However, such risk cannot be entirely eliminated and is reflected in the current fair value of the investments as of December 31, 2014.

Item 8: Financial Statements and Supplementary Data

Consolidated Financial Statements

Our consolidated financial statements as required by this item are included in Item 15: “Exhibits and Financial Statement Schedules – Consolidated Financial Statements.” See Item 15(a)(1) for a list of our consolidated financial statements.

Selected Quarterly Financial Data (Unaudited)

The following selected quarterly financial data should be read in conjunction with our consolidated financial statements, the related notes thereto and Item 7: “Management’s Discussion and Analysis of Financial Condition and Results of Operations.” This information has been derived from our unaudited consolidated financial statements that, in our opinion, reflect all recurring adjustments necessary to fairly present this information when read in conjunction with our consolidated financial statements and the related notes thereto appearing in the section entitled “Consolidated

Financial Statements." The results of operations for any quarter are not necessarily indicative of the results to be expected for any future period.

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	Quarters Ended							
	Dec 31, 2014	Sep 30, 2014	Jun 30, 2014	Mar 31, 2014	Dec 31, 2013	Sep 30, 2013	Jun 30, 2013	Mar 31, 2013
	(In thousands, except per share amounts)							
Net sales	$1,007,993	$889,310	$544,353	$950,158	$768,437	$1,265,587	$519,760	$755,205
Cost of sales	699,611	700,023	451,628	713,447	579,141	901,553	379,662	585,879
Gross profit	308,382	189,287	92,725	236,711	189,296	364,034	140,098	169,326
Operating expenses:								
Research and development	34,944	37,593	32,659	38,773	38,421	34,984	30,964	29,931
Selling, general and administrative	70,968	66,528	57,667	58,664	65,661	63,870	66,265	74,465
Production start-up	3,249	1,406	491	—	—	—	1,392	1,376
Restructuring and asset impairment	—	—	—	—	24,892	57,276	2,381	2,347
Total operating expenses	109,161	105,527	90,817	97,437	128,974	156,130	101,002	108,119
Operating income (loss)	199,221	83,760	1,908	139,274	60,322	207,904	39,096	61,207
Foreign currency (loss) gain	(2,628)	169	21	(579)	(104)	(705)	(1,068)	1,618
Interest and other income (expense), net	9,539	(3,268)	2,437	2,137	715	3,713	(5,327)	780
Income income (loss) before income taxes	206,132	80,661	4,366	140,832	62,492	208,637	41,062	66,189
Income tax (expense) benefit	(10,545)	7,108	2,166	(28,853)	2,982	(13,650)	(7,464)	(7,047)
Equity in earnings (loss) of unconsolidated affiliates, net of tax	(3,628)	655	(2,004)	28	(214)	51	—	—
Net income	$191,959	$88,424	$4,528	$112,007	$65,260	$195,038	$33,598	$59,142
Net income per share:								
Basic	$1.91	$0.88	$0.05	$1.12	$0.66	$1.98	$0.38	$0.68
Diluted	$1.89	$0.87	$0.04	$1.10	$0.64	$1.94	$0.37	$0.66
Weighted-average number of shares used in per share calculations:								
Basic	100,246	100,197	100,148	99,591	99,471	98,720	89,201	87,206
Diluted	101,509	101,415	101,814	101,822	101,260	100,378	91,142	89,377

From time to time, our operating results are significantly affected by certain transactions or events that we believe are not indicative or representative of our results. The following significant items have affected the comparison of our operating results during the periods indicated:

First Quarter 2013
During the quarter ended March 31, 2013, we recognized $2.3 million in restructuring and asset impairments relating to our April 2012 European restructuring initiative for employee separation charges.

Second Quarter 2013
During the quarter ended June 30, 2013, we recognized $2.4 million in restructuring and asset impairments primarily consisting of employee separation charges of $1.1 million and asset impairments of $1.3 million relating to our April 2012 European restructuring initiative.

Third Quarter 2013
During the quarter ended September 30, 2013, we recognized $57.3 million in restructuring and asset impairments primarily consisting of $56.6 million in asset impairment charges relating to our facility in Mesa, Arizona.

Fourth Quarter 2013
During the quarter ended December 31, 2013, we recognized $24.9 million in restructuring and asset impairments primarily consisting of incremental asset impairment charges relating to our facility in Vietnam.

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Item 9: Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A: Controls and Procedures

(a) Evaluation of Disclosure Controls and Procedures

We maintain "disclosure controls and procedures," as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, that are designed 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. In designing and evaluating our disclosure controls and procedures, management recognizes that disclosure controls and procedures, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the disclosure controls and procedures are met. Additionally, in designing disclosure controls and procedures, our management was required to apply its judgment in evaluating the cost-benefit relationship of possible disclosure controls and procedures. The design of any disclosure control and procedure also is 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.

Based on their evaluation as of the end of the period covered by this Annual Report on Form 10-K, our Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures were effective as of that date.

(b) Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate "internal control over financial reporting," as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2014 based on the criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles in the United States of America.

Based on the results of our evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2014.

The effectiveness of our internal control over financial reporting as of December 31, 2014 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in its report which appears herein.

(c) Changes in Internal Control over Financial Reporting

We 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 Rule 15d-15(f) to determine whether any changes in our internal control over financial reporting occurred during the year ended December 31, 2014 that materially affected, or are reasonably likely to

material affect, our internal control over financial reporting.

Based on that evaluation, there have been no such changes in our internal control over financial reporting that occurred during the quarter ended December 31, 2014 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

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(d) Inherent Limitations on Effectiveness of Controls

Our management, including our Chief Executive Officer and Chief Financial Officer, do not expect that our disclosure controls or our internal control over financial reporting will prevent all errors and all fraud. 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 control system 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.

Item 9B: Other Information

On February 18, 2015, the Audit Committee of the Board of Directors of First Solar adopted an amendment to our code of business conduct and ethics that applies to all directors and associates, including our chairman, chief executive officer, chief financial officer, other directors and executive officers, and all of our associates in the global organization. The amendment primarily adds references to certain internal policies that govern specific subject matter areas and clarifies or updates certain prior provisions of the code. The foregoing description of the amendment is only a summary, and is qualified entirely by the amended code of business conduct and ethics, a copy of which is attached as Exhibit 14.1 to this Annual Report on Form 10-K and also posted on our website at http://www.firstsolar.com under "Investors – Corporate Governance." Any substantive amendment to, or waiver from, any provision of the code of business conduct and ethics with respect to any director or executive officer will be posted on our website.

PART III

Item 10: Directors, Executive Officers, and Corporate Governance

Information concerning our board of directors and audit committee will appear in our 2015 Proxy Statement, under the sections entitled "Directors" and "Corporate Governance." The information in that portion of the Proxy Statement is incorporated in this Annual Report on Form 10-K by reference.

For information with respect to our executive officers, see Item 1: "Business – Executive Officers of the Registrant."

Information concerning Section 16(a) beneficial ownership reporting compliance will appear in our 2015 Proxy Statement under the section entitled "Section 16(a) Beneficial Ownership Reporting Compliance." The information in that portion of the Proxy Statement is incorporated in this Annual Report on Form 10-K by reference.

We have adopted a Code of Business Conduct and Ethics that applies to all directors, officers, and associates of First Solar. Information concerning this code will appear in our 2015 Proxy Statement under the section entitled "Corporate Governance." The information in that portion of the Proxy Statement is incorporated in this Annual Report on Form 10-K by reference.

Item 11: Executive Compensation

Information concerning executive compensation and related information will appear in our 2015 Proxy Statement under the section entitled “Executive Compensation,” and information concerning the Compensation Committee will appear under “Corporate Governance” and “Compensation Committee Report.” The information in that portion of the Proxy Statement is incorporated in this Annual Report on Form 10-K by reference.

Item 12: Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Information concerning the security ownership of certain beneficial owners and management and related stockholder matters, including certain information regarding our equity compensation plans, will appear in our 2015 Proxy Statement under the section entitled “Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.” The information in that portion of the Proxy Statement is incorporated in this Annual Report on Form 10-K by reference.

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Item 13: Certain Relationships and Related Transactions, and Director Independence

Information concerning certain relationships and related party transactions will appear in our 2015 Proxy Statement under the section entitled “Certain Relationships and Related Party Transactions.” The information in that portion of the Proxy Statement is incorporated in this Annual Report on Form 10-K by reference. Information concerning director independence will appear in our 2015 Proxy Statement under the section entitled “Corporate Governance.” The information in that portion of the Proxy Statement is incorporated in this Annual Report on Form 10-K by reference.

Item 14: Principal Accountant Fees and Services

Information concerning principal accountant fees and services and the audit committee’s pre-approval policies and procedures will appear in our 2015 Proxy Statement under the section entitled “Principal Accountant Fees and Services.” The information in that portion of the Proxy Statement is incorporated in this Annual Report on Form 10-K by reference.

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PART IV

Item 15: Exhibits and Financial Statement Schedules

(a) The following documents are filed as part of this Annual Report on Form 10-K:

(1) Consolidated Financial Statements

Report of Independent Registered Public Accounting Firm
Financial Statements
Consolidated Balance Sheets
Consolidated Statements of Operations
Consolidated Statements of Comprehensive Income (Loss)
Consolidated Statements of Stockholders' Equity
Consolidated Statements of Cash Flows
Notes to Consolidated Financial Statements

(2) Financial Statement Schedule:

Schedule II — Valuation and Qualifying Accounts

SCHEDULE II: VALUATION AND QUALIFYING ACCOUNTS
For the Years Ended December 31, 2014, 2013, and 2012

Description	Balance at Beginning of Year	Additions	Deductions	Balance at End of Year
	(In thousands)			
Allowance for doubtful accounts receivable				
Year ended December 31, 2012	$10,032	$4,471	$—	$14,503
Year ended December 31, 2013	$14,503	$2,489	$(4,682)	$12,310
Year ended December 31, 2014	$12,310	$24	$(5,226)	$7,108

(3) Exhibits: See Item 15(b) below.

(b) Exhibits: The exhibits listed on the accompanying Index to Exhibits on this Annual Report on Form 10-K are filed, or incorporated into this Annual Report on Form 10-K by reference.

(c) Financial Statement Schedule: See Item 15(a)(1) above.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this Annual Report to be signed on its behalf by the undersigned, thereunto duly authorized on February 24, 2015.

FIRST SOLAR, INC.
By: /s/ MARK R. WIDMAR
Mark R. Widmar
Chief Financial Officer

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

Signature	Title	Date
/s/ JAMES A. HUGHES James A. Hughes	Chief Executive Officer and Director	February 24, 2015
/s/ MARK R. WIDMAR Mark R. Widmar	Chief Financial Officer and Chief Accounting Officer	February 24, 2015
Additional Directors:		
/s/ MICHAEL J. AHEARN Michael J. Ahearn	Chairman of the Board of Directors	February 24, 2015
/s/ SHARON L. ALLEN Sharon L. Allen	Director	February 24, 2015
/s/ RICHARD D. CHAPMAN Richard D. Chapman	Director	February 24, 2015
/s/ GEORGE A. HAMBRO George A. Hambro	Director	February 24, 2015
/s/ CRAIG KENNEDY Craig Kennedy	Director	February 24, 2015
/s/ JAMES F. NOLAN James F. Nolan	Director	February 24, 2015
/s/ WILLIAM J. POST William J. Post	Director	February 24, 2015
/s/ J. THOMAS PRESBY J. Thomas Presby	Director	February 24, 2015
/s/ PAUL H. STEBBINS Paul H. Stebbins	Director	February 24, 2015

/s/ MICHAEL SWEENEY Michael Sweeney	Director	February 24, 2015

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of First Solar, Inc.

In our opinion, the consolidated financial statements listed in the index appearing under Item 15(a)(1) present fairly, in all material respects, the financial position of First Solar, Inc. and its subsidiaries at December 31, 2014 and December 31, 2013, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2014 in conformity with accounting principles generally accepted in the United States of America. In addition, in our opinion, the financial statement schedule listed in the index appearing under Item 15(a)(2) presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2014, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements and financial statement schedule, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in Management’s Report on Internal Control over Financial Reporting appearing under Item 9A(b). Our responsibility is to express opinions on these financial statements, on the financial statement schedule, and on the Company's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers LLP

Phoenix, Arizona
February 24, 2015

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FIRST SOLAR, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS
(In thousands, except share data)

	December 31, 2014	2013
ASSETS		
Current assets:		
Cash and cash equivalents	$1,482,054	$1,325,072
Marketable securities	509,032	439,102
Accounts receivable trade, net	135,434	136,383
Accounts receivable, unbilled and retainage	76,971	521,323
Inventories	505,088	388,951
Balance of systems parts	125,083	133,731
Deferred project costs	29,354	556,957
Deferred tax assets, net	91,565	63,899
Assets held for sale	20,728	132,626
Notes receivable, affiliate	12,487	—
Prepaid expenses and other current assets	202,670	94,720
Total current assets	3,190,466	3,792,764
Property, plant and equipment, net	1,402,304	1,385,084
PV solar power systems, net	46,393	—
Project assets and deferred project costs	810,348	720,916
Deferred tax assets, net	222,326	296,603
Restricted cash and investments	407,053	279,441
Investments in unconsolidated affiliates and joint ventures	255,029	17,321
Goodwill	84,985	84,985
Other intangibles, net	119,236	117,416
Inventories	115,617	129,664
Note receivable, affiliate	9,127	—
Other assets	61,555	59,308
Total assets	$6,724,439	$6,883,502
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$214,656	$261,333
Income taxes payable	1,727	6,707
Accrued expenses	388,156	320,077
Current portion of long-term debt	51,918	60,543
Billings in excess of costs and estimated earnings	195,346	117,766
Payments and billings for deferred project costs	60,591	642,214
Other current liabilities	88,702	179,421
Total current liabilities	1,001,096	1,588,061
Accrued solar module collection and recycling liability	246,307	225,163
Long-term debt	165,003	162,780
Other liabilities	284,546	404,381
Total liabilities	1,696,952	2,380,385
Commitments and Contingencies		
Stockholders' equity:		

Common stock, $0.001 par value per share; 500,000,000 shares authorized; 100,288,942 and 99,506,941 shares issued and outstanding at December 31, 2014 and 2013, respectively	100	100
Additional paid-in capital	2,697,558	2,646,022
Accumulated earnings	2,279,689	1,882,771
Accumulated other comprehensive income (loss)	50,140	(25,776)
Total stockholders' equity	5,027,487	4,503,117
Total liabilities and stockholders' equity	$6,724,439	$6,883,502

See accompanying notes to these consolidated financial statements.

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FIRST SOLAR, INC. AND SUBSIDIARIES

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

	Years Ended December 31,		
	2014	2013	2012
Net sales	$3,391,814	$3,308,989	$3,368,545
Cost of sales	2,564,709	2,446,235	2,515,796
Gross profit	827,105	862,754	852,749
Operating expenses:			
Research and development	143,969	134,300	132,460
Selling, general and administrative	253,827	270,261	280,928
Production start-up	5,146	2,768	7,823
Restructuring and asset impairments	—	86,896	469,101
Total operating expenses	402,942	494,225	890,312
Operating income (loss)	424,163	368,529	(37,563)
Foreign currency loss, net	(3,017)	(259)	(2,122)
Interest income	18,030	16,752	12,824
Interest expense, net	(1,982)	(1,884)	(13,888)
Other (expense) income, net	(5,203)	(4,758)	945
Income (loss) before taxes and equity in earnings of unconsolidated affiliates	431,991	378,380	(39,804)
Income tax expense	(30,124)	(25,179)	(56,534)
Equity in earnings of unconsolidated affiliates, net of tax	(4,949)	(163)	—
Net income (loss)	$396,918	$353,038	$(96,338)
Net income (loss) per share:			
Basic	$3.97	$3.77	$(1.11)
Diluted	$3.91	$3.70	$(1.11)
Weighted-average number of shares used in per share calculations:			
Basic	100,048	93,697	86,860
Diluted	101,643	95,468	86,860

See accompanying notes to these consolidated financial statements.

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FIRST SOLAR, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(In thousands)

	Years Ended December 31,		
	2014	2013	2012
Net income (loss)	$396,918	$353,038	$(96,338)
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments	(19,147)	4,295	9,896
Unrealized gain (loss) on marketable securities and restricted investments	90,741	(39,685)	26,813
Unrealized gain (loss) on derivative instruments	4,322	(565)	(21,493)
Other comprehensive income (loss), net of tax	75,916	(35,955)	15,216
Comprehensive income (loss)	$472,834	$317,083	$(81,122)

See accompanying notes to these consolidated financial statements.

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FIRST SOLAR, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In thousands)

	Common Stock		Additional Paid-In Capital	Accumulated Earnings	Accumulated Other Comprehensive (Loss) Income	Total Equity
	Shares	Amount				
Balance, December 31, 2011	86,468	$86	$2,022,743	$1,626,071	$ (5,037)	$3,643,863
Net loss	—	—	—	(96,338)	—	(96,338)
Other comprehensive income	—	—	—	—	15,216	15,216
Exercise of stock options, including excess tax benefits	253	1	8,136	—	—	8,137
Issuance of restricted and unrestricted stock	633	—	—	—	—	—
Tax withholding related to vesting of restricted stock	(209)	—	(5,019)	—	—	(5,019)
Share-based compensation	—	—	39,667	—	—	39,667
Balance, December 31, 2012	87,145	87	2,065,527	1,529,733	10,179	3,605,526
Net income	—	—	—	353,038	—	353,038
Other comprehensive loss	—	—	—	—	(35,955)	(35,955)
Exercise of stock options, including excess tax benefits	148	—	26,363	—	—	26,363
Issuance of restricted and unrestricted stock	1,096	1	—	—	—	1
Tax withholding related to vesting of restricted stock	(380)	—	(11,979)	—	—	(11,979)
Share-based compensation	—	—	54,178	—	—	54,178
Common stock issued for acquisition	1,750	2	83,753	—	—	83,755
Common stock issued for public offering	9,747	10	428,180	—	—	428,190
Balance, December 31, 2013	99,506	100	2,646,022	1,882,771	(25,776)	4,503,117
Net income	—	—	—	396,918	—	396,918
Other comprehensive income	—	—	—	—	75,916	75,916
Exercise of stock options, including excess tax benefits	108	—	29,455	—	—	29,455
Issuance of restricted and unrestricted stock	1,018	—	—	—	—	—
Tax withholding related to vesting of restricted stock	(344)	—	(23,100)	—	—	(23,100)
Share-based compensation	—	—	45,181	—	—	45,181
Balance, December 31, 2014	100,288	$100	$2,697,558	$2,279,689	$ 50,140	$5,027,487

See accompanying notes to these consolidated financial statements.

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FIRST SOLAR, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Years Ended December 31,		
	2014	2013	2012
Cash flows from operating activities:			
Cash received from customers	$3,366,839	$3,868,540	$3,231,268
Cash paid to suppliers and associates	(2,642,306)	(2,973,855)	(2,447,337)
Interest received	12,966	6,599	4,693
Interest paid	(7,601)	(9,289)	(19,916)
Income tax (payments) refunds, net	(17,045)	1,550	21,543
Excess tax benefit from share-based compensation arrangements	(31,166)	(35,076)	(27,373)
Other operating activities	(698)	(2,343)	(669)
Net cash provided by operating activities	680,989	856,126	762,209
Cash flows from investing activities:			
Purchases of property, plant and equipment	(257,549)	(282,576)	(379,228)
Proceeds from sale of property, plant and equipment	1,532	116,403	5,083
Purchases of marketable securities	(305,396)	(435,015)	(29,200)
Proceeds from maturities and sales of marketable securities	227,900	93,984	108,663
Investment in notes receivable, affiliate	(72,692)	—	(21,659)
Payments received on notes receivable, affiliate	49,517	17,108	4,498
Purchase of restricted investments	—	—	(80,667)
Change in restricted cash	(124,061)	5,173	16,215
Acquisitions, net of cash acquired	(4,306)	(30,745)	(2,437)
Purchase of equity and cost method investments	(24,967)	(17,905)	(5,000)
Other investing activities	(1,857)	(3,533)	—
Net cash used in investing activities	(511,879)	(537,106)	(383,732)
Cash flows from financing activities:			
Proceeds from stock option exercises	—	1,054	176
Repayment of borrowings under revolving credit facility	—	(605,000)	(1,305,000)
Proceeds from borrowings under revolving credit facility	—	335,000	1,375,000
Repayment of long-term debt	(60,063)	(64,954)	(178,842)
Proceeds from borrowings under long-term debt, net of discount and issuance costs	65,563	—	—
Excess tax benefit from share-based compensation arrangements	31,166	35,076	27,373
Repayment of economic development funding	—	(8,315)	(6,820)
Proceeds from equity offering, net of issuance costs	—	428,190	—
Contingent consideration payments and other financing activities	(29,307)	(19,887)	(996)
Net cash provided by (used in) financing activities	7,359	101,164	(89,109)
Effect of exchange rate changes on cash and cash equivalents	(19,487)	3,594	6,307
Net increase in cash and cash equivalents	156,982	423,778	295,675
Cash and cash equivalents, beginning of the period	1,325,072	901,294	605,619
Cash and cash equivalents, end of the period	$1,482,054	$1,325,072	$901,294
Supplemental disclosure of noncash investing and financing activities:			
Equity interests retained from the partial sale of project assets	$220,679	$—	$—
Property, plant and equipment acquisitions funded by liabilities	$61,130	$60,677	$62,344
	$53,894	$97,885	$—

Acquisitions currently or previously funded by liabilities and contingent consideration			
Shares issued for acquisition	$—	$83,755	$—
Settlement of long-term debt	$—	$—	$4,802

See accompanying notes to these consolidated financial statements.

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FIRST SOLAR, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. First Solar and Its Business

We design, manufacture, and sell thin-film photovoltaic ("PV") solar modules, which we currently produce at our plants in Perrysburg, Ohio and Kulim, Malaysia. Through our fully integrated systems business, we provide a complete turn-key solar power system solution or any combination of our systems solutions, which may include project development, engineering, procurement, and construction ("EPC") services, operations and maintenance ("O&M") services, and project finance expertise.

First Solar Holdings, LLC was formed as a Delaware limited liability company in May 2003 to act as the holding company for First Solar, LLC, which was formed in 1999 and renamed First Solar US Manufacturing, LLC in the second quarter of 2006, and other subsidiaries formed during 2003 and later. On February 22, 2006, First Solar Holdings, LLC was incorporated in Delaware as First Solar Holdings, Inc. and, also during the first quarter of 2006, was renamed First Solar, Inc.

During the year ended December 31, 2012, we corrected certain errors that aggregated to a gross overstatement of net loss by $7.8 million in both actual and absolute terms for the year ended December 31, 2011, with such correction having the effect of reducing net loss by $7.8 million in the aggregate for the year ended December 31, 2012.

The first error was an overstatement of $4.9 million in net loss related to "cut-off" of our inventories and balance of systems ("BoS") parts that had been installed in our systems business projects and accounted for under the percentage-of-completion method, but remained in inventories and BoS parts as of December 31, 2011. Accordingly, the value of the installed inventories and BoS parts was not included in the incurred cost portion of our percentage-of-completion calculations. The overstatement in net loss was comprised of (a) an understatement of $13.6 million in net sales, (b) an understatement of $8.4 million in cost of sales, (c) an overstatement of $8.4 million in inventories and BoS parts, and (d) an overstatement of $0.3 million due to the associated impact to our income tax expense. The second error was an overstatement of $2.5 million in net loss related to an understatement in our income tax benefit for the year ended December 31, 2011, related to a benefit associated with Subpart F foreign tax credits. The remaining error was an overstatement of $0.4 million in operating expenses due to a miscellaneous item that was considered in our overall evaluation of materiality, but is considered to be individually insignificant.

In evaluating whether these errors, individually and in the aggregate, and the corrections of the errors had a material impact on the quarterly periods such errors and corrections related to, we evaluated both the quantitative and qualitative impact to our consolidated financial statements for such periods. We considered a number of qualitative factors, including, among others, that the errors and the correction of the errors did not change a net loss into net income or vice versa, did not have an impact on our long-term debt covenant compliance, and did not mask a change in earnings or other trends when considering the overall competitive and economic environment within the industry during 2011 and 2012.

Based upon our quantitative and qualitative evaluation, we determined that the errors and the correction of such errors did not have a material impact on the periods to which they related.

2. Summary of Significant Accounting Policies

Basis of Presentation. These consolidated financial statements include the accounts of First Solar, Inc. and all of its subsidiaries and are prepared in accordance with accounting principles generally accepted in the United States of

America (“U.S. GAAP”). We eliminated all inter-company transactions and balances during consolidation. Investments in unconsolidated affiliates in which we have less than a controlling interest are accounted for using the cost or equity method of accounting. Certain prior year balances have been reclassified to conform to the current year presentation. These reclassifications had no material impact on our consolidated balance sheets, consolidated statements of operations, consolidated statements of stockholders’ equity, or consolidated statements of cash flows.

Use of Estimates. The preparation of consolidated financial statements in conformity with U.S. GAAP requires us to make estimates and assumptions that affect the amounts reported in our consolidated financial statements and the accompanying notes. Significant estimates in these consolidated financial statements include percentage-of-completion revenue recognition, inventory valuation, recoverability of project assets, 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, accrued collection and recycling expense, 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.

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Fair Value Measurements. We measure certain financial assets and liabilities at fair value. As of December 31, 2014, our financial assets and liabilities consist principally of cash and cash equivalents, marketable securities, trade accounts receivable, unbilled accounts receivable and retainage, notes receivable, restricted investments, derivative contracts, accounts payable, accrued expenses, debt, and income taxes payable. Fair value is defined as the price that would be received from the sale of an asset or paid to transfer a liability (an exit price) on the measurement date in an orderly transaction between market participants in the principal or most advantageous market for the asset or liability. Accounting standards include disclosure requirements around fair values used for certain financial instruments and establish a fair value hierarchy. The hierarchy prioritizes valuation inputs into three levels based on the extent to which inputs used in measuring fair value are observable in the market. Each fair value measurement is reported in one of three levels:

- Level 1 — Valuation techniques in which all significant inputs are unadjusted quoted prices from active markets for assets or liabilities that are identical to the assets or liabilities being measured.

- Level 2 — Valuation techniques in which significant inputs include quoted prices from active markets for assets or liabilities that are similar to the assets or liabilities being measured and/or quoted prices for assets or liabilities that are identical or similar to the assets or liabilities being measured from markets that are not active. Also, model-derived valuations in which all significant inputs and significant value drivers are observable in active markets are Level 2 valuation techniques.

- Level 3 — Valuation techniques in which one or more significant inputs or significant value drivers are unobservable. Unobservable inputs are valuation technique inputs that reflect our own assumptions about the assumptions that market participants would use to price an asset or liability.

When available, we use quoted market prices to determine the fair value of an asset or liability. If quoted market prices are not available, we measure fair value using valuation techniques that use, when possible, current market-based or independently-sourced market parameters, such as interest rates and currency rates.

Cash and Cash Equivalents. We consider all highly liquid instruments with original maturities of 90 days or less at the time of purchase to be cash equivalents.

Marketable Securities — Current and Noncurrent and Restricted Investments. We determine the classification of our marketable securities and restricted investments at the time of purchase and reevaluate such designation at each balance sheet date. We have classified our marketable securities and restricted investments as available-for-sale. These marketable securities and restricted investments are recorded at fair value and unrealized gains and losses are recorded to “Accumulated other comprehensive income (loss)” until realized. Realized gains and losses on sales of these marketable securities and restricted investments are reported in earnings, computed using the specific identification method.

We may sell marketable securities prior to their stated maturities after consideration of our liquidity requirements. We view unrestricted securities with maturities beyond 12 months as available to support current operations and, accordingly, classify all such securities as current assets under the caption marketable securities in the consolidated balance sheets. Restricted investments consist of long-term duration marketable securities that we hold through a custodial account to fund the estimated future costs of our solar module collection and recycling obligations. Accordingly, we classify all restricted investments as noncurrent assets under the caption “Restricted cash and investments” in the consolidated balance sheets.

All of our available-for-sale marketable securities and restricted investments are subject to a periodic impairment review. We consider a marketable security or restricted investment to be impaired when its fair value is less than its carrying cost, in which case we would further review the marketable security or restricted investment to determine if it is other-than-temporarily impaired. When we evaluate a marketable security or restricted investment for other-than-temporary impairment, we review factors such as the length of time and the extent to which its fair value has been below its cost basis, the financial conditions of the issuer and any changes thereto, our intent to sell, and whether it is more likely than not that we will be required to sell the marketable security or restricted investment before we have recovered its cost basis. If a marketable security or restricted investment were other-than-temporarily impaired, we would write it down through “Other (expense) income, net” to its impaired value and establish that as a new cost basis for the marketable security or restricted investment.

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Derivative Instruments. We recognize derivative instruments on our consolidated balance sheet at their fair value. On the date that we enter into a derivative contract, we designate the derivative instrument as a fair value hedge, a cash flow hedge, a hedge of a net investment in a foreign operation, or a derivative instrument that will not be accounted for using hedge accounting methods. As of December 31, 2014 and 2013, all of our derivative instruments were designated either as cash flow hedges or as derivative instruments not accounted for using hedge accounting methods.

We record changes in the fair value of a derivative instrument that is highly effective and that is designated and qualifies as a cash flow hedge, to the extent that the hedge is effective, in “Other comprehensive income, net of tax” until our earnings are affected by the variability of cash flows of the underlying hedge. We record any hedge ineffectiveness and amounts excluded from effectiveness testing in current period earnings within “Other (expense) income, net.” We report changes in the fair values of derivative instruments that are not designated or do not qualify for hedge accounting in current period earnings. We classify cash flows from derivative instruments on the consolidated statements of cash flows in the same category as the item being hedged or on a basis consistent with the nature of the instrument.

We formally document all relationships between hedging instruments and the underlying hedged items, as well as our risk-management objective and strategy for undertaking various hedge transactions, at the inception of the hedge. We support all of our derivatives with documentation specifying the underlying exposure being hedged. We also formally assess (both at the hedge’s inception and on an ongoing basis) whether the derivative instruments that we use in hedging transactions have been highly effective in offsetting changes in the fair value or cash flows of the underlying hedged items and whether those derivatives are expected to remain highly effective in future periods. When we determine that a derivative instrument is not (or has ceased to be) highly effective as a hedge, we discontinue hedge accounting prospectively. In all situations in which we discontinue hedge accounting and the derivative instrument remains outstanding, we will carry the derivative instrument at its fair value on our consolidated balance sheet and recognize subsequent changes in its fair value in our current period earnings.

Receivables and Allowance for Doubtful Accounts. The carrying value of our receivables, net of the allowance for doubtful accounts, represents their estimated net realizable value. We estimate our allowance for doubtful accounts based on historical collection trends, the age of outstanding receivables, and existing economic conditions. If events or changes in circumstances indicate that specific receivable balances may be impaired, further consideration is given to the collectability of those balances, and the allowance is adjusted accordingly. Past-due receivable balances are written off when our internal collection efforts have been unsuccessful. We account for rebates and other customer incentives as a reduction to the selling price of our products and, therefore, as a reduction in revenue at the time of revenue recognition with a corresponding contra-asset within “Accounts receivable trade, net.”

Retainage. Certain of our EPC contracts for solar power plants we build contain retainage provisions. 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. We consider whether collectability of such retainage is reasonably assured in connection with our overall assessment of the collectability of amounts due or that will become due under our EPC contracts. Retainage expected to be collected within 12 months is classified within “Accounts receivable, unbilled and retainage” on the consolidated balance sheets. Retainage expected to be collected after 12 months is classified within “Other assets” on the consolidated balance sheets. After we have met the EPC contract requirements to bill for retainage, we will reclassify such amounts to “Accounts receivable trade, net.”

Inventories — Current and Noncurrent. We report our inventories at the lower of cost or market. We determine cost on a first-in, first-out basis and include both the costs of acquisition and the costs of manufacturing in our inventory costs. These costs include direct material, direct labor, and indirect manufacturing costs, including depreciation and amortization. Our capitalization of costs into inventory is based on the normal utilization of our plants. If production capacity is abnormally utilized, the portion of our indirect manufacturing costs related to the abnormal utilization

levels is expensed as incurred. Finished goods inventory is comprised exclusively of solar modules that have not yet been installed in a solar power plant under construction or sold to a third-party customer.

We regularly review the cost of inventories, including noncurrent inventories, against their estimated market value and record a lower of cost or market write-down if any inventories have a cost in excess of their estimated market value. We also regularly evaluate the quantities and values of our inventories, including noncurrent inventories, in light of current market conditions and market trends, among other factors, and record write-downs for any quantities in excess of demand and for any new obsolescence. This evaluation considers the use of modules in our systems business, historical usage, expected demand, anticipated sales price, desired strategic raw material requirements, new product development schedules, the effect new products might have on the sale of existing products, product obsolescence, customer concentrations, product merchantability, and other factors. Market conditions are subject to change, and actual consumption of our inventory could differ from forecasted demand.

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We classify inventories not used within our normal operating cycle (which is 12 months) as noncurrent inventory. This inventory generally consists of a critical raw material used in our core production process that we purchase in quantities that exceed anticipated consumption within our operating cycle.

Balance of Systems Parts. BoS parts represent mounting, electrical, and other construction parts purchased for solar power plants under construction, which we hold title to and are not yet installed in a solar power plant. These parts include posts, tilt brackets, tables, harnesses, combiner boxes, inverters, cables, tracker equipment, and other parts we purchase or assemble for the solar power plants we construct. BoS parts does not include solar modules that we manufacture. We carry these parts at the lower of cost or market, with market being based primarily on recoverability through installation in a solar power system.

Asset Impairments. We assess long-lived assets classified as “held and used,” including our property, plant and equipment and project assets, for impairment whenever events or changes in business circumstances arise that may indicate that the carrying amount of our long-lived assets may not be recoverable. These events and changes can include significant current period operating losses or negative cash flows associated with the use of a long-lived asset, or group of assets, combined with a history of such factors, significant changes in the manner of use of the assets, and current expectations that it is more likely than not that a long-lived asset will be sold or otherwise disposed of significantly before the end of its previously estimated useful life. For purposes of recognition and measurement of an impairment loss, long-lived assets are grouped with other assets and liabilities at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities. When impairment indicators are present, we compare undiscounted future cash flows, including the eventual disposition of the asset group at market value, to the asset group’s carrying value to determine if the asset group is recoverable. If the carrying values are in excess of undiscounted expected future cash flows, we measure any impairment by comparing the fair value of the asset or asset group to its carrying value. Fair value is generally determined by considering (i) internally developed discounted projected cash flow analysis of the asset or asset group, (ii) actual third-party valuations, and/or (iii) information available regarding the current market for similar assets. If the fair value of an asset or asset group is determined to be less than the carrying amount of the asset or asset group, an impairment in the amount of the difference is recorded in the period that the impairment indicator occurs and is included in “Restructuring and asset impairments” in our consolidated statement of operations. Estimating future cash flows requires significant judgment, and projections may vary from the cash flows eventually realized, which could impact our ability to accurately assess whether an asset has been impaired.

We consider a long-lived asset to be abandoned after we have ceased use of such asset and we have no intent to use or re-purpose the asset in the future.

We classify each long-lived tangible asset we plan to sell as an asset held for sale on our consolidated balance sheets only after certain criteria have been met including: (i) management has the authority and commits to a plan to sell the asset; (ii) the asset is available for immediate sale in its present condition; (iii) there is an active program to locate a buyer, and the plan to sell the asset has been initiated; (iv) the sale of the asset is probable within 12 months; (v) the asset is being actively marketed at a reasonable sales price relative to its current fair value; and (vi) it is unlikely that the plan to sell will be withdrawn or that significant changes to the plan will be made. We record assets held for sale at the lower of the carrying value or fair value less costs to sell. If, due to unanticipated circumstances, such assets are not sold in the 12 months after being classified as held for sale, then held for sale classification will continue as long as the above criteria are still met and the asset is being actively marketed at a reasonable sales price relative to its then current fair value.

We assess held for sale long-lived assets for impairment whenever events or circumstances arise that may indicate that the carrying amount of our held for sale long-lived assets may not be recoverable. Depreciation and amortization expense is not recorded on assets once they are classified as assets held for sale.

Property, Plant and Equipment. We report our property, plant and equipment at cost, less accumulated depreciation. Cost includes the price paid to acquire or construct the assets, required installation costs, interest capitalized during the construction period, and any expenditure that substantially adds to the value of or substantially extends the useful life of an existing asset. We expense repair and maintenance costs at the time we incur them.

We begin depreciation for such assets when they are placed into service. We consider an asset to be placed into service when the asset is both in the location and condition for its intended use.

We compute depreciation expense using the straight-line method over the estimated useful lives of assets, as presented in the table below. We depreciate leasehold improvements over the shorter of their estimated useful lives or the remaining term of the lease. The estimated useful life of an asset is reassessed whenever applicable facts and circumstances indicate a change in the estimated useful life of such asset has occurred.

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	Useful Lives in Years
Buildings and building improvements	25 – 40
Manufacturing machinery and equipment	5 – 7
Furniture, fixtures, computer hardware, and computer software	3 – 7
Leasehold improvements	up to 15

Idle Property, Plant and Equipment. For property, plant and equipment that has been placed into service, but is subsequently idled temporarily, we continue to record depreciation expense during the idle period. We adjust the estimated useful lives of the idled assets if the estimated useful lives have changed. At December 31, 2014, the current net book value of the temporarily idled equipment was $5.0 million.

PV Solar Power Systems. PV solar power systems represent solar systems that we hold and operate after being placed into service. We report our PV solar power systems at cost, less accumulated depreciation. When we are entitled to incentive tax credits for our systems, we reduce the related carrying value of the assets by the amount of the tax credits, which reduces future depreciation. Any energy generated by the PV solar power systems prior to being placed into service is also accounted for as a reduction in the related carrying value of the asset. We begin depreciation for such PV solar power systems when they are placed into service at the earlier of management's determination that we will own and operate the system or one year from the system's commercial operations date. We compute depreciation expense for PV solar power systems using the straight-line method over the shortest of the term of the related power purchase agreement ("PPA"), the lease on the land, or 25 years. Our current PV solar power systems have estimated useful lives ranging from 19 to 20 years.

We sell energy generated by our PV solar power systems under PPAs or directly into a competitive wholesale market. We recognize revenue from such sales at the time the energy is delivered to our customers or the grid (in the case of merchant power). For the year ended December 31, 2014, we recognized revenue from our PV solar power systems of $4.5 million.

Asset Retirement Obligations. We develop, construct, and operate certain project assets and PV solar power systems under power purchase or other agreements that include a requirement for the removal of the assets at the end of the term of the agreement. We recognize asset retirement obligations ("AROs") at fair value in the period in which they are incurred, and the carrying amounts of the related project assets or PV solar power systems are correspondingly increased. AROs represent the present value of the expected costs and timing of the related decommissioning activities. At December 31, 2014 and 2013, our AROs totaled $6.7 million and $4.1 million, respectively.

Internal-Use Software Costs. We capitalize the costs related to computer software obtained or developed for internal use. Software obtained for internal use has generally been enterprise-level business and finance software that we customize to meet our specific operational requirements. The capitalized costs are amortized on a straight-line basis over the estimated useful life of the software, ranging from 3 to 7 years.

Interest Capitalization. We capitalize interest as part of the historical cost of acquiring or constructing certain assets during the period of time required to place the assets into service or sell the assets to customers. These assets include property, plant and equipment and PV solar power system development and construction costs that we have capitalized as project assets. Interest capitalized for property, plant and equipment is depreciated over the estimated useful life of the related assets when they are placed into service. We charge interest capitalized for project assets to cost of sales when such assets are sold and we have met all revenue recognition criteria. We capitalize interest to the extent that expenditures to acquire, construct, or develop an asset have occurred and interest cost has been incurred. We cease capitalization of interest for projects in development or under construction if the projects are substantially complete or if we receive any payment for or have sold such projects.

Project Assets. Project assets consist primarily of costs relating to solar power projects in various stages of development that we capitalize prior to entering into a definitive sales agreement for the solar power project, including projects that have begun commercial operation under the project PPAs and are actively marketed and intended to be sold. These costs include costs for land and costs for developing and constructing a PV solar power system. Development costs can include legal, consulting, permitting, interconnect, and other similar costs. Once we enter into a definitive sales agreement, we reclassify project assets to deferred project costs on our consolidated balance sheet 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 to cost of sales after each respective project asset is sold to a customer and all revenue recognition criteria have been met (matching the expensing of costs to the underlying revenue recognition method). We generally classify project assets as noncurrent due to the nature of solar power projects (long-lived assets) and the time required to complete all activities to develop, construct, and sell projects, which is typically longer than 12 months.

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We review project assets for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. We consider a project commercially viable or recoverable if it is anticipated to be sold for a profit once it is either fully developed or fully constructed. We consider a partially developed or partially constructed project commercially viable or recoverable if the anticipated selling price is higher than the carrying value of the related project assets. We examine a number of factors to determine if the project will be recoverable, the most notable of which include whether there are any changes in environmental, ecological, permitting, market pricing, or regulatory conditions that impact the project. Such changes could cause the costs of the project to increase or the selling price of the project to decrease. If a project is not considered recoverable, we impair the respective project assets and adjust the carrying value to the estimated recoverable amount, with the resulting impairment recorded within operating expenses.

Deferred Project Costs. 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 is 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 agreement, the completed project will remain in project assets or deferred project costs until the sale of such project closes. Any income generated by such 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.

The following table illustrates the balance sheet classification of project assets and deferred project costs:

Milestone	Balance Sheet Classification -Arrangements Accounted for under ASC 360 (Real Estate Sales)	Balance Sheet Classification - Arrangements Accounted for under ASC 605 (Long-Term Construction Contracts)
Execution of a definitive sales arrangement, but all revenue recognition criteria are not yet met	Deferred project costs	Deferred project costs
Pre execution of a definitive sales arrangement	Project asset	Deferred project costs (recoverable pre-contract costs)

Accounts Receivable, Unbilled. Accounts receivable, unbilled represents revenue that has been recognized in advance of billing the customer, which is common for construction contracts. For example, we recognize revenue from contracts for the construction and sale of solar power systems, which include the sale of project assets over the construction period using applicable accounting methods. One applicable accounting method is the percentage-of-completion method, which recognizes sales and gross profit as work is performed based on the relationship between actual costs incurred compared to the total estimated costs for completing the entire 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.

Billings in Excess of Costs and Estimated Earnings. The liability “Billings in excess of costs and estimated earnings” represents 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 milestones as provided for in the sales arrangement, and the timing of revenue recognition may be different from when we can bill our customers.

Payments and Billings for Deferred Project Costs. The liability “Payments and billings for deferred project costs” represents customer payments received or customer billings made under the terms of solar power project related sales arrangements 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.

Deferred Revenue. Deferred revenue consists of payments received in advance of meeting all revenue recognition criteria (with the exception of payments and billings for deferred project costs) for the sale of solar modules or services performed under our O&M agreements. We recognize deferred revenue as net sales after all revenue recognition criteria are met.

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Business Combinations. We account for business acquisitions using the acquisition method of accounting and record intangible assets separate from goodwill. Intangible assets are recorded at fair value based on estimates as of the date of acquisition. Goodwill is recorded as the residual amount of the purchase price consideration less the fair value assigned to the individual assets acquired and liabilities assumed as of the date of acquisition. We charge acquisition related costs that are not part of the purchase price consideration to general and administrative expense as they are incurred. These costs typically include transaction and integration costs, such as legal, accounting, and other professional fees. Contingent consideration, which represents an obligation of the acquirer to transfer additional assets or equity interests to the former owner as part of the exchange if specified future events occur or conditions are met, is accounted for at fair value on the acquisition date either as a liability or as equity depending on the terms of the acquisition agreement.

Goodwill. 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 in the fourth quarter. We perform impairment tests between scheduled annual tests 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.

We may first make a qualitative assessment of whether it is more likely than not that a reporting unit's fair value is less than its carrying value to determine whether it is necessary to perform the two-step goodwill impairment test. The qualitative impairment test considers various factors including macroeconomic conditions, industry and market conditions, cost factors, a sustained share price or market capitalization decrease, and any reporting unit specific events. If it is determined through the qualitative assessment that a reporting unit's fair value is more likely than not greater than its carrying value, the two-step impairment test is not required. If the qualitative assessment indicates it is more likely than not that a reporting unit's fair value is not greater than its carrying value, we must perform the two-step impairment test. We may also elect to proceed directly to the two-step impairment test without considering such qualitative factors.

The first step in a two-step impairment test is the comparison of the fair value of a reporting unit with its carrying amount, including goodwill. Our reporting units consist of our fully integrated systems business, cadmium telluride ("CdTe") module manufacturing business, and our crystalline silicon module manufacturing business from our TetraSun acquisition in 2013. In accordance with the authoritative guidance over fair value measurements, we define the fair value of a reporting unit as the price that would be received to sell the unit as a whole in an orderly transaction between market participants at the measurement date. We primarily use the income approach methodology of valuation, which includes the discounted cash flow method, to estimate the fair values of our reporting units.

Significant management judgment is required when estimating the fair value of our reporting units including the forecasting of future operating results and the selection of discount and expected future growth rates that we use in discounting cash flows. If the estimated fair value of a reporting unit exceeds its carrying value, goodwill is not impaired and no further analysis is required.

If the carrying value of a reporting unit exceeds its estimated fair value in the first step, then we are required to perform the second step of the impairment test. In this step, we assign the fair value of the reporting unit calculated in step one to all of the assets and liabilities of the reporting unit, as if a market participant just acquired the reporting unit in a business combination. The excess of the fair value of the reporting unit determined in the first step of the impairment test over the total amount assigned to the assets and liabilities in the second step of the impairment test represents the implied fair value of goodwill. If the carrying value of a reporting unit's goodwill exceeds the implied fair value of goodwill, we would record an impairment loss equal to the difference. If there is no such excess, then all goodwill for a reporting unit is considered impaired.

See Note 6 “Goodwill and Intangible Assets,” for additional information on our goodwill impairment tests.

In-Process Research and Development: In-process research and development (“IPR&D”) is initially capitalized at fair value as an intangible asset with an indefinite life and assessed for impairment thereafter. When the IPR&D project is complete, it is reclassified as a definite-lived intangible asset and is amortized over its estimated useful life. If an IPR&D project is abandoned, we will record a charge for the value of the related intangible asset to our consolidated statement of operations in the period it is abandoned.

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Product Warranties. We provide a limited warranty against defects in materials and workmanship under normal use and service conditions for 10 years following delivery to the owners of our solar modules. We also typically warrant to the owners of our solar modules that modules installed in accordance with agreed-upon specifications will produce at least 90% of their labeled power output rating during the first 10 years following their installation and at least 80% of their labeled power output rating during the following 15 years. In resolving claims under both the defects and power output warranties, we have the option of either repairing or replacing the covered solar modules or, under the power output warranty, providing additional solar modules to remedy the power shortfall. We also have the option to make a payment for the then current market price of solar modules to resolve claims. Our warranties are automatically transferred from the original purchasers of our solar modules to subsequent purchasers upon resale. In 2013, we announced to our customers the availability of a new linear power output warranty for modules shipping beginning in the second quarter of 2014.

As an alternative to our module power output warranty, we have offered a system level module performance warranty for a limited number of our recent system sales. This system level module performance warranty is designed for utility scale systems and provides 25-year plant-level energy degradation protection. The system level module performance warranty is typically calculated as a percentage of a system's expected energy production, adjusted for certain actual site conditions including weather, with the warranted level of performance declining each year in a linear fashion, but never falling below 80% during the term of the warranty. In resolving claims under the system level module performance warranty to restore the system to warranted performance levels, we first must validate that the root cause is due to module performance. For qualifying claims, we typically have the option to repair or replace modules, provide supplemental modules, or make a cash payment. Consistent with our module power output warranty, when we elect to satisfy a valid warranty claim by providing replacement or supplemental modules under the system level module performance warranty, we do not have any obligation to pay for the labor to remove or install modules.

In addition to our solar module warranty described above, for solar power plants built by our systems business, we typically provide a limited warranty on the balance of the system against defects in engineering design, installation, and workmanship for a period of one to two years following the substantial completion of a phase or the entire solar power plant. In resolving claims under the engineering design, installation, and workmanship warranties, we have the option of remedying the defect through repair or replacement.

When we recognize revenue for module or systems project sales, we accrue a liability for the estimated future costs of meeting our limited warranty obligations. 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 BoS components, and our estimated per-module replacement cost.

From time to time we have taken remediation actions in respect of affected modules beyond our limited warranty, and we may elect to do so in the future. In such cases, we would incur additional expenses that are beyond our limited warranty, which amounts may be material to our consolidated statement of operations.

Accrued Solar Module Collection and Recycling Liability. We recognize expense at the time of sale for the estimated cost of our future obligations for collecting and recycling the solar modules covered by our collection and recycling program. See Note 14 "Solar Module Collection and Recycling Liability," for further information.

Income Taxes. We use the asset and liability method to account for income taxes whereby we calculate the deferred tax asset or liability account balances using tax laws and rates in effect at that time. We establish valuation allowances, when necessary, to reduce deferred tax assets to the extent it is more likely than not that such deferred tax assets will not be realized. We do not provide deferred taxes related to the U.S. GAAP basis in excess of the U.S. tax basis in the investment in our foreign subsidiaries to the extent such amounts relate to indefinitely reinvested earnings

and profits of such foreign subsidiaries.

Income tax expense includes (i) deferred tax expense, which generally represents the net change in the deferred tax asset or liability balance during the year plus any change in valuation allowances, and (ii) current tax expense, which represents the amount of tax currently payable to or receivable from taxing authorities. We only recognize tax benefits related to uncertain tax positions that are more likely than not of being sustained upon examination. For those positions that satisfy such recognition criteria, the amount of tax benefit that we recognize is the largest amount of tax benefit that is more than fifty percent likely of being sustained on ultimate settlement of the uncertain tax position.

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Foreign Currency Translation. The functional currencies of certain of our international subsidiaries are their local currencies. Accordingly, we apply the period-end exchange rates to translate their assets and liabilities, and the daily transaction exchange rates are used to translate their revenues, expenses, gains, and losses into U.S. dollars. We include the translation adjustments as a separate component of "Accumulated other comprehensive income (loss)" within stockholders' equity. The functional currency of our subsidiaries in Canada, Malaysia, Singapore, and Chile is the U.S. dollar; therefore, we do not translate their financial statements. Gains and losses arising from the remeasurement of monetary assets and liabilities denominated in currencies other than a subsidiary's functional currency are included in "Foreign currency loss, net" in the period in which they occur.

Comprehensive Income. Our comprehensive income consists of our net income, the effects on our consolidated financial statements of translating the financial statements of our subsidiaries that operate in foreign currencies, the unrealized gains or losses on available-for-sale marketable securities and restricted investments, and the unrealized gains or losses on derivative instruments that qualify for and have been designated as cash flow hedges. We present our comprehensive income in the consolidated statements of comprehensive income (loss). Our "Accumulated other comprehensive income (loss)" is presented as a component of stockholders' equity in our consolidated balance sheets.

Per Share Data. Basic net income (loss) per share is based on the weighted effect of all common shares outstanding and is calculated by dividing net income (loss) by the weighted average number of common shares outstanding during the period. Diluted net income (loss) per share is based on the weighted effect of all common shares and dilutive potential common shares outstanding and is calculated by dividing net income (loss) by the weighted average number of common shares and dilutive potential common shares outstanding during the period.

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 Accounting Standards Codification ("ASC") 605, Accounting for Long-term Construction Contracts or, for arrangements which include land or land rights, ASC 360, Accounting for Sales of Real Estate.

For systems business sales arrangements that do not include land or land rights and thus are accounted for under ASC 605, we use the percentage-of-completion method, as described further below, using actual costs incurred over total estimated costs to develop and construct a project (including module costs) as our standard accounting policy, unless we cannot make reasonably dependable estimates of the costs to complete the contract, in which case we would use the completed contract method.

For systems business sales arrangements that are accounted for under ASC 360 where we convey control of land or land rights, we record the sale as revenue using one of the following revenue recognition methods, based upon evaluation of the substance and form of the terms and conditions of such real estate sales arrangements:

(i) We apply the percentage-of-completion method, as further described below, to certain real estate sales arrangements where 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. The initial and continuing investment requirements, which demonstrate a buyer's commitment to honor their 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. 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. Prohibited forms of continuing involvement in a real estate sales arrangement may include us retaining risks or rewards associated with the project that are not customary with the range of risks or rewards that an EPC contractor may assume.

(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.

(iii) We may also record revenue for certain sales arrangements after construction of discrete portions of a project or after the entire project is substantially complete, we have transferred the usual risks and rewards of ownership to the buyer, and we have received substantially all payments due from the buyer or the initial and continuing investment criteria have been met.

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For any systems business sales arrangements containing multiple deliverables (including our solar modules) not required to be accounted for under ASC 360 (real estate) or ASC 605 (long-term construction contracts), we analyze each activity within the sales arrangement to ensure that we adhere to the separation guidelines of ASC 605 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 estimated costs to complete (including module costs) in order to estimate the progress towards completion to determine the amount of revenue and profit to recognize. Incurred costs include all installed direct materials, installed solar modules, labor, subcontractor costs, and those indirect costs related to contract performance, such as indirect labor, supplies, and tools. We recognize direct material and solar module costs as incurred costs when the direct materials and solar modules have been installed in the project. When contracts specify that title to direct materials and solar modules 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 direct materials and solar modules to be installed when they are permanently placed or affixed to the solar power system as required by engineering designs. Solar modules manufactured by us that will be used in our solar power systems, which we still hold title to, remain within inventory until such modules are installed in a solar power system.

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

If estimated total costs on any contract are greater than the 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 contract revenues and costs to complete contracts, including penalties, incentive awards, claims, change orders, anticipated losses, and others are recorded in the period in which the revisions to estimates are identified and the loss 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 — 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 module 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 contracts. Our customers typically do not have extended payment terms or rights of return for our products. We account for rebates or other customer incentives as a reduction to the selling price of our solar modules at the time of sale and, therefore, as a reduction to revenue.

Revenue Recognition — Operations and Maintenance. Our operations and maintenance revenue is billed and recognized as services are performed. Costs of these revenues are expensed in the period in which they are incurred.

Research and Development Expense. We incur research and development costs during the process of researching and developing new products and enhancing our existing products, technologies, and manufacturing processes. Our research and development costs consist primarily of employee compensation, materials, supplies, depreciation,

consulting, and laboratory testing. We expense these costs as incurred until the resulting product has been completed, is tested, and is ready for commercial manufacturing.

Restructuring and Exit Activities. We record costs associated with exit activities such as employee termination benefits that represent a one-time benefit when management approves and commits to a plan of termination, or over the future service period, if any. Other costs associated with exit activities may include contract termination costs, including costs related to leased facilities to be abandoned or subleased, and facility and employee relocation costs.

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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 raw materials for solar modules run through the production line during the qualification phase. Costs related to equipment upgrades and implementation of manufacturing process improvements are also included in production start-up expense. Additionally, it includes all expenses related to the selection of a new site and the related legal and regulatory costs, and the costs to maintain our plant replication program, to the extent we cannot capitalize these expenditures.

Share-Based Compensation. We recognize share-based compensation expense on the estimated grant-date fair value of equity instruments issued as compensation to employees over the requisite service period, which is generally four years. The share-based compensation expense that we recognize in our results of operations is based on the number of awards expected to ultimately vest; therefore, the amounts used to determine share-based compensation expense have been reduced for estimated forfeitures. We estimate the number of awards that we expect to vest at the time the awards are granted and revise those estimates, if necessary, in subsequent periods. We estimate the number of awards that we expect to vest based on our historical experience with forfeitures, giving consideration to whether future forfeiture behavior might be expected to differ from past behavior. We recognize compensation expense for awards with graded vesting schedules on a straight-line basis over the requisite service periods for each separately vesting portion of the awards as if each award was in substance multiple awards.

Our forfeiture rate assumptions, including estimates as to which share-based awards will ultimately vest, require judgment, and to the extent actual results or updated estimates differ from our current estimates, such amounts will be recorded as a cumulative adjustment in the period of change and could be materially different from share-based compensation expense recorded in prior periods. Additionally, when an associate’s employment is terminated, all previously unvested awards granted to such associate are forfeited, which results in a benefit to share-based compensation expense in the period of such associate’s termination equal to the cumulative expense recorded through the termination date for such forfeited unvested awards.

Shipping and Handling Costs. We classify shipping and handling costs as a component of cost of sales. We record customer payments of shipping and handling costs as a component of net sales.

Taxes Collected from Customers and Remitted to Governmental Authorities. We do not include tax amounts collected from customers in sales transactions as a components of net sales.

Advertising Costs. Advertising costs are expensed as incurred. Advertising costs during the years ended December 31, 2014, 2013, and 2012 were $2.9 million, $1.9 million, and $1.4 million, respectively.

Self-Insurance. We are self-insured for certain healthcare benefits provided to our U.S. employees. The liability for the self-insured benefits is limited by the purchase of stop-loss insurance. The stop-loss coverage provides payment for claims exceeding $0.2 million per covered person for any given year. Accruals for losses are made based on our claim experience and estimates based on historical data. Actual losses may differ from accrued amounts. Should actual losses exceed the amounts expected and, as a result, the recorded liabilities are determined to be insufficient, an additional expense will be recorded.

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 variable interest entities when we are considered the primary beneficiary of such entities. Additionally, we have and may in the future form joint venture type arrangements (“ventures”), including partnerships and partially owned limited liability companies or similar legal structures, with one or more third parties primarily to develop and build specific or a pipeline of solar power projects. These types of ventures are core to our business and long-term strategy related to providing solar photovoltaic generation solutions using our modules to sustainable 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 the 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 equity or cost methods 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 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 the investor. Our venture agreements typically require some form of project development capital or project equity ranging from amounts necessary to obtain a PPA (or similar power off-take agreement) to a pro-rata portion of the total equity required to develop and complete construction of a project, depending upon the opportunity and the market our ventures are in. Our limited number

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of ventures as of December 31, 2014 and future ventures of a similar nature are typically VIEs because the total equity investment at risk is not sufficient to permit the ventures to finance their activities without additional financial support.

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 that VIE's economic performance and the obligation to absorb losses or the right to receive benefits of that VIE that could potentially be significant to the VIE. If we determine that we do not have the power to direct the activities that most significantly impact the venture, 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 a venture. We consider the participating and protective rights we have as well as the legal form of the venture when evaluating whether we have the ability to exercise significant influence. Cost method investments are initially recorded and subsequently carried at their historical cost, and income is recorded to the extent there are dividends. We use the equity method of accounting for our equity investments where we hold more than 20% of the outstanding stock of the investee or where we have the ability to significantly influence the operations or financial decisions of the investee. We initially record the investment at cost and adjust the carrying amount each period to recognize our share of the earnings or losses of the investee based on our ownership percentage. We monitor these investments, which are included in "Investments in unconsolidated affiliates and joint ventures" in the accompanying consolidated balance sheets, for impairment and record reductions in their carrying values if the carrying amount of the investment exceeds its fair value. An impairment charge is recorded when an impairment is deemed to be other-than-temporary. To determine whether an impairment is other-than-temporary, we must consider whether we have the ability and intent to hold the investment until the carrying amount is fully recovered. Circumstances that indicate an other-than-temporary decline include factors such as decreases in quoted market prices or declines in operations of the issuer. The evaluation of an investment for potential impairment requires management to exercise significant judgment and to make certain assumptions. The use of different judgments and assumptions could result in different conclusions. During 2014 and 2013, we recorded impairment losses of $7.1 million and $0.2 million, respectively, related to our cost and equity method investments. The impairment losses were included in "Equity in earnings of unconsolidated affiliates, net of tax."

3. Recent Accounting Pronouncements

In March 2013, the FASB issued ASU 2013-05, Foreign Currency Matters (Topic 830) - Parent's Accounting for the Cumulative Translation Adjustment upon Derecognition of Certain Subsidiaries or Groups of Assets within a Foreign Entity or of an Investment in a Foreign Entity, which applies to the release of cumulative translation adjustments into net income when a parent (i) sells a part or all of its investment in a foreign entity, (ii) no longer holds a controlling financial interest in a subsidiary or group of assets within a foreign entity, (iii) sells part of an equity method investment of a foreign entity, or (iv) obtains control of a foreign acquiree in which such parent held an equity interest immediately before the acquisition date through a step acquisition. The adoption of ASU 2013-15 in the first quarter of 2014 did not have an impact on our consolidated financial position, results of operations, or cash flows.

In July 2013, the FASB issued ASU 2013-11, Income Taxes (Topic 740) - Presentation of an Unrecognized Tax Benefit When a Net Operating Loss Carryforward or Tax Credit Carryforward Exists. ASU 2013-11 provides that an entity's unrecognized tax benefit, or a portion of its unrecognized tax benefit, should be presented in its financial statements as a reduction to a deferred tax asset for a net operating loss carryforward, a similar tax loss, or a tax credit carryforward, with one exception. That exception states that, to the extent a net operating loss carryforward, a similar tax loss, or a tax credit carryforward is not available at the reporting date under the tax law of the applicable jurisdiction to settle any additional income taxes that would result from the disallowance of a tax position, or the tax

law of the applicable jurisdiction does not require the entity to use, and the entity does not intend to use, the deferred tax asset for such purpose, the unrecognized tax benefit should be presented in the financial statements as a liability and should not be combined with deferred tax assets. The adoption of ASU 2013-11 in the first quarter of 2014 resulted in netting impacts of $50.6 million on our consolidated statement of financial position as of March 31, 2014.

In April 2014, the FASB issued ASU 2014-08, Presentation of Financial Statements (Topic 205) and Property, Plant and Equipment (Topic 360) - Reporting Discontinued Operations and Disclosures of Disposals of Components of an Entity. ASU 2014-08 defines a discontinued operation as a disposal of a component or group of components that is disposed of or is classified as held for sale and "represents a strategic shift that has (or will have) a major effect on an entity's operations and financial results." The standard states that a strategic shift could include a disposal of: a major geographic area of operations, a major line of business, a major equity investment, or other major parts of an entity. The adoption of ASU 2014-08 in the third quarter of 2014 did not have an impact on our consolidated financial position, results of operations, or cash flows. However, in the event that a future disposition meets the revised criteria, we expect that this standard will have an impact on the presentation of our financial statements and associated disclosures.

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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. An entity has the option to apply the provisions of ASU 2014-09 either retrospectively to each prior reporting period presented 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, 2016, and early adoption is not permitted. We are currently evaluating the method of adoption and the impact ASU 2014-09 will have on our consolidated financial position, results of operations, cash flows, and associated disclosures.

In June 2014, the FASB issued ASU 2014-12, Compensation-Stock Compensation (Topic 718) - Accounting for Share-Based Payments When the Terms of an Award Provide That a Performance Target Could Be Achieved after the Requisite Service Period. ASU 2014-12 provides guidance on whether to treat a performance target that could be achieved after the requisite service period as a performance condition that affects vesting or as a nonvesting condition that affects the grant-date fair value of an award. ASU 2014-12 is effective for fiscal years and interim periods within those years beginning after December 15, 2015. We do not expect the adoption of ASU 2014-12 to have an impact on our consolidated financial position, results of operations, or cash flows.

In August 2014, the FASB issued ASU 2014-15, Presentation of Financial Statements - Going Concern (Subtopic 205-40) - Disclosure of Uncertainties about an Entity’s Ability to Continue as a Going Concern. ASU 2014-15 provides guidance regarding management’s responsibility to (i) evaluate whether there is substantial doubt about an organization’s ability to continue as a going concern and (ii) provide related footnote disclosures. ASU 2014-15 is effective for fiscal years and interim periods within those years beginning after December 15, 2016. We do not expect the adoption of ASU 2014-15 to have a significant impact on our financial statement disclosures.

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. ASU 2015-02 is effective for fiscal years and interim periods within those years beginning after December 15, 2015. We are currently evaluating the impact of ASU 2015-02 on our consolidated financial statements and associated disclosures.

4. Restructuring and Asset Impairments

February 2012 Manufacturing Restructuring

In February 2012, executive management completed an evaluation of and approved a set of manufacturing capacity and other initiatives primarily intended to adjust our previously planned manufacturing capacity expansions and global manufacturing footprint. The primary goal of these initiatives was to better align production capacity and geographic location of such capacity with expected geographic market requirements and demand.

The following table summarizes the February 2012 manufacturing restructuring activity recorded during the year ended December 31, 2012 and the remaining balance at December 31, 2012 (in thousands):

February 2012 Restructuring	Asset Impairments	Asset Impairment Related Costs	Total
Charges to income	$122,765	$8,479	$131,244

Changes in estimates	519	(246)	273
Gain on sale of previously impaired assets	(4,524)	—	(4,524)
Cash payments	—	(292)	(292)
Cash received on sale of impaired assets	4,524	—	4,524
Noncash amounts	(123,284)	(2,840)	(126,124)
Ending balance at December 31, 2012	$—	$5,101	$5,101

Expenses recognized for the February 2012 restructuring activities are presented in “Restructuring and asset impairments” on the consolidated statements of operations. All expenses related to the February 2012 manufacturing restructuring were related to our components segment. As of December 31, 2014, $4.9 million remains accrued for asset impairment related charges from the February 2012 manufacturing restructuring and is included within “Other liabilities.” We do not expect to incur any additional expense for the February 2012 manufacturing restructuring initiatives.

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April 2012 European Restructuring

In April 2012, our executive management approved a set of restructuring initiatives intended to reduce costs and to align the organization with our Long Term Strategic Plan ("Long Term Strategic Plan") including expected sustainable market opportunities. As part of these initiatives, we substantially reduced our European operations including the closure of our manufacturing operations in Frankfurt (Oder), Germany at the end of 2012. Due to the lack of policy support for utility-scale solar projects in Europe, we did not believe there was a business case for continuing manufacturing operations in Germany or to proceed with the previously announced two-line plant in France. Additionally, we substantially reduced the size of our operations in Mainz, Germany and elsewhere in Europe.

In addition, due to the closure of our manufacturing plants in Frankfurt (Oder), Germany, we no longer had reasonable assurance we would meet the required conditions under which we had previously received certain economic development grants from the original plant expansion. As a result, in the three months ended March 31, 2012, we recorded expense of $29.8 million primarily associated with the expected repayment of amounts received and the write-off of outstanding amounts accrued for as receivables under such incentive programs. During 2012, we repaid €5.3 million of grants received in 2011. During 2013, we repaid the remaining €6.3 million of grants received in 2011, including outstanding interest due, as a result of the closure of our Frankfurt (Oder) manufacturing plants.

The following table summarizes the April 2012 European restructuring activity recorded during the years ended December 31, 2014, 2013, and 2012 and the remaining balance at December 31, 2014, 2013, and 2012 (in thousands):

April 2012 European Restructuring	Asset Impairments	Asset Impairment Related Costs	Severance and Termination Related Costs	Grant Repayments	Total
Charges to income	$225,716	$26,356	$60,629	$30,510	$343,211
Changes in estimates	—	(289)	(937)	—	(1,226)
Cash payments	—	(9,313)	(32,087)	(7,044)	(48,444)
Noncash amounts	(225,716)	(129)	(1,888)	(15,066)	(242,799)
Ending balance at December 31, 2012	—	16,625	25,717	8,400	50,742
Charges to income	—	4,151	3,583	—	7,734
Changes in estimates	—	(2,265)	(226)	—	(2,491)
Cash payments	—	(14,877)	(27,084)	(8,315)	(50,276)
Noncash amounts	—	(2,945)	(50)	(85)	(3,080)
Ending balance at December 31, 2013	—	689	1,940	—	2,629
Changes in estimates	—	—	(619)	—	(619)
Cash payments	—	—	(1,298)	—	(1,298)
Noncash amounts	—	(80)	(23)	—	(103)
Ending balance at December 31, 2014	$—	$609	$—	$—	$609

Expenses recognized for restructuring activities are presented in "Restructuring and asset impairments" on the consolidated statements of operations. Substantially all expenses related to the April 2012 European restructuring were related to our components segment. As of December 31, 2014, $0.6 million remains accrued for asset impairment related charges from the April 2012 restructuring and was included within "Other liabilities." We do not expect to incur any additional expense for the April 2012 European restructuring initiatives.

Asset Impairments

In October 2013, we entered into an agreement to sell our facility in Mesa, Arizona. The facility consisted of land, a building, and certain fixtures and improvements. The facility housed our O&M capabilities as well as certain equipment and inventory. The facility was originally designed to house a CdTe PV module manufacturing factory; however, we never commissioned manufacturing at the facility. As a result of the sales agreement, we classified the Mesa facility as “Assets held for sale” in the consolidated balance sheet as of December 31, 2013 and recognized a $56.5 million asset impairment charge, which lowered the book value of the facility to its fair value, less costs to sell. During the fourth quarter of 2013, we received cash proceeds, net of

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costs to sell, of approximately $115 million in connection with the Mesa sales agreement. The transaction was completed during the first quarter of 2014.

As a result of our February 2012 manufacturing restructuring, our Vietnam facility was classified as an “Assets held for sale” in the consolidated balance sheets as of December 31, 2014 and 2013. During 2013, we expanded our marketing strategy for the plant to include potential strategic and financial buyers. As a result of this change, we determined that the estimated fair value of our Vietnam plant and related equipment was less than its carrying value and recorded an asset impairment charge of $25.2 million to lower the carrying value of the facility to its estimated fair value, less costs to sell. Impairment charges recognized for our Mesa and Vietnam facilities are presented in “Restructuring and asset impairments” on the consolidated statements of operations. We continue to actively market the facility at a price that is at or above the current carrying value of the assets.

5. Business Acquisitions

General Electric

In August 2013, we acquired all of the CdTe PV specific intellectual property assets and CdTe solar manufacturing processes (“GE Intellectual Property”) of General Electric Company (“GE”) pursuant to a Master Transaction Agreement and an Intellectual Property Purchase Agreement (the “Agreements”), by and between First Solar and GE and certain of their subsidiaries. Pursuant to the Agreements, First Solar received the GE Intellectual Property and GE received 1,750,000 shares of First Solar common stock, which had a market value of $83.8 million on August 5, 2013. The GE Intellectual Property included trade secrets, technology, business and technical information and know-how, databases, and other confidential and proprietary information as well as solar manufacturing processes and protocols. The combination of the GE Intellectual Property and our existing manufacturing capacity is expected to further advance CdTe technology and to achieve a more rapid increase in module efficiency.

In connection with applying the acquisition method of accounting, $73.7 million of the purchase price consideration was assigned to an IPR&D intangible asset at fair value that will be amortized over its useful life upon successful completion of the project or expensed earlier if impaired, and $10.1 million was assigned to goodwill. The underlying technology and IPR&D acquired from GE focuses on increasing the efficiency of the CdTe solar modules while at the same time lowering production and installation costs. We are expecting to integrate the acquired technology into our manufacturing process in the first quarter of 2015 in order to increase the efficiency of our solar modules. We valued the acquired IPR&D using the reproduction cost method and the income approach, as appropriate. The income approach reflected the present value of forecasted cash flows derived from the incremental module efficiency benefits. The amortization period of the projects once completed is expected to be 8 to 10 years. IPR&D assets allocated to individual projects will be expensed earlier if impaired or determined to be abandoned due to obsolescence or technological advancement.

The pro forma effect of this all-stock acquisition was not material to our historical consolidated balance sheets, results of operations, or cash flows. Substantially all of the goodwill and intangible assets recorded for this acquisition are deductible for tax purposes.

TetraSun

In April 2013, we acquired 100% of the stock not previously owned by us of TetraSun, Inc. (“TetraSun”), a development stage company with high efficiency crystalline silicon technology that is expected to provide improvements in performance relative to conventional crystalline silicon solar modules. This all-cash acquisition was not material to our historical consolidated balance sheets, results of operations, or cash flows. We have included the financial results of TetraSun in our consolidated financial statements from the date of acquisition.

In connection with applying the acquisition method of accounting, $39.1 million of the purchase price consideration was assigned to an IPR&D intangible asset that will be amortized over its useful life upon successful completion of the project or expensed earlier if impaired, and $6.1 million was assigned to goodwill. The acquired IPR&D involves a project to develop a lower cost and higher efficiency crystalline silicon cell. We valued the IPR&D using the multi-period excess earnings method under the income approach. The method reflected the present value of the projected cash flows that are expected to be generated by the IPR&D beginning in the first quarter of 2015 less charges representing the contribution of other assets to those cash flows. The amortization period of the project once completed is expected to be 10 to 12 years.

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Solar Chile

In January 2013, we acquired 100% of the ownership interest of Solar Chile S.A. ("Solar Chile"), a Chilean-based solar project development company with substantially all of its assets being a portfolio of early to mid-stage utility-scale PV power projects in northern Chile, in an all-cash transaction which was not material to our historical consolidated balance sheets, results of operations, or cash flows. We have included the financial results of Solar Chile in our consolidated financial statements from the date of acquisition. In connection with applying the acquisition method of accounting, $3.4 million was assigned to goodwill.

In connection with the TetraSun and Solar Chile acquisitions, we agreed to pay additional amounts to sellers contingent upon achievement by the acquired businesses of certain negotiated goals, such as targeted project and module shipment volume milestones. We have recognized $4.9 million and $16.5 million of current liabilities and $14.7 million and $11.7 million and long-term liabilities for these contingent obligations based on their estimated fair value as of December 31, 2014 and, 2013 respectively. During 2014, we made $6.8 million of payments for contingent consideration related to these acquisitions.

6. Goodwill and Intangible Assets

Goodwill

The changes in the carrying amount of goodwill for the years ended December 31, 2014 and 2013 were as follows (in thousands):

Reporting Unit	Balance at December 31, 2013	Acquisitions	Balance at December 31, 2014
CdTe components	$403,420	$—	$403,420
Crystalline silicon components	6,097	—	6,097
Systems	68,833	—	68,833
Accumulated impairment losses	(393,365)	—	(393,365)
Total	$84,985	$—	$84,985

Reporting Unit	Balance at December 31, 2012	Acquisitions	Balance at December 31, 2013
CdTe components	$393,365	$10,055	$403,420
Crystalline silicon components	—	6,097	6,097
Systems	65,444	3,389	68,833
Accumulated impairment losses	(393,365)	—	(393,365)
Total	$65,444	$19,541	$84,985

At December 31, 2014 and 2013, accumulated impairment losses related entirely to the CdTe components reporting unit.

2014 Goodwill Impairment Testing

Our annual impairment analysis was performed in the fourth quarter of 2014. We elected to perform the first step of the two-step goodwill impairment test instead of first performing a qualitative goodwill impairment test. The first-step in the two-step impairment test is the comparison of the fair value of a reporting unit with its carrying amount, including goodwill. We define our reporting units as CdTe components, crystalline silicon components, and systems, with the CdTe components and crystalline silicon components reporting units within the components segment, while

the systems reporting unit is within our fully integrated systems business ("systems segment"). In determining fair value, we primarily used discounted cash flows and operating results based on a comparative multiple of earnings or revenues.

Significant estimates used in our fair value calculations included: (i) estimates of future revenue and expense growth by reporting unit; (ii) future estimated effective tax rates, which range from 10% to 35%; (iii) future estimated capital expenditures and required investments in working capital; (iv) estimated discount rates, which range from 9.6% to 10.6%; and (v) future terminal values of reporting units, which are based on their ability to exist into perpetuity. Additionally, the underlying assumptions used in the first step of our 2014 impairment test considered our market capitalization as of October 1, 2014 and the current solar industry market conditions when determining the fair value of our reporting units.

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As of October 1, 2014, we determined that the estimated fair value of our reporting units exceeded their carrying value and, therefore, we noted no indicators of impairment at our reporting units.

We will continuously monitor market trends in our business, the related expected cash flows, and our calculation of market capitalization for purposes of identifying possible indicators of impairment. If our book value per share exceeds our market price per share or if we have other indicators of impairment, we will be required to perform an interim step-one impairment analysis, which may lead to a step-two analysis and possible impairment of our goodwill. Additionally, we would then be required to review our remaining long-lived assets for impairment.

2013 and 2012 Goodwill Impairment Testing

We performed our annual impairment analysis in the fourth quarter of 2013 and 2012, and determined the carrying amount of our goodwill for our CdTe components, crystalline silicon components, and systems reporting units to be recoverable because the results of the impairment tests indicated that the fair values of the reporting units significantly exceeded their carrying values. The underlying assumptions used in the first step of our 2013 and 2012 impairment tests considered our market capitalization as of October 1, 2013 and 2012, respectively, and the solar industry market conditions when determining the fair value of our reporting units.

Intangible Assets

Intangible assets include those assets acquired primarily as part of our GE and TetraSun acquisitions described in Note 5 “Business Acquisitions,” and our internally generated intangible assets, substantially all of which are 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. At December 31, 2014, $112.8 million of the $119.2 million of intangible assets, net consisted of IPR&D related to the TetraSun and GE acquisitions. Such assets will be amortized over their estimated useful lives upon successful completion of the project or expensed earlier if impaired.

The following table summarizes our intangible assets at December 31, 2014 and 2013 (in thousands):

	December 31, 2014		
	Gross Amount	Accumulated Amortization	Net Amount
Patents	$5,347	$ (1,208)	$4,139
Trade names	700	(700)	—
Developed technology	2,757	(460)	2,297
In-process research and development	112,800	—	112,800
Total	$121,604	$ (2,368)	$119,236
	December 31, 2013		
	Gross Amount	Accumulated Amortization	Net Amount
Patents	$10,180	$ (5,797)	$4,383
Trade names	700	(467)	233
In-process research and development	112,800	—	112,800
Total	$123,680	$ (6,264)	$117,416

Amortization expense for our intangible assets was $1.2 million, $0.9 million, and $2.1 million for the years ended December 31, 2014, 2013, and 2012, respectively.

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Estimated future amortization expense for our intangible assets is as follows at December 31, 2014 (in thousands):

	Amortization Expense
2015	$1,441
2016	1,436
2017	945
2018	483
2019	479
Thereafter	1,652
Total amortization expense	$6,436

The above estimated future amortization expense does not include $112.8 million of IPR&D, which will be reclassified as a definite-lived intangible asset upon successful completion of individual projects and amortized over useful lives of approximately 8 to 12 years. These projects are scheduled for completion in the first quarter of 2015.

7. Cash, Cash Equivalents, and Marketable Securities

Cash, cash equivalents, and marketable securities consisted of the following at December 31, 2014 and 2013 (in thousands):

	2014	2013
Cash and cash equivalents:		
Cash	$1,480,452	$1,322,183
Cash equivalents:		
Money market funds	1,602	2,889
Total cash and cash equivalents	1,482,054	1,325,072
Marketable securities:		
Foreign debt	462,731	364,046
Foreign government obligations	—	25,115
Time deposits	40,000	—
U.S. debt	2,800	46,439
U.S. government obligations	3,501	3,502
Total marketable securities	509,032	439,102
Total cash, cash equivalents, and marketable securities	$1,991,086	$1,764,174

During the year ended December 31, 2014, we realized $0.2 million of gains on the sale or maturities of our marketable securities. During the years ended December 31, 2013 and 2012, we did not realize a material amount of gains and losses on our marketable securities.

As of December 31, 2014, we identified two investments totaling $41.1 million with immaterial unrealized losses that have been in a loss position for a period of time greater than 12 months. The unrealized loss is primarily due to an increase in market spreads relative to spreads at the time of purchase. Based on the underlying credit quality of the investments, we do not intend to sell these securities prior to 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 at December 31, 2014 and 2013.

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The following tables summarize the unrealized gains and losses related to our available-for-sale marketable securities, by major security type, as of December 31, 2014 and 2013 (in thousands):

	As of December 31, 2014			
Security Type	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Foreign debt	$463,466	$18	$753	$462,731
Time deposits	40,000	—	—	40,000
U.S. debt	2,800	—	—	2,800
U.S. government obligations	3,500	1	—	3,501
Total	$509,766	$19	$753	$509,032

	As of December 31, 2013			
Security Type	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Foreign debt	$364,568	$127	$649	$364,046
Foreign government obligations	25,125	—	10	25,115
U.S. debt	46,430	12	3	46,439
U.S. government obligations	3,498	4	—	3,502
Total	$439,621	$143	$662	$439,102

Contractual maturities of our available-for-sale marketable securities as of December 31, 2014 and 2013 were as follows (in thousands):

	As of December 31, 2014			
Maturity	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
One year or less	$329,974	$14	$174	$329,814
One year to two years	125,892	5	380	125,517
Two years to three years	53,900	—	199	53,701
Total	$509,766	$19	$753	$509,032

	As of December 31, 2013			
Maturity	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
One year or less	$161,752	$57	$84	$161,725
One year to two years	270,149	81	578	269,652
Two years to three years	7,720	5	—	7,725
Total	$439,621	$143	$662	$439,102

The net unrealized losses of $0.7 million and $0.5 million as of December 31, 2014 and 2013, respectively, on our marketable securities were primarily the result of changes in interest rates. 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.

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The following table shows gross unrealized losses and estimated fair values for those marketable securities that were in an unrealized loss position as of December 31, 2014 and 2013, aggregated by major security type and the length of time the marketable securities have been in a continuous loss position (in thousands):

	As of December 31, 2014					
	In Loss Position for Less Than 12 Months		In Loss Position for 12 Months or Greater		Total	
Security Type	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses
Foreign debt	$391,840	$740	$41,060	$13	$432,900	$753
Total	$391,840	$740	$41,060	$13	$432,900	$753

	As of December 31, 2013					
	In Loss Position for Less Than 12 Months		In Loss Position for 12 Months or Greater		Total	
Security Type	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses
Foreign debt	$212,655	$649	$—	$—	$212,655	$649
Foreign government obligations	25,161	10	—	—	25,161	10
U.S. debt	21,465	3	—	—	21,465	3
Total	$259,281	$662	$—	$—	$259,281	$662

8. Restricted Cash and Investments

Restricted cash and investments consisted of the following at December 31, 2014 and 2013 (in thousands):

	2014	2013
Restricted cash	$49,818	$167
Restricted investments	357,235	279,274
Total restricted cash and investments (1)	$407,053	$279,441

(1)There was $74.7 million and zero of restricted cash included within prepaid expenses and other current assets at December 31, 2014 and 2013, respectively.

At December 31, 2014, 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 payments for the related project construction credit facilities. See Note 16 “Commitments and Contingencies,” to our consolidated financial statements for further discussion relating to letters of credit.

At December 31, 2014 and 2013, our restricted investments consisted of long-term marketable securities that we hold through custodial accounts to fund the estimated future costs of collecting and recycling modules covered under our solar module collection and recycling program. We have classified 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 (loss).” We report realized gains and losses on the maturity or sale of our restricted investments in “Other (expense) income, net” computed using the specific identification method. Restricted investments are classified as noncurrent as the underlying accrued solar module collection and recycling liability is also noncurrent in nature.

We fund the estimated collection and recycling obligations incremental to amounts already pre-funded in prior years for the cumulative module sales covered by our solar module collection and recycling program within 90 days of the

end of each year, assuming for this purpose a service life of 25 years for our solar modules. To ensure that our collection and recycling program for covered modules is available at all times and the pre-funded amounts are accessible regardless of our financial status in the future (even in the case of our own insolvency), we have established a trust structure (the "Trust") under which estimated required funds are put into custodial accounts with an established and reputable bank as the investment advisor in the name of the Trust, 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 executing the required collection and recycling services. Investments in these custodial accounts must meet the criteria of the highest quality investments, such as highly rated

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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. Under the trust agreements, each year we determine the annual pre-funding requirement (if any) based upon the difference between the current estimated future costs of collecting and recycling all solar modules covered under our program combined with the rate of return restricted investments will earn prior to being utilized to cover qualified collection and recycling costs and amounts already pre-funded in prior years. Based primarily upon reductions in the estimated future costs of collecting and recycling solar modules covered under our program combined with the cumulative amounts pre-funded since the inception of our program, we have determined that no incremental funding will be required in the first quarter of 2015 for all historical covered module sales through December 31, 2014.

The following table summarizes unrealized gains and losses related to our restricted investments by major security type as of December 31, 2014 and 2013 (in thousands):

	As of December 31, 2014			
Security Type	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Foreign government obligations	$189,455	$93,280	$—	$282,735
U.S. government obligations	58,510	15,990	—	74,500
Total	$247,965	$109,270	$—	$357,235
	As of December 31, 2013			
Security Type	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Foreign government obligations	$205,484	$22,295	$1,489	$226,290
U.S. government obligations	55,916	1,372	4,304	52,984
Total	$261,400	$23,667	$5,793	$279,274

As of December 31, 2014, the contractual maturities of these restricted investments were between 13 years and 22 years. As of December 31, 2013, the contractual maturities of these restricted investments were between 14 years and 23 years.

9. Consolidated Balance Sheet Details

Accounts receivable trade, net

Accounts receivable trade, net consisted of the following at December 31, 2014 and 2013 (in thousands):

	2014	2013
Accounts receivable trade, gross	$142,542	$148,693
Allowance for doubtful accounts	(7,108)	(12,310)
Accounts receivable trade, net	$135,434	$136,383

At December 31, 2014 and 2013, $21.4 million and $25.2 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 December 31, 2014 and 2013 (in thousands):

	2014	2013

Accounts receivable, unbilled	$41,868	$102,953
Retainage	35,103	418,370
Accounts receivable, unbilled and retainage	$76,971	$521,323

The current portion of retainage is included within accounts receivable, unbilled and retainage. 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.

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Inventories

Inventories consisted of the following at December 31, 2014 and 2013 (in thousands):

	2014	2013
Raw materials	$157,468	$165,805
Work in process	20,829	11,874
Finished goods	442,408	340,936
Total inventories	$620,705	$518,615
Inventories — current	$505,088	$388,951
Inventories — noncurrent (1)	$115,617	$129,664

(1) We purchase a critical raw material that is used in our core production process in quantities that exceed anticipated consumption within our operating cycle (which is 12 months). We classify the raw materials that we do not expect to be consumed within our operating cycle as noncurrent.

Balance of systems parts

Balance of systems parts, which totaled $125.1 million and $133.7 million as of December 31, 2014 and 2013, respectively, represent mounting, third-party modules, and electrical and other construction parts purchased for solar power plants to be constructed or currently under construction, which we hold title to and are not yet installed in a solar power plant. These parts include posts, tilt brackets, tables, harnesses, combiner boxes, inverters, cables, tracker equipment, and other parts we purchase or assemble for the solar power plants we construct. Balance of systems parts does not include any solar modules that we manufacture. We carry these parts at the lower of cost or market, with market being based primarily on recoverability through installation in a solar power system.

Prepaid expenses and other current assets

Prepaid expenses and other current assets consisted of the following at December 31, 2014 and 2013 (in thousands):

	2014	2013
Prepaid expenses	$42,193	$24,572
Derivative instruments	9,791	7,996
Restricted cash	74,695	—
Other current assets	75,991	62,152
Prepaid expenses and other current assets	$202,670	$94,720

Property, plant and equipment, net

Property, plant and equipment, net consisted of the following at December 31, 2014 and 2013 (in thousands):

	2014	2013
Land	$12,378	$10,714
Buildings and improvements	381,925	360,504
Machinery and equipment	1,646,841	1,445,939
Office equipment and furniture	134,268	124,332
Leasehold improvements	50,096	47,833
Construction in progress	154,497	133,223
Stored assets (1)	155,389	203,269
Property, plant and equipment, gross	2,535,394	2,325,814
Less: accumulated depreciation	(1,133,090)	(940,730)

Property, plant and equipment, net	$1,402,304	$1,385,084

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(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 into 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 year ended December 31, 2014, we transferred $47.9 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 or location to produce modules as intended, we will not begin depreciation until such assets are placed into service. The stored assets are evaluated for impairment under a held and used impairment model whenever events or changes in business circumstances arise, including consideration of technological obsolescence, that may indicate that the carrying amount of our long-lived assets may not be recoverable. We ceased the capitalization of interest on such stored assets once they were physically received from the related machinery and equipment vendors.

Depreciation of property, plant and equipment was $245.0 million, $237.9 million, and $263.3 million for the years ended December 31, 2014, 2013, and 2012, respectively.

See Note 4 "Restructuring and Asset Impairments," for more information on the long-lived asset impairments incurred during 2013 in connection with our Mesa and Vietnam facilities.

PV solar power systems, net

PV solar power systems, net consisted of the following at December 31, 2014 and 2013 (in thousands):

	2014	2013
PV solar power systems, gross	$47,727	$—
Accumulated depreciation	(1,334)	—
PV solar power systems, net	$46,393	$—

Depreciation of PV solar power systems was $1.4 million, zero, and zero for the years ended December 31, 2014, 2013, and 2012, respectively.

Capitalized interest

The cost of constructing facilities, equipment and project assets includes interest costs incurred during the asset's construction period. The components of interest expense and capitalized interest are as follows during the years ended December 31, 2014, 2013, and 2012 (in thousands):

	2014	2013	2012
Interest cost incurred	$(9,997)	$(11,703)	$(24,191)
Interest cost capitalized — property, plant and equipment	2,324	2,608	4,201
Interest cost capitalized — project assets	5,691	7,211	6,102
Interest expense, net	$(1,982)	$(1,884)	$(13,888)

Project assets and deferred project costs

Project assets and deferred project costs consisted of the following at December 31, 2014 and 2013 (in thousands):

	2014	2013
Project assets — land	$20,170	$4,150
Project assets — development costs including project acquisition costs	359,203	465,316
Project assets — construction costs	408,402	156,824
Project assets — projects in pre-COD operation under project PPAs	—	66,240
Project assets	787,775	692,530

Deferred project costs - current	29,354	556,957
Deferred project costs - noncurrent	22,573	28,386
Deferred project costs	51,927	585,343
Total project assets and deferred project costs	$839,702	$1,277,873

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Other assets

Other assets consisted of the following at December 31, 2014 and 2013 (in thousands):

	2014	2013
Notes receivable (1)	$12,096	$9,655
Income taxes receivable	4,850	7,656
Deferred rent	20,779	21,175
Other	23,830	20,822
Other assets	$61,555	$59,308

(1) On April 8, 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% per annum payable quarterly with the full amount due on December 31, 2026. As of each of the years ended December 31, 2014 and 2013, the balance on this credit facility was €7.0 million ($8.5 million and $9.7 million, respectively, at the balance sheet dates). On February 7, 2014, we entered into a convertible loan agreement with a strategic entity for an available amount of up to $5.0 million. The loan bears interest at 8.0% per annum. As of December 31, 2014, the balance outstanding on the convertible loan was $3.5 million.

Accrued expenses

Accrued expenses consisted of the following at December 31, 2014 and 2013 (in thousands):

	2014	2013
Accrued compensation and benefits	$43,072	$50,148
Accrued property, plant and equipment	30,723	19,834
Accrued inventory	36,233	43,966
Accrued project assets and deferred project costs	113,012	80,528
Product warranty liability (1)	69,656	67,097
Accrued expenses in excess of normal product warranty liability and related expenses (1)	7,800	12,516
Other	87,660	45,988
Accrued expenses	$388,156	$320,077

(1) See Note 16 “Commitments and Contingencies,” to our 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 totaling $195.3 million and $117.8 million at December 31, 2014 and 2013, respectively, represent 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 totaling $60.6 million and $642.2 million at December 31, 2014 and 2013, respectively, represent 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 related costs are included as deferred project costs. We classify such amounts

as current or noncurrent depending upon when all revenue recognition criteria are expected to be met, consistent with the classification of the associated deferred project costs.

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Other current liabilities

Other current liabilities consisted of the following at December 31, 2014 and 2013 (in thousands):

	2014	2013
Deferred revenue	$21,879	$1,193
Derivative instruments	7,657	8,096
Contingent consideration (1)	36,817	37,775
Other (2)	22,349	132,357
Other current liabilities	$88,702	$179,421

(1) See Note 16 “Commitments and Contingencies,” to our consolidated financial statements for further discussion of “Contingent consideration.”

(2) At December 31, 2013, the balance consisted primarily of proceeds received for our Mesa facility, which was classified as “Assets held for sale” on the consolidated balance sheet. For further discussion see Note 4 “Restructuring and Asset Impairments.” Due to our continuing involvement with the Mesa facility, we deferred recognition of the sales transaction until certain risks and rewards of ownership were fully transferred to the buyer, which occurred in the first quarter of 2014.

Other liabilities

Other liabilities consisted of the following at December 31, 2014 and 2013 (in thousands):

	2014	2013
Product warranty liability (1)	$153,401	$130,944
Other taxes payable	46,555	119,124
Contingent consideration (1)	17,077	58,969
Liability in excess of normal product warranty liability and related expenses (1)	23,139	39,565
Other	44,374	55,779
Other liabilities	$284,546	$404,381

(1) See Note 16 “Commitments and Contingencies,” to our consolidated financial statements for further discussion on “Product warranty liability,” “Contingent consideration,” and “Liability in excess of normal product warranty liability and related expenses.

10. 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 consolidated net assets, financial position, results of operations, and cash flows. We use derivative instruments to hedge against such risks, and we only hold derivative 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 consolidated 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 (loss)” 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 11 “Fair Value Measurements,” to our consolidated financial statements for information about the techniques we use to measure the fair value of our derivative instruments.

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The following tables present the fair values of derivative instruments included in our consolidated balance sheets as of December 31, 2014 and 2013 (in thousands):

	December 31, 2014		
	Prepaid Expenses and Other Current Assets	Other Current Liabilities	Other Liabilities
Derivatives designated as hedging instruments:			
Foreign exchange forward contracts	$1,213	$—	$—
Cross-currency swap contract	—	2,996	8,995
Interest rate swap contract	—	164	46
Total derivatives designated as hedging instruments	$1,213	$3,160	$9,041
Derivatives not designated as hedging instruments:			
Foreign exchange forward contracts	$8,578	$4,497	$—
Total derivatives not designated as hedging instruments	$8,578	$4,497	$—
Total derivative instruments	$9,791	$7,657	$9,041

	December 31, 2013			
	Prepaid Expenses and Other Current Assets	Other Assets	Other Current Liabilities	Other Liabilities
Derivatives designated as hedging instruments:				
Foreign exchange forward contracts	$2,357	$282	$—	$—
Cross-currency swap contract	—	$—	1,934	7,739
Interest rate swap contract	—	—	334	369
Total derivatives designated as hedging instruments	$2,357	$282	$2,268	$8,108
Derivatives not designated as hedging instruments:				
Foreign exchange forward contracts	$5,639	$—	$5,828	$—
Total derivatives not designated as hedging instruments	$5,639	$—	$5,828	$—
Total derivative instruments	$7,996	$282	$8,096	$8,108

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

	December 31, 2014					
				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	$1,213	—	1,213	—	—	$1,213

Cross-currency swap contract	$(11,991	)	—	(11,991	)	—	—	$(11,991	)
Interest rate swap contract	$(210	)	—	(210	)	—	—	$(210	)

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	December 31, 2013					
				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	$2,639	—	2,639	—	—	$2,639
Cross-currency swap contract	$(9,673)	—	(9,673)	—	—	$(9,673)
Interest rate swap contract	$(703)	—	(703)	—	—	$(703)

The following tables present the effective amounts related to derivative instruments designated as cash flow hedges affecting accumulated other comprehensive income (loss) and our consolidated statements of operations for the years ended December 31, 2014, 2013, and 2012 (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, 2011	$33,751	$(2,571)	$(5,899)	$25,281
Amounts recognized in other comprehensive income (loss)	(11,040)	(1,650)	2,680	(10,010)
Amounts reclassified to net sales as a result of forecasted transactions being probable of not occurring	(4,372)	—	—	(4,372)
Amounts reclassified to earnings impacting:				
Net sales	(9,359)	—	—	(9,359)
Foreign currency loss, net	—	—	(5,176)	(5,176)
Interest expense, net	—	2,754	364	3,118
Balance in accumulated other comprehensive income (loss) at December 31, 2012	8,980	(1,467)	(8,031)	(518)
Amounts recognized in other comprehensive income (loss)	8,486	(30)	(6,666)	1,790
Amounts reclassified to net sales as a result of forecasted transactions being probable of not occurring	(13,115)	—	—	(13,115)
Amounts reclassified to earnings impacting:				
Foreign currency loss, net	—	—	8,426	8,426
Interest expense	—	794	451	1,245
Balance in accumulated other comprehensive income (loss) at December 31, 2013	4,351	(703)	(5,820)	(2,172)
Amounts recognized in other comprehensive income (loss)	1,769	12	(2,846)	(1,065)
Amounts reclassified to earnings impacting:				
Cost of sales	501	—	—	501
Foreign currency loss, net	—	—	5,050	5,050
Interest expense	—	481	217	698
Balance in accumulated other comprehensive income (loss) at December 31, 2014	$6,621	$(210)	$(3,399)	$3,012

We recorded immaterial amounts related to ineffective portions of our derivative instruments designated as cash flow hedges during the years ended December 31, 2014, 2013, and 2012 directly to “Other (expense) income, net.” In addition, we recognized unrealized gains of $1.8 million, unrealized losses of $2.1 million, and unrealized gains of $2.0 million related to amounts excluded from effectiveness testing for our foreign exchange forward contracts designated as cash flow hedges within “Other (expense) income, net” during the years ended December 31, 2014, 2013, and 2012, respectively.

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The following table presents the amounts related to derivative instruments not designated as hedges affecting our consolidated statements of operations for the years ended December 31, 2014, 2013, and 2012 (in thousands):

		Amount of Gain (Loss) Recognized in Income on Derivatives		
Derivatives Not Designated as Hedging Instruments	Location of Gain (Loss) Recognized in Income on Derivatives	2014	2013	2012
Foreign exchange forward contracts	Foreign currency (loss) gain	$(8,066)	$6,063	$3,185
Foreign exchange forward contracts	Cost of sales	$13,240	$(3,760)	$(1,284)
Foreign exchange forward contracts	Net Sales	$—	$5,324	$—

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 hedges the foreign currency risk of the Malaysian Ringgit denominated principal and interest payments as we make swap payments in U.S. dollars and receive swap payments in Malaysian Ringgits at a fixed exchange rate of 3.19 MYR to USD. The notional amount of the swap is scheduled to decline in line with our scheduled principal payments on the underlying hedged debt. As of December 31, 2014 and 2013, the notional value of this cross-currency swap contract was MYR 310.1 million and MYR 387.5 million, respectively. This swap is a derivative instrument that qualifies for accounting as a cash flow hedge in accordance with ASC 815, and we designated it as such. We determined that this swap was highly effective as a cash flow hedge at December 31, 2014 and 2013. For the years ended December 31, 2014 and 2013, there were immaterial amounts of ineffectiveness from this cash flow hedge.

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 are 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 notional amount of the interest rate swap contract is scheduled to decline in line with our scheduled principal payments on the underlying hedged debt. As of December 31, 2014 and 2013, the notional value of this interest rate swap contract was €10.3 million ($12.5 million) and €19.7 million ($27.2 million), respectively. This derivative instrument qualifies for accounting as a cash flow hedge in accordance with ASC 815, and we designated it as such. We determined that our interest rate swap contract was highly effective as a cash flow hedge at December 31, 2014 and 2013. For the years ended December 31, 2014, 2013, and 2012, there were immaterial amounts of ineffectiveness from this cash flow hedge.

In the following 12 months, we expect to reclassify to earnings $3.2 million of net unrealized losses related to swap contracts that are included in accumulated other comprehensive income (loss) at December 31, 2014 as we realize the earnings effect of the underlying loans. The amount we ultimately record to earnings will depend on the actual interest rates and foreign exchange rate when we realize the earnings effect of the underlying loans.

Foreign Currency Exchange Risk

Cash Flow Exposure

We expect many of the subsidiaries of our business to have material future cash flows that will be denominated in currencies other than the subsidiaries' functional currencies. Our primary cash flow exposures are net sales and expenses. Changes in the exchange rates between the functional currency 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 December 31, 2014 and 2013, these foreign exchange forward contracts hedged our forecasted cash flows for up to 6 months and 18 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 (loss)" 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 at December 31, 2014 and 2013. During the years ended December 31, 2014, 2013, and 2012, we did not discontinue any cash flow hedges because a hedging relationship was no longer highly effective.

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During the year ended December 31, 2014, we purchased foreign exchange forward contracts to hedge the exchange risk on forecasted cash flows denominated in Australian dollars and Japanese yen. As of December 31, 2014 and 2013, 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):

	December 31, 2014	
Currency	Notional Amount	USD Equivalent
Australian dollar	AUD 38.4	$31.5
Japanese yen	JPY 1,223.2	$10.3
	December 31, 2013	
Currency	Notional Amount	USD Equivalent
Australian dollar	AUD 148.9	$132.4

As of December 31, 2014 and 2013, the unrealized gain on these contracts was $6.6 million and $4.4 million, respectively.

In the following 12 months, we expect to reclassify to earnings $6.6 million of net unrealized gains related to these forward contracts that are included in accumulated other comprehensive income (loss) at December 31, 2014 as we realize the earnings effect of the related forecasted transactions. The amount we ultimately record to earnings will depend on the actual exchange rate when we realize the related forecasted transactions.

Transaction Exposure and Economic Hedging

Many subsidiaries of our business have assets and liabilities (primarily receivables, marketable securities, accounts payable, 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 our subsidiaries' functional currencies and the other currencies in which these assets and liabilities are denominated can create fluctuations in our reported 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 the 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 purchase foreign exchange forward contracts to economically hedge balance sheet and other exposures related to transactions with third parties. Such contracts are considered economic hedges and do not qualify for hedge accounting. We recognize gains or losses from the fluctuation in foreign exchange rates and the fair value of these derivative contracts in "Net sales," "Cost of sales," and "Foreign currency gain (loss)" on our consolidated statements of operations, depending on where the gain or loss from the economically hedged item is classified on our consolidated statements of operations. As of December 31, 2014, the total net unrealized gain on our economic hedge foreign exchange forward contracts was $4.1 million. As of December 31, 2013, the total net unrealized loss on our economic hedge foreign exchange forward contracts was $0.2 million. As these amounts do not qualify for hedge accounting, changes in the fair value of such derivative instruments are recorded directly to earnings. These contracts have maturities of less than three months.

As of December 31, 2014 and 2013, 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):

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	December 31, 2014		
Transaction	Currency	Notional Amount	USD Equivalent
Purchase	Euro	€91.1	$110.9
Sell	Euro	€92.4	$112.5
Purchase	Australian dollar	AUD 26.0	$21.3
Sell	Australian dollar	AUD 118.0	$96.7
Purchase	Malaysian ringgit	MYR 146.0	$41.7
Sell	Malaysian ringgit	MYR 93.6	$26.7
Purchase	Canadian dollar	CAD 0.7	$0.6
Sell	Canadian dollar	CAD 8.3	$7.1
Purchase	Japanese yen	JPY 244.6	$2.1
Sell	Japanese yen	JPY 2,322.1	$19.5
Purchase	British pound	GBP 1.4	$2.2
Sell	British pound	GBP 37.7	$58.6

	December 31, 2013		
Transaction	Currency	Notional Amount	USD Equivalent
Purchase	Euro	€108.2	$149.2
Sell	Euro	€116.7	$161.0
Purchase	Australian dollar	AUD 7.3	$6.5
Sell	Australian dollar	AUD 14.6	$13.0
Purchase	Malaysian ringgit	MYR 185.1	$55.5
Sell	Malaysian ringgit	MYR 95.0	$28.5
Purchase	Canadian dollar	CAD 24.0	$22.6
Sell	Canadian dollar	CAD 40.3	$37.9
Sell	Japanese yen	JPY 775.0	$5.9

11. 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. Our cash equivalents consisted of money market funds at December 31, 2014 and 2013, respectively. 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. Our marketable securities consisted of foreign debt, time deposits, U.S. debt, and U.S. government obligations and foreign debt, foreign government obligations, U.S. debt, and U.S. government obligations at December 31, 2014 and 2013, respectively. At December 31, 2014 and 2013, our restricted investments consisted of foreign and U.S. government obligations. We value our marketable securities and restricted investments using quoted prices for securities with similar characteristics and other observable inputs (such as interest rates that are observable at commonly quoted intervals), and accordingly, we classify the valuation techniques that use these inputs as Level 2. We also consider the effect of our counterparties' credit standings in these fair value measurements.

- Derivative assets and liabilities. At December 31, 2014 and 2013, our derivative assets and liabilities consisted of foreign exchange forward contracts involving major currencies, an interest rate swap contract involving a benchmark of interest rates, and a cross-currency swap including both. Since our derivative assets and liabilities are not traded on an exchange, we value them using industry standard valuation models. Where applicable, these models project future

cash flows and discount the future 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 these valuation techniques as Level 2. We consider the effect of our own credit standing and that of our counterparties in our fair value measurements of our derivative assets and liabilities, respectively.

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At December 31, 2014 and 2013, the fair value measurements of our assets and liabilities that we measure on a recurring basis were as follows (in thousands):

	As of December 31, 2014			
		Fair Value Measurements at Reporting Date Using		
	Total Fair Value and Carrying Value on Our Balance Sheet	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Cash equivalents:				
Money market funds	$1,602	$1,602	$—	$—
Marketable securities:				
Foreign debt	462,731	—	462,731	—
Time deposits	40,000	40,000	—	—
U.S. debt	2,800	—	2,800	—
U.S. government obligations	3,501	—	3,501	—
Restricted investments (excluding restricted cash)	357,235	—	357,235	—
Derivative assets	9,791	—	9,791	—
Total assets	$877,660	$41,602	$836,058	$—
Liabilities:				
Derivative liabilities	$16,698	$—	$16,698	$—

	As of December 31, 2013			
		Fair Value Measurements at Reporting Date Using		
	Total Fair Value and Carrying Value on Our Balance Sheet	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Cash equivalents:				
Money market funds	$2,889	$2,889	$—	$—
Marketable securities:				
Foreign debt	364,046	—	364,046	—
Foreign government obligations	25,115	—	25,115	—
U.S debt	46,439	—	46,439	—
U.S. government obligations	3,502	—	3,502	—
Restricted investments (excluding restricted cash)	279,274	—	279,274	—
Derivative assets	8,278	—	8,278	—
Total assets	$729,543	$2,889	$726,654	$—
Liabilities:				
Derivative liabilities	$16,204	$—	$16,204	$—

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Fair Value of Financial Instruments

The carrying values and fair values of our financial and derivative instruments at December 31, 2014 and 2013 were as follows (in thousands):

	December 31, 2014		December 31, 2013	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Assets:				
Marketable securities	$509,032	$509,032	$439,102	$439,102
Foreign exchange forward contract assets	$9,791	$9,791	$8,278	$8,278
Restricted investments (excluding restricted cash)	$357,235	$357,235	$279,274	$279,274
Notes receivable - noncurrent	$12,096	$12,189	$9,655	$9,633
Notes receivable, affiliate - noncurrent	$9,127	$9,812	$—	$—
Liabilities:				
Long-term debt, including current maturities	$216,921	$224,489	$223,323	$224,435
Interest rate swap contract liabilities	$210	$210	$703	$703
Cross-currency swap contract liabilities	$11,991	$11,991	$9,673	$9,673
Foreign exchange forward contract liabilities	$4,497	$4,497	$5,828	$5,828

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

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

Credit Risk

We have certain financial and derivative instruments that subject us to credit risk. These consist primarily of cash, cash equivalents, marketable securities, restricted investments, interest rate swap and cross-currency swap contracts, 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 investments, interest rate swap and cross-currency swap contracts, 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.

12. Investments in Unconsolidated Affiliates and Joint Ventures

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

investments as of December 31, 2014 and 2013 (in thousands):

	2014	2013
Equity method investments	$249,614	$12,148
Cost method investments	5,415	5,173
Investments in unconsolidated affiliates and joint ventures	$255,029	$17,321

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SG2 Holdings, LLC

In November 2014, we completed the sale of 51% of our 150 MW Solar Gen 2 project to Southern Power Company for net revenue of $459.2 million and accounted for the transaction as a partial sale of real estate pursuant to ASC 360. The Solar Gen 2 project spans three sites, each of which is an approximately 50 MW grid-connected PV solar power system, comprising a combined 1,451 acres of land in Imperial County, California. Electricity generated by the systems is contracted to serve a 25-year PPA with a local utility company. Our remaining 49% membership interest in the project holding company, SG2 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 year ended December 31, 2014, we recognized a loss of $0.4 million, net of tax, from our investment in Solar Gen 2. As of December 31, 2014, the carrying value of our investment was $219.9 million.

Clean Energy Collective, LLC

In November 2014, we entered into various agreements to purchase a 28% ownership interest in Clean Energy Collective, LLC (CEC) for $21.8 million, including $0.8 million of transaction costs. This investment represented our latest entry into the distributed generation market and provided us with 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 of approximately 7% at prices at or above our initial investment price per unit.

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, of which CEC borrowed an initial amount of $9.1 million. All loans are due in November 2017 on the third anniversary of the initial loan agreement. Interest is payable semiannually and may be capitalized to the outstanding principal balance of the loans at CEC's election. The loans bear interest at rates ranging from 7% to 16% depending on CEC's current capital structure. As of December 31, 2014, the balance outstanding on the loans was $9.1 million.

CEC is considered a variable interest entity, and our 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 portion of the $19.3 million basis difference resulting from the cost of our investment differing from our proportionate share of CEC's equity. During the year ended December 31, 2014, we recognized a loss of $0.3 million, net of tax from our investment in CEC. As of December 31, 2014, the carrying value of our investment was $19.5 million.

Joint Venture with Customer

In September 2013, we contributed an immaterial amount for a 50% ownership interest in a newly formed joint venture, which was established to develop solar power projects in Europe, North Africa, the United States, and the Middle East. One of our customers also contributed an immaterial amount for the remaining 50% ownership interest in the joint venture. The project development and related activities of the entity are governed by a joint venture agreement. The intent of this agreement is to outline the general parameters of the arrangement with our customer, whereby we will supply solar modules for various solar power projects and our customer will develop and construct the projects. The joint venture agreement also requires each party to consent to all decisions made for the most

significant activities of the entity. There are no requirements for us to make further contributions to the joint venture, and the proceeds from the sale of any future projects are to be divided equally between us and our customer after the repayment of any project financing and project development related costs.

In 2014, we subsequently entered into various loan agreements with solar power project entities of the joint venture pursuant to which the project entities may borrow funds for the construction of PV solar power systems in the United Kingdom. The loans bear interest at rates from 6% to 8% per annum and are payable at the earlier of the sale of the associated project entities or maturity on September 30, 2015. As of December 31, 2014, the balance outstanding on the loans was £8.0 million ($12.5 million).

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The joint venture is considered a variable interest entity, and our ownership interest in and loans to the project entities of the joint venture are considered variable interests. We accounted for our investment in the joint venture under the equity method of accounting as we concluded we are not the primary beneficiary of the joint venture given that we currently share the power to make the decisions that most significantly impact the entity's economic performance. The variable interest model may require a reconsideration as to whether we are the primary beneficiary of the variable interest entity due to changes in facts and circumstances. A failure of a project entity to repay its loan agreements by September 30, 2015 would be an event of default that triggers our ability to take over key decisions that would significantly impact the defaulting project entity's economic performance. Our specific rights in the event of default would include (i) a unilateral right to terminate the EPC contractor, (ii) a unilateral right to negotiate the sale of the project, and (iii) an ability to enforce our rights over all of the project entity's shares, which have been pledged as a form of security. Such a development would be a reconsideration event that could result in us concluding that we are the primary beneficiary of the defaulting project entity.

13. 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 prepare estimates of contracted revenues and costs to complete our projects. In making such estimates, management judgments are required to evaluate significant assumptions including the cost of materials and labor, expected labor productivity, the impact of potential variances in schedule completion, the amount of net contract revenues, and the impact of any penalties, claims, change orders, or performance incentives. If estimated total costs on any contract are greater than the contract revenues, we recognize the entire estimated loss in the period the loss becomes known. The cumulative effect of the changes in estimates related to contract revenues and costs to complete contracts are recognized in the period in which the revised estimates are identified and 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) changes in estimates to reflect actual costs, (ii) construction plan accelerations or delays, (iii) module cost forecast changes, and (iv) other cost related change orders. Changes in estimates could have a material effect on our consolidated statements of operations. The table below outlines the impact on gross profit of the aggregate net changes in systems business contract estimates (both increases and decreases) for the years ended December 31, 2014 and 2013 as well as the number of projects that comprise such aggregate net changes in estimates. For purposes of the below table, we only include projects that have a net impact on gross profit from changes in estimates of at least $1.0 million during a period. Also included in the table below is the net change in estimates as a percentage of the aggregate gross profit for such projects for each period.

	2014		2013	
Number of projects	9		6	
Increases in gross profit resulting from net changes in estimates (in thousands)	$40,118		$8,465	
Net change in estimates as percentage of aggregate gross profit for associated projects	1.6	%	0.4	%

14. Solar Module Collection and Recycling Liability

We established a voluntary module collection and recycling program to collect and recycle modules sold and covered under such program once these modules have reached the end of their useful lives. Historically, we included a description of our module collection and recycling obligations in customer sales contracts covered under the program. Based on the terms of these contracts, we agreed to cover the costs for the collection and recycling of qualifying solar modules, and the end-users agreed 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.

For modules covered under this program, we record our collection and recycling obligation at the time of sale based on the estimated present value of the cost to collect and recycle covered solar modules within cost of sales. 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 the solar modules for transport, 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 this estimate on (i) our experience collecting and recycling our solar modules and on our expectations about future developments in recycling technologies and processes, (ii) economic conditions at the time the solar modules will be collected and recycled, and (iii) the expected timing of when our solar modules will be returned for recycling. In the periods between the time of our sales and the settlement of our collection and recycling obligations, 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

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our consolidated statement of operations. We periodically review our estimates of the expected future recycling costs and may adjust our liability accordingly.

During the year ended December 31, 2014, we did not make any significant changes to our recycling technology roadmap cost estimates or inflation assumptions based on our annual cost study. As part of this study, we obtained a high volume of operational cost data that confirmed our currently estimated future collection and recycling costs remained appropriate. We will continue to evaluate our estimates as technology and cost assumptions change in the future.

Our module collection and recycling liabilities at December 31, 2014 and 2013 totaled $246.3 million and $225.2 million, respectively. We charged $30.7 million, $15.1 million, and $24.3 million to cost of sales for the estimated cost of our collection and recycling obligation for modules sold during the years ended December 31, 2014, 2013 and 2012, respectively. The accretion expense on our collection and recycling obligations was $7.5 million, $4.6 million, and $2.4 million during the years ended December 31, 2014, 2013, and 2012, respectively. A 1% increase in the annualized inflation rate used in our estimated future collection and recycling cost per module would increase our liability by $60.6 million, and a 1% decrease in that inflation rate would decrease our liability by $49.8 million.

The percentage of modules sold that were subject to our solar module collection and recycling liability was 56% and 99% for the years ended December 31, 2014 and 2013, respectively.

See also Note 8 “Restricted Cash and Investments,” for more information about our arrangements for funding of this liability.

15. Debt

Our long-term debt consisted of the following at December 31, 2014 and 2013 (in thousands):

Loan Agreement	Maturity	Loan Denomination	2014	2013
Revolving Credit Facility	July 2018 (Tranche A) October 2015 (Tranche B)	USD	$—	$—
Project Construction Credit Facilities	Various	Various	75,418	—
Malaysian Ringgit Facility Agreement	September 2018	MYR	88,606	117,630
Malaysian Euro Facility Agreement	April 2018	EUR	34,112	49,699
Malaysian Facility Agreement	March 2016	EUR	25,818	55,637
Capital lease obligations	Various	Various	1,558	2,041
Long-term debt principal			225,512	225,007
Less unamortized discount			(8,591)	(1,684)
Total long-term debt			216,921	223,323
Less current portion			(51,918)	(60,543)
Noncurrent portion			$165,003	$162,780

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 $600.0 million, with the right to request an increase up to $750.0 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 by us. These margins are subject to adjustments depending on our consolidated leverage ratio. We had no borrowings under our Revolving Credit Facility, as of December 31, 2014 and 2013, respectively. We had $202.5 million and $158.6 million of letters of credit using availability under our Revolving Credit Facility, leaving $397.5 million and $441.4 million of availability at December 31, 2014 and 2013, respectively.

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 December 31, 2014.

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In addition to paying interest on outstanding principal under the Revolving Credit Facility, we are required to pay a commitment fee, currently at the 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 equal to the applicable margin for Eurocurrency revolving loans on the face amount of each letter of credit and a fronting fee of 0.125%.

On July 15, 2013, we entered into the fourth amendment to the credit agreement (the "Amendment"). The Amendment provided for, among other things, the division of the Revolving Credit Facility into Tranche A commitments in an aggregate amount equal to $450.0 million and Tranche B commitments in an aggregate amount equal to $150.0 million and the extension of the maturity date of the Tranche A loans and commitment until July 15, 2018. The maturity date of the Tranche B loans and commitment is October 15, 2015 and is unchanged. The Amendment also contained certain covenant changes.

In connection with the Amendment, we entered into an Amended and Restated Guarantee and Collateral Agreement. Loans and letters of credit issued under the Revolving Credit Facility are jointly and severally, unconditionally, and irrevocably guaranteed by First Solar Inc.; First Solar Electric, LLC; First Solar Electric (California), Inc.; and First Solar Development, LLC and are secured by liens on substantially all of the guarantors' tangible and intangible assets other than certain excluded assets.

Project Construction Credit Facilities

On August 22, 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 an approximately 141 MW AC PV power plant located near Copiapó, Chile (the "Luz del Norte Credit Facilities").

Up to $230.0 million of the aggregate principal amount of the loans will be funded by OPIC. Of the OPIC commitment, $178.0 million is currently committed, while the remaining $52.0 million is subject to the occurrence of certain future events, including the execution by Luz del Norte of a PPA. The currently committed 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 will mature on September 15, 2029, and the variable rate loans will mature on September 15, 2032. As of December 31, 2014, the balance outstanding on the OPIC loan was $47.3 million.

Up to $60.0 million of the aggregate principal amount of the loans will be funded by IFC, of which 100% is currently committed. The IFC commitment is comprised of fixed rate loans in an aggregate principal amount of up to approximately $44.9 million and variable rate loans in an aggregate principal amount of up to approximately $15.1 million. The fixed rate loans will mature on September 15, 2029, and the variable rate loans will mature on September 15, 2032. As of December 31, 2014, the balance outstanding on the IFC loan was $16.0 million.

The OPIC and IFC loans are secured by liens over all of Luz del Norte's assets, which had an aggregate book value of $134.5 million as of December 31, 2014, and by a pledge of all of the equity interests in the entity. The financing agreements 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 December 31, 2014.

On August 22, 2014, Luz del Norte also entered into a Chilean Peso facility ("VAT facility" and together with the Luz del Norte Credit Facilities, the "Project Construction Facilities") equivalent to approximately $65.0 million with Banco de Crédito e Inversiones to fund Chilean value added tax incurred in connection with the construction of the Luz del Norte project described above. In connection with the VAT facility, First Solar, Inc. provided a guaranty of substantially all payment obligations of Luz del Norte thereunder. As of December 31, 2014, the balance outstanding under the VAT facility was $12.2 million.

Malaysian Ringgit Facility Agreement

FS Malaysia, our indirect wholly owned subsidiary, has 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 are secured by, among other things, FS Malaysia's leases over the leased 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 addition, FS Malaysia's obligations under the Malaysian Ringgit Facility Agreement are guaranteed, on an unsecured basis, by FSI. At

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December 31, 2014, buildings, machinery, equipment, and land leases with an aggregate net book value of $262.7 million were pledged as collateral for this loan.

The Malaysian Ringgit Facility Agreement contains negative covenants that, among other things, restrict, subject to certain exceptions, the ability of FS Malaysia to incur indebtedness, create liens, effect asset sales, engage in reorganizations, issue guarantees, and make loans. In addition, the agreement includes financial covenants relating to net total leverage ratio, interest coverage ratio, total debt to equity ratio, debt service coverage ratio, and tangible net worth. It also contains certain representations and warranties, affirmative covenants, and events of default provisions. We were in compliance with all covenants associated with the Malaysian Ringgit Facility Agreement through December 31, 2014.

Malaysian Euro Facility Agreement

FS Malaysia, our indirect wholly owned subsidiary, has 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 are 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 are subordinated to the claims of the lenders.

The Malaysian Euro Facility Agreement contains negative covenants that, among other things, restrict, subject to certain exceptions, the ability of FS Malaysia to grant liens over the equipment financed by the facilities, effect asset sales, provide guarantees, change its business, engage in mergers, consolidations and restructurings, and enter into contracts with FSI and its subsidiaries. In addition, the agreement includes the following financial covenants: maximum total debt to equity ratio, maximum total leverage ratio, minimum interest coverage ratio, and minimum debt service coverage ratio. It also contains certain representations and warranties, affirmative covenants, and events of default provisions. We were in compliance with all covenants associated with the Malaysian Euro Facility Agreement through December 31, 2014.

Malaysian Facility Agreement

FS Malaysia, our indirect wholly owned subsidiary, has entered into an export financing facility agreement ("Malaysian Facility Agreement") with a consortium of banks. FS Malaysia's obligations related to the agreement are guaranteed, on an unsecured basis, by FSI. In connection with the Malaysian Facility Agreement, all of FS Malaysia's obligations are secured by a first party, first legal charge over the machinery and equipment financed by the credit facilities, and any other documents, contracts, and agreements related to that machinery and equipment. Also in connection with the agreement, any payment claims of FSI against FS Malaysia are subordinated to the claims of the lenders. At December 31, 2014, machinery and equipment with an aggregate net book value of $22.0 million was pledged as collateral for these loans.

The Malaysian Facility Agreement contains negative covenants that, among other things, restrict, subject to certain exceptions, the ability of FS Malaysia to incur indebtedness, create liens, effect asset sales, engage in reorganizations, issue guarantees, and make loans. In addition, the Malaysian Facility Agreement includes financial covenants relating to net total leverage ratio, interest coverage ratio, total debt to equity ratio, debt service coverage ratio, and tangible net worth. The Malaysian Facility Agreement also contains certain representations and warranties, affirmative covenants, and events of default provisions. We were in compliance with all covenants associated with the Malaysian Facility Agreement as of December 31, 2014.

Variable Interest Rate Risk

Certain of our long-term debt agreements bear interest at prime, EURIBOR, KLIBOR, LIBOR, 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 EURIBOR would impact our cost of borrowing under our entire Malaysian Euro Facility Agreement, but would not impact our cost of borrowing of the floating-rate term loan under our Malaysian Facility Agreement as we entered into an interest rate swap contract to mitigate such risk. An increase in KLIBOR would not increase our cost of borrowing under our Malaysian Ringgit Facility Agreement as we entered into a cross-currency swap contract to mitigate such risk. An increase in prime, LIBOR, or equivalent variable rates would increase our cost of borrowing under our Revolving Credit Facility and Project Construction Credit Facilities.

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Our long-term debt borrowing rates as of December 31, 2014 were as follows:

Loan Agreement	Borrowing Rate at December 31, 2014
Revolving Credit Facility	2.42%
Project Construction 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%
Malaysian Ringgit Facility Agreement	KLIBOR plus 2.00% (2)
Malaysian Euro Facility Agreement	EURIBOR plus 1.00%
Malaysian Facility Agreement (1)	Fixed rate facility at 4.54% Floating rate facility at EURIBOR plus 0.55% (2)
Capital lease obligations	Various

(1) Outstanding balance split equally between fixed and floating rates.

(2) Interest rate hedges have been entered into relating to these variable rates. See Note 10 “Derivative Financial Instruments,” to our consolidated financial statements.

Future Principal Payments

At December 31, 2014, the future principal payments on our long-term debt, excluding payments related to capital leases, were due as follows (in thousands):

	Total Debt
2015	$52,021
2016	37,565
2017	44,750
2018	28,691
2019	2,025
Thereafter	58,902
Total long-term debt future principal payments	$223,954

16. Commitments and Contingencies

Financial Guarantees

In the normal course of business, we occasionally enter into agreements with third parties under which we guarantee the performance or obligations of our wholly owned subsidiaries related to certain contracts, which may include development, engineering, procurement of permits and equipment, construction management, and operating and maintenance services related to solar power plants. These agreements are considered guarantees of our own performance and no liabilities are separately recorded outside of any liabilities recorded by our subsidiaries.

Loan Guarantees

At December 31, 2014 and 2013, our only loan guarantees were guarantees of our own long-term debt, as disclosed in Note 15 “Debt,” to these consolidated financial statements.

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Commercial Commitments

During the normal course of business, we enter into commercial commitments in the form of letters of credit, surety bonds, and bank guarantees to provide financial and performance assurance to third parties. Our Revolving Credit Facility provides us the capacity to issue up to $600.0 million in letters of credit, subject to certain limits depending on the currencies of the letters of credit, at a fee equal to the applicable margin for Eurocurrency revolving loans and a fronting fee. As of December 31, 2014, we had $202.5 million in letters of credit issued under the Revolving Credit Facility with a remaining availability of $397.5 million, all of which can be used for the issuance of letters of credit. The substantial majority of these letters of credit were supporting our systems business projects. As of December 31, 2014, we had $6.0 million in bank guarantees and letters of credit issued outside of our Revolving Credit Facility, some of which were posted by certain of our foreign subsidiaries, $69.4 million of letters of credit issued under a bi-lateral facility secured with cash, and $168.7 million in surety bonds outstanding primarily for our systems business projects. The available bonding capacity under our surety lines was $624.3 million as of December 31, 2014.

Lease Commitments

We lease our corporate headquarters in Tempe, Arizona and administrative, research and development, business and marketing development, customer support, and government affairs offices throughout the United States and the rest of the world under non-cancelable operating leases. These leases may require us to pay property taxes, common area maintenance, and certain other costs in addition to base rent. We also lease certain machinery and equipment under operating and capital leases. Future minimum payments under all of our non-cancelable leases are as follows as of December 31, 2014 (in thousands):

	2015	2016	2017	2018	2019	Thereafter	Total Minimum Lease Payments	Less Amounts Representing Interest	Present Value of Minimum Lease Payments	Less Current Portion of Capital Leases	Noncurrent Portion of Capital Leases
Gross operating lease obligations	$19,420	$17,497	$16,724	$13,766	$10,891	$94,786	$173,084				
Sublease income	(1,449)	(1,449)	(1,449)	(906)	—	—	(5,253)				
Net operating lease obligations	17,971	16,048	15,275	12,860	10,891	94,786	167,831				
Capital leases	563	540	514	129	109	—	1,855	(297)	1,558	(372)	1,186
Total	$18,534	$16,588	$15,789	$12,989	$11,000	$94,786	$169,686				

Our rent expense was $18.0 million, $14.4 million, and $19.2 million for the years ended December 31, 2014, 2013, and 2012, respectively.

Purchase Commitments

We purchase raw materials for inventory, construction, services, and manufacturing equipment from a variety of vendors. During the normal course of business, in order to manage manufacturing lead times and help assure an

adequate supply, we enter into agreements with suppliers that either allow us to procure goods and services when we choose or that establish purchase requirements. In certain instances, the agreements with purchase requirements allow us the option to cancel, reschedule, or adjust our requirements based on our business needs prior to firm orders being placed. Consequently, only a portion of our purchase commitments are firm, non-cancelable, and unconditional. At December 31, 2014, our obligations under firm, non-cancelable, and unconditional agreements were $406.4 million, of which $36.6 million was for commitments related to capital purchases. $296.1 million of our purchase obligations are due in 2015.

Product Warranties

When we recognize revenue for module or systems project sales, we accrue a liability for the estimated future costs of meeting our limited warranty obligations for both modules and the balance of the systems. We make and revise this estimate 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 BoS components, and our estimated replacement cost.

From time to time, we have taken remediation actions in respect of affected modules beyond our limited warranty, 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 obligation may be material to our consolidated statements of operations if we commit to any such remediation actions.

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Product warranty activities during the years ended December 31, 2014, 2013, and 2012 were as follows (in thousands):

	2014	2013	2012
Product warranty liability, beginning of period	$198,041	$191,596	$157,742
Accruals for new warranties issued	40,599	35,985	40,863
Settlements	(16,721)	(33,499)	(60,644)
Changes in estimate of product warranty liability	1,138	3,959	53,635
Product warranty liability, end of period	$223,057	$198,041	$191,596
Current portion of warranty liability	$69,656	$67,097	$90,581
Noncurrent portion of warranty liability	$153,401	$130,944	$101,015

At December 31, 2014, our accrued liability for product warranty was $223.1 million. We have historically estimated our product warranty liability for power output and defects in materials and workmanship under normal use and service conditions to have an estimated warranty return rate of approximately 3% of modules covered under warranty. A 1% change in estimated warranty return rate would change our estimated module warranty liability by approximately $60.4 million, and a 1% change in estimated warranty return rate for balance of systems would not have a material impact on our warranty liability.

Accrued Expenses in Excess of Product Warranty

During the period from June 2008 to June 2009, a manufacturing excursion occurred whereby certain modules manufactured during that time period may experience premature power loss once installed in the field. We initiated a voluntary remediation program beyond our standard limited warranty pursuant to which we made commitments to customers with systems containing modules manufactured during the relevant period that we would cover certain costs of remediation efforts. These remediation efforts included module removal, replacement, and logistical services and additional compensation payments to customers under certain circumstances. As of each fiscal period in question, we have estimated our voluntary remediation program accrual based on evaluation and consideration of the then-currently available information, including the estimated number of affected modules in the field, historical experience related to our voluntary remediation efforts, customer-provided data related to potentially affected systems, and the estimated costs of performing the logistical services covered under our remediation program. During the years ended December 31, 2014 and 2013, we did not record any additional expenses associated with our voluntary remediation program.

As of December 31, 2014 and 2013, accrued expenses in excess of normal product warranty liability were $30.9 million and $52.1 million, of which $7.8 million and $12.5 million, respectively, was classified as current and $23.1 million and $39.6 million, respectively, was classified as noncurrent and included in “Accrued expenses” and “Other liabilities,” respectively, on our consolidated balance sheets.

As of December 31, 2014 and 2013, $27.2 million and $42.7 million of accrued expenses in excess of normal product warranty liability related to the manufacturing excursion during the period between June 2008 and June 2009, whereby certain modules manufactured during that time period may experience premature power loss once installed in the field. The accrued expenses consist primarily of estimated compensation payments to customers, under certain circumstances, for power lost prior to remediation of the customer’s system under our remediation program, and to a lesser extent, remediation efforts related to module removal, replacement, and logistical services committed to by us beyond the normal product warranty.

As of December 31, 2014 and 2013, $3.7 million and $9.4 million of accrued expenses in excess of normal product warranty liability and related expenses include commitments to certain customers related to a workmanship issue potentially affecting a limited number of solar modules manufactured between October 2008 to June 2009. A limited

number of the modules manufactured during that time utilized a new material and process to attach the cord plate (junction box) to the module which may not adhere securely over time. We know the serial numbers of the affected modules and have proactively contacted the system owners to repair or replace the potentially impaired modules currently in service in a manner consistent with our normal workmanship warranty. For roof-mounted systems, we will also remove and replace the affected modules at no cost to the system owner, which remediation is in excess of our limited workmanship warranty obligation.

Our best estimate for such remediation programs is based on evaluation and consideration of currently available information, including the estimated number of potentially affected modules in the field, historical experience related to our remediation efforts, customer provided data related to potentially affected systems, the estimated costs of performing the removal, replacement, and logistical services and the post-sale expenses covered under our remediation program. If any of our estimates prove incorrect, we could be required to accrue additional expenses.

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Performance Guarantees

As part of our systems business, we conduct performance testing of the solar power plant prior to substantial completion to confirm the power plant meets operational and capacity expectations noted in the EPC agreement. In addition, we may provide an energy generation performance test during the first year of the solar power plant's operation. Such a test is designed to demonstrate that the actual energy generation for the first year meets or exceeds the modeled energy expectation, after certain adjustments and exclusions. If there is an underperformance event, determined at the end of the first year after substantial completion, we may incur liquidated damages as a percentage of the EPC contract price. In some instances, a bonus payment may be received at the end of the first year if the power plant performs above a certain level.

Under our O&M service offering, we typically include an effective availability guarantee when we provide long-term total asset management services. In limited cases, a form of energy generation performance test is offered in lieu of the availability guarantee up to a maximum of five years. In such cases, liquidated damages are incurred at the lost energy price noted in the PPA. Additionally, as part of our O&M service guarantees there is potential for bonus payments.

As of December 31, 2014 and 2013, we recorded $4.3 million and $11.5 million, respectively, of estimated obligations under such arrangements, of which $4.3 million and zero, respectively, was classified as "Other current liabilities" and zero and $11.5 million, respectively, was classified as "Other liabilities" in the accompanying consolidated balance sheets.

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. As of December 31, 2014 no such projects existed.

Contingent Consideration

In connection with our TetraSun and Solar Chile acquisitions, we agreed to pay additional amounts to sellers contingent upon achievement by the acquired businesses of certain negotiated goals, such as targeted project and module shipment volume milestones. We have recognized $4.9 million and $16.5 million of current liabilities and $14.7 million and $11.7 million of long-term liabilities for these contingent obligations based on their estimated fair value as of December 31, 2014 and 2013, respectively.

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 we are also pursuing opportunities to acquire advanced-stage projects, which already have PPAs in place. In connection with these project acquisitions, we agree to pay additional amounts to project sellers upon achievement of project related milestones such as obtaining a purchase price agreement, 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 December 31, 2014 and 2013, we have recorded $31.9 million and $21.3 million of current liabilities, respectively, and $2.4 million and $47.3 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.

Legal Proceedings

Legal Matters

We are party to legal matters and claims that are normal in the 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.

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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 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. The deadline to complete merits discovery is February 27, 2015. The deadline to file motion(s) for summary judgment is March 27, 2015.

Merits discovery is continuing. 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.

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 District of Arizona. On July 12, 2013, the court adopted the magistrate judge's Report and Recommendation and ordered the case transferred to the District of Arizona. 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.

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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 shareholder 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 November 6, 2014, the court ordered that the action shall remain on its inactive calendar until March 31, 2015.

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.

17. Stockholders' Equity

Preferred Stock

We have authorized 30,000,000 shares of undesignated preferred stock, $0.001 par value, none of which was issued and outstanding at December 31, 2014. Our board of directors is authorized to determine the rights, preferences, and restrictions on any series of preferred stock that we may issue.

Common Stock

We have authorized 500,000,000 shares of common stock, $0.001 par value, of which 100,288,942 shares were issued and outstanding at December 31, 2014. Each share of common stock is entitled to a single vote. We have not declared or paid any dividends through December 31, 2014.

During June 2013, we completed an equity offering of 9,747,000 shares of our common stock at a public offering price of $46.00 per share. Net proceeds from the equity offering were $428.2 million, after deducting $17.9 million of underwriting discounts and offering expenses of $2.2 million. We have used proceeds from this offering for general corporate purposes, which includes items such as acquisitions of under development PV solar power system projects, investments in PV solar power system projects that will be jointly developed with strategic partners, and capital expenditures or strategic investments to develop certain business units and expand in new geographies.

18. 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 consolidated statements of operations for the years ended December 31, 2014, 2013, and 2012 was as follows (in thousands):

	2014	2013	2012
Share-based compensation expense included in:			
Cost of sales	$11,713	$17,610	$22,842
Research and development	4,417	5,760	7,149
Selling, general and administrative	27,660	31,426	5,315
Production start-up	20	283	794

Restructuring and asset impairments	—	—	871
Total share-based compensation expense	$43,810	$55,079	$36,971

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The following table presents our share-based compensation expense by type of award for the years ended December 31, 2014, 2013, and 2012 (in thousands):

	2014	2013	2012
Stock options	$—	$—	$273
Restricted and performance stock units	42,852	51,927	36,283
Unrestricted stock	1,326	1,253	845
Stock purchase plan	1,003	998	761
	45,181	54,178	38,162
Net amount (absorbed into) released from inventory	(1,371)	901	(1,191)
Total share-based compensation expense	$43,810	$55,079	$36,971

Share-based compensation expense capitalized in our inventory was $5.3 million, $3.6 million, and $4.5 million at December 31, 2014, 2013, and 2012, respectively. As of December 31, 2014, we had no unrecognized share-based compensation expense related to unvested stock option awards, and $42.8 million of unrecognized share-based compensation expense related to unvested restricted and performance stock units including our stock purchase plan, which we expect to recognize as expense over a weighted-average period of approximately 1.3 years.

The estimated forfeiture rate used to record compensation expense is based on historical forfeitures and is adjusted periodically based on actual results. At December 31, 2014 and 2013, our forfeiture rates were 9.5% and 9.5%, respectively.

During the years ended December 31, 2014, 2013, and 2012, we recognized an income tax benefit in our statement of operations of $15.8 million, $19.4 million, and $12.3 million, respectively, related to share-based compensation expense.

We authorize our transfer agent to issue new shares, net of shares withheld for minimum statutory withholding taxes as appropriate, for the exercise of stock options, vesting of restricted stock units, or grants of unrestricted stock.

Share-Based Compensation Plans

During 2010, we adopted our 2010 Omnibus Incentive Compensation Plan (“the 2010 Plan”). This plan differs from prior equity compensation plans in that the 2010 Plan (i) incorporates additional performance criteria applicable to performance compensation awards and enables us to grant “performance based compensation” within the meaning of Section 162(m) of the Internal Revenue Code, (ii) reflects changes in the law (such as Section 409A of the Internal Revenue Code), and (iii) responds to other compensation and governance trends. Under the 2010 Plan, directors, officers, employees, and consultants of First Solar, Inc. (including any of its subsidiaries) are eligible to participate. The 2010 Plan is administered by the compensation committee of our board of directors (or any other committee designated by our board of directors), which is authorized to, among other things, determine who will receive grants and determine the exercise price and vesting schedule of the awards made under the 2010 Plan. Our board of directors may amend, modify, or terminate the 2010 Plan without the approval of our stockholders, except stockholder approval is required for amendments that would increase the maximum number of shares of our common stock available for awards under the 2010 Plan, increase the maximum number of shares of our common stock that may be delivered by incentive stock options, or modify the requirements for participation in the 2010 Plan.

The 2010 Plan provides for the grant of incentive stock options, non-qualified stock options, stock appreciation rights, restricted shares, restricted stock units, performance units, cash incentive awards, other stock-based awards, dividends and dividend equivalents, and performance compensation awards. The maximum number of new shares of our common stock that may be delivered by awards granted under the 2010 Plan is 6,000,000. Also, the shares underlying forfeited, expired, terminated, or canceled awards, or shares surrendered as payment for taxes required to be withheld

become available for new award grants. We may not grant awards under the 2010 Plan after 2020, which is the tenth anniversary of the 2010 Plan's approval by our stockholders. At December 31, 2014, 3,383,172 shares were available for grant under the 2010 Plan.

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Stock Options

Following is a summary of our stock options as of December 31, 2014 and changes during the year then ended:

	Number of Shares Under Option	Weighted Average Exercise Price	Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Options outstanding at December 31, 2013	50,051	$176.62		
Options granted	—	$—		
Options exercised	—	$—		
Options forfeited or expired	(40,051)	$154.08		
Options outstanding at December 31, 2014	10,000	$266.90	0.0	$—
Options vested and exercisable at December 31, 2014	0	$—	0.0	$—

During the years ended December 31, 2014, 2013, and 2012, we received net cash proceeds of zero, $1.1 million, and $0.2 million, respectively, from the exercise of employee stock options. The total intrinsic value of employee stock options exercised was zero, $1.8 million, and $0.7 million during the years ended December 31, 2014, 2013, and 2012, respectively. We estimated the fair value of each stock option awarded on its grant date using the Black-Scholes-Merton closed-form option valuation formula. During the years ended December 31, 2014, 2013, and 2012, we did not grant any stock options.

Restricted Stock Units and Performance Based Restricted Stock Units

We issue shares to the holders of restricted units on the date the restricted stock units vest. The majority of shares issued are net of the minimum statutory withholding requirements, which we pay on behalf of our associates. As a result, the actual number of shares issued will be less than the number of restricted stock units granted. Prior to vesting, restricted stock units do not have dividend equivalent rights or voting rights, and the shares underlying the restricted stock units are not considered issued and outstanding.

Some of our restricted stock units below are characterized as performance based restricted stock units. Our board of directors approved and adopted the Key Senior Talent Equity Performance Program (“KSTEPP”), a performance unit program under the 2010 Omnibus Plan applicable to our senior executives. The KSTEPP rewards achievement of certain performance objectives aligned to the success of our Long Term Strategic Plan. The performance objectives for the rolling annual measurement periods include KSTEPP adjusted operating income, sales in sustainable markets, and cash adjusted return on invested capital. The KSTEPP awards were designed so that the attainment of the performance criteria required for full or partial vesting would be attained over time, which may be several years from the date of the grant, and the earliest any KSTEPP award was able to vest, other than in the event of a change in control, as defined, was December 31, 2014.

Following is a summary of our restricted stock and performance units as of December 31, 2014 and changes during the year then ended:

	Number of Shares	Weighted Average Grant-Date Fair Value
Unvested restricted stock units at December 31, 2013	5,229,722	$32.33
Restricted stock units granted	438,889	57.74
Restricted stock units vested	(995,822)	54.48

Restricted stock units forfeited	(459,991)	29.21
Unvested restricted stock units at December 31, 2014	4,212,798	$30.08

We estimate the fair value of our restricted stock unit awards based on our stock price on the grant date. For the years ended December 31, 2013 and 2012, the weighted average grant-date fair value for restricted stock units granted in such years was $29.56 and $28.97, respectively. The total fair value of restricted stock units vested during 2014, 2013, and 2012 was $66.8 million, $33.6 million, and $14.3 million, respectively.

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Stock Awards

During the years ended December 31, 2014, 2013, and 2012, we awarded 21,879, 31,891, and 37,993, respectively, of fully vested, unrestricted shares of our common stock to the independent members of our board of directors. We recognized $1.3 million, $1.3 million, and $0.8 million of share-based compensation expense for these awards during the years ended December 31, 2014, 2013, and 2012, respectively.

Stock Purchase Plan

Our shareholders approved a stock purchase plan for employees in June 2010. The plan allows employees to purchase our common stock through payroll withholdings over a six-month offering period at 85% of the closing share price on the last day of the offering period. We estimate the fair value of the stock purchase plan compensation expense based primarily on our stock price on the offering date.

19. Benefit Plans

We offer a 401(k) retirement savings plan into which all of our U.S. associates (our term for employees) can voluntarily contribute a portion of their annual salaries and wages, subject to legally prescribed dollar limits. Our contributions to our associates' plan accounts are made at the discretion of our board of directors and are based on a percentage of the participating associates' contributions. Associate contributions are matched dollar-for-dollar up to the first 4%. Our contributions to the plan were $6.5 million, $6.7 million, and $7.0 million for the years ended December 31, 2014, 2013, and 2012, respectively. None of these benefit plans offered participants an option to invest in our common stock.

We also offer certain retirement savings plans to certain non-U.S. associates. These plans are managed in accordance with applicable local statutes and practices and are defined contribution plans. Our contributions to these plans were $0.9 million, $0.9 million, and $1.3 million during the years ended December 31, 2014, 2013, and 2012, respectively.

20. Income Taxes

The components of our income tax expense (benefit) for the years ended December 31, 2014, 2013, and 2012 were as follows (in thousands):

	2014	2013	2012
Current expense:			
Federal	$15,616	$44,444	$37,882
State	1,717	825	(1,085)
Foreign	6,917	788	6,799
Total current expense	24,250	46,057	43,596
Deferred expense (benefit):			
Federal	2,926	(12,022)	7,374
State	5,133	2,229	(2,965)
Foreign	(2,185)	(11,085)	8,529
Total deferred expense (benefit)	5,874	(20,878)	12,938
Total income tax expense	$30,124	$25,179	$56,534

The current tax expense listed above does not reflect income tax benefits of $25.7 million, $21.0 million, and $4.4 million for the years ended December 31, 2014, 2013, and 2012, respectively, related to excess tax deductions on share-based compensation because we recorded these benefits directly to additional paid-in capital.

The U.S. and non-U.S. components of our income (loss) before income taxes for the years ended December 31, 2014, 2013, and 2012 were as follows (in thousands):

	2014	2013	2012
U.S. income	$139,026	$75,747	$96,766
Non-U.S. income (loss)	292,965	302,633	(136,570)
Income (loss) before income taxes	$431,991	$378,380	$(39,804)

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We account for our investment tax credits using the "deferred method" of accounting under which the tax benefit generated from an investment tax credit is recorded as a reduction to the U.S. GAAP fixed asset basis. As a result of a project being placed into service in the second quarter of 2014, we generated $20.7 million of investment tax credit.

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 in meeting certain employment and investment thresholds.

Our effective tax rates were 7.0% and 6.7% for the years ended December 31, 2014 and 2013, respectively. Income tax expense increased by $4.9 million during 2014 compared with 2013. The increase in income tax expense was primarily attributable to an increase in pretax book income earned in higher tax jurisdictions in 2014, partially offset by a discrete tax benefit of $26.2 million due to the expiration of the statute of limitations for various uncertain tax positions.

Our effective tax rates were 6.7% and (142.0)% for the years ended December 31, 2013 and 2012, respectively. Income tax expense decreased by $31.4 million during 2013 compared to 2012. The decrease in income tax expense was primarily attributable to the establishment of valuation allowances against previously established deferred tax assets in certain foreign jurisdictions, operating losses generated in jurisdictions for which no tax benefit is recorded, and a greater percentage of profits earned in higher tax jurisdictions.

Our income tax results differed from the amount computed by applying the U.S. statutory federal income tax rate of 35% to our income (loss) before income taxes for the following reasons for the years ended December 31, 2014, 2013, and 2012 (in thousands):

	2014		2013		2012	
	Tax	Percent	Tax	Percent	Tax	Percent
Statutory income tax expense (benefit)	$151,189	35.0 %	$132,427	35.0 %	$(13,931)	35.0 %
Non-deductible expenses	3,001	0.7 %	707	0.2 %	1,364	(3.4)%
State tax, net of federal benefit	4,567	1.1 %	1,568	0.4 %	(2,739)	6.9 %
Effect of tax holiday	(80,049)	(18.5)%	(80,076)	(21.2)%	(78,313)	196.7 %
Foreign tax rate differential	(8,730)	(2.0)%	(24,673)	(6.5)%	8,422	(21.2)%
Tax credits	(3,014)	(0.7)%	(13,267)	(3.5)%	(4,428)	11.1 %
Other	(5,198)	(1.3)%	2,447	0.7 %	(783)	2.1 %
Impact of changes in valuation allowance	(31,642)	(7.3)%	6,046	1.6 %	146,942	(369.2)%
Reported income tax expense	$30,124	7.0 %	$25,179	6.7 %	$56,534	(142.0)%

For the year ended December 31, 2014, the tax benefit from the foreign tax rate differential primarily relates to our income generated in Malaysia calculated at statutory tax rate of 25.0%, compared to the U.S. statutory tax rate of 35.0%. For the year ended December 31, 2013, the tax benefit from the foreign tax rate differential primarily relates to our income generated in Germany and Malaysia calculated at the statutory tax rates of 29.6% and 25.0%, respectively, compared to the U.S. statutory tax rate of 35.0%. For the year ended December 31, 2012, the tax expense from the foreign tax rate differential primarily relates to our loss generated in Germany offset by income generated in Malaysia calculated at statutory tax rates of 29.3% and 25.0%, respectively, compared to the U.S. statutory tax rate of 35.0%.

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities calculated for U.S. GAAP financial reporting purposes and the amounts calculated for preparing our income tax returns in accordance with tax regulations. The items that gave rise to our deferred taxes for the years ended

December 31, 2014 and 2013 were as follows (in thousands):

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	2014	2013
Deferred tax assets:		
Goodwill	$39,299	$46,465
Economic development funding	—	1,364
Compensation	38,890	32,200
Accrued expenses	59,517	38,127
Tax credits	174,633	169,977
Net operating losses	86,268	131,932
Inventory	11,435	8,290
Deferred expenses	3,778	21,364
Property, plant and equipment	48,026	40,988
Long-term contracts	10,100	44,747
Other	5,736	189
Deferred tax assets, gross	477,682	535,643
Valuation allowance	(129,323)	(160,965)
Deferred tax assets, net of valuation allowance	348,359	374,678
Deferred tax liabilities:		
Capitalized interest	(5,216)	(3,356)
Acquisition accounting / basis difference	(13,780)	(13,124)
Restricted investments and derivatives	(18,124)	(3,094)
Investment in foreign subsidiaries	(967)	(3,978)
Other	(5,044)	(1,128)
Deferred tax liabilities	(43,131)	(24,680)
Net deferred tax assets and liabilities	$305,228	$349,998

During June 2014, we filed a request for a private letter ruling in a foreign jurisdiction related to the timing of the deduction for certain of our obligations. Our historical position has been to treat these obligations as currently deductible. This treatment has ultimately resulted in no tax benefit to the income statement due to an income tax holiday in the jurisdiction. The private letter ruling would change our method to treat these obligations as deductible when we actually make payments on the obligations. To the extent that the taxing authorities agree that the deduction should be taken at the time payments are made, there would be an approximate $41.0 million benefit through the tax provision to establish a deferred tax asset associated with the future deductibility of these obligations. We expect a ruling to be rendered during 2015.

Changes in our valuation allowance against our deferred tax assets were as follows during the years ended December 31, 2014 and December 31, 2013 (in thousands):

	2014	2013	2012
Valuation allowance, beginning of year	$160,965	$154,919	$7,977
Additions	2,068	15,059	146,942
Reversals	(33,710)	(9,013)	—
Valuation allowance, end of year	$129,323	$160,965	$154,919

We maintained a valuation allowance of $129.3 million and $161.0 million as of December 31, 2014 and 2013, respectively, against certain of our deferred tax assets, as it is more likely than not that such amounts will not be fully realized. In 2014, the valuation allowance decreased by $31.6 million primarily due to the partial release of valuation allowances in jurisdictions with current year operating income and a reduction of deferred tax assets with a full valuation allowance due to a decrease in foreign exchange rates, partially offset by an increase in valuation allowances due to current year operating losses.

Except as required under U.S. tax law, we do not provide for U.S. taxes on our undistributed earnings of foreign subsidiaries that have not been previously taxed since we intend to invest such undistributed earnings indefinitely outside of the U.S. If our intent changes or if these funds are needed for our U.S. operations, we would be required to accrue or pay U.S. taxes on some or all of these undistributed earnings. Accordingly, we have not provided for $839.6 million of deferred income taxes on $2.4 billion of undistributed earnings from non-U.S. subsidiaries. These taxes would be required to be recognized when and if we determine that these amounts are not indefinitely reinvested outside the U.S.

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At December 31, 2014, we had federal and aggregate state net operating loss carryforwards of $117.3 million and $20.5 million, respectively. At December 31, 2013, we had federal and aggregate state net operating loss carryforwards of $188.1 million and $41.9 million, respectively. If not used, the federal net operating loss will expire beginning in 2028, and the state net operating loss will begin to expire in 2015. The utilization of a portion of our net operating loss carryforwards is subject to an annual limitation under Section 382 of the Internal Revenue Code due to a change of ownership. However, we do not believe such annual limitation will impact our realization of the net operating loss carryforwards. Our deferred tax assets at December 31, 2014 do not include $21.7 million of excess tax deductions from employee stock option exercises and vested restricted stock units that comprise our net operating loss carryforwards. Our stockholders' equity will be increased by up to $21.7 million if and when we ultimately realize these excess tax benefits. We use tax law ordering when determining when excess tax benefits have been realized.

At December 31, 2014 we had federal and state research and development credit carryforwards of $28.6 million, U.S. foreign tax credit carryforwards of $137.0 million, and investment tax credits of $37.7 million available to reduce future federal and state income tax liabilities. If not used, the research and development credits, investment tax credits, and U.S. foreign tax credits will begin to expire in 2026 through 2034, 2026 through 2034, and 2016 through 2024, respectively.

A reconciliation of the beginning and ending amount of liabilities associated with uncertain tax positions for the years ended December 31, 2014, 2013, and 2012 is as follows (in thousands):

	2014	2013	2012
Unrecognized tax benefits, beginning of year	$146,889	$141,513	$82,911
Increases related to prior year tax positions	522	5,547	23,616
Decreases related to prior year tax positions	(957)	(14,092)	—
Decreases from lapse in statute of limitations	(28,649)	—	—
Decreases relating to settlements with authorities	(3,111)	—	—
Increases related to current tax positions	11,335	13,921	34,986
Unrecognized tax benefits, end of year	$126,029	$146,889	$141,513

If recognized, $120.1 million of unrecognized tax benefits would reduce our annual effective tax rate. Due to the uncertain and complex application of tax regulations, it is possible that the ultimate resolution of uncertain tax positions may result in liabilities that could be materially different from these estimates. In such an event, we will record additional tax expense or tax benefit in the period in which such resolution occurs. Our policy is to recognize any interest and penalties that we might incur related to our tax positions as a component of income tax expense. We did not accrue any penalties related to these unrecognized tax benefits during 2014, 2013, or 2012. We accrued interest related to these unrecognized tax benefits of zero in 2014 and $0.6 million in 2013. We did not accrue any interest related to unrecognized tax benefits in 2012. It is reasonably possible that approximately $13.4 million of unrecognized tax benefits will be recognized within the next twelve months.

The Internal Revenue Service ("the IRS") concluded their examination of the year ended December 31, 2011, during the fourth quarter of 2014 and did not propose any adjustments. The Company settled an audit with the German taxing authorities during the fourth quarter of 2014 and made $3.8 million of payments upon settlement. In addition, and unrelated to the aforementioned audit settlement, the Company continues to have discussions regarding an ongoing dispute with the German taxing authorities. The Company is subject to audit by various other state, local, and foreign tax authorities. 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 the Company's tax audits are resolved in a manner not consistent with our expectations, the Company could be required to adjust its provision for income taxes in the period such resolution occurs.

The following table summarizes the tax years that are either currently under audit or remain open and subject to examination by the tax authorities in the most significant jurisdictions in which we operate:

	Tax Years
Germany	2010 - 2014
Malaysia	2009 - 2014
United States	2008 - 2009; 2011 - 2014

In certain of the jurisdictions noted above, we operate through more than one legal entity, each of which has different open years subject to examination. The table above presents the open years subject to examination for the most material of the legal entities in each jurisdiction. Additionally, it is important to note that tax years are technically not closed until the statute of limitations

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in each jurisdiction expires. In the jurisdictions noted above, the statute of limitations can extend beyond the open years subject to examination.

21. Net Income (Loss) per Share

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

The calculation of basic and diluted net income (loss) per share for the years ended December 31, 2014, 2013, and 2012 was as follows (in thousands, except per share amounts):

	2014	2013	2012
Basic net income (loss) per share			
Numerator:			
Net income (loss)	$396,918	$353,038	$(96,338)
Denominator:			
Weighted-average common stock outstanding	100,048	93,697	86,860
Diluted net income (loss) per share			
Denominator:			
Weighted-average common stock outstanding	100,048	93,697	86,860
Effect of stock options, restricted and performance stock units, and stock purchase plan shares	1,595	1,771	0
Weighted-average shares used in computing diluted net income (loss) per share	101,643	95,468	86,860

	2014	2013	2012
Per share information - basic:			
Net income (loss) per share	$3.97	$3.77	$(1.11)
Per share information - diluted:			
Net income (loss) per share	$3.91	$3.70	$(1.11)

The following number of outstanding employee stock options, restricted and performance stock units, and stock purchase plan shares were excluded from the computation of diluted net income (loss) per share for the years ended December 31, 2014, 2013, and 2012 as they would have had an anti-dilutive effect (in thousands):

	2014	2013	2012
Anti-dilutive shares	70	86	1,497

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22. Comprehensive Income (Loss) and Accumulated Other Comprehensive Income (Loss)

Comprehensive income (loss), 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 (loss) and reflected as components of stockholders' equity, was as follows for the years ended December 31, 2014, 2013, and 2012 (in thousands):

	2014	2013	2012
Net income (loss)	$396,918	$353,038	$(96,338)
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments	(19,147)	4,295	9,896
Unrealized (loss) gain on marketable securities and restricted investments for the period (net of tax of $(6,644), $3,334, and $(1,835), respectively)	90,868	(39,685)	26,829
Less: reclassification for (gains) included in net income (loss) (net of tax of $83, $0, and $0, respectively)	(127)	—	(16)
Unrealized (loss) gain on marketable securities and restricted investments	90,741	(39,685)	26,813
Unrealized (loss) on derivative instruments for the period (net of tax of $(711), $(2,387), and $2,533, respectively)	(1,777)	(596)	(7,478)
Less: reclassification for (gains) losses included in net income (loss) (net of tax of $(150), $3,475, and $1,774, respectively)	6,099	31	(14,015)
Unrealized (loss) gain on derivative instruments	4,322	(565)	(21,493)
Other comprehensive (loss) income, net of tax	75,916	(35,955)	15,216
Comprehensive income (loss)	$472,834	$317,083	$(81,122)

Components and details of accumulated other comprehensive income (loss) at December 31, 2014 and 2013 were as follows (in thousands):

	Foreign Currency Translation Adjustment	Unrealized Gain (Loss) on Marketable Securities	Unrealized Gain (Loss) on Derivative Instruments	Total
Balance as of December 31, 2012	$(38,485)	$51,243	$(2,579)	$10,179
Other comprehensive income (loss) before reclassifications	4,295	(39,685)	(596)	(35,986)
Amounts reclassified from accumulated other comprehensive income	—	—	31	31
Net other comprehensive income (loss)	4,295	(39,685)	(565)	(35,955)
Balance as of December 31, 2013	(34,190)	11,558	(3,144)	(25,776)
Other comprehensive income (loss) before reclassifications	(19,147)	90,868	(1,777)	69,944
Amounts reclassified from accumulated other comprehensive income	—	(127)	6,099	5,972
Net other comprehensive income (loss)	(19,147)	90,741	4,322	75,916
Balance as of December 31, 2014	$(53,337)	$102,299	$1,178	$50,140

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Details of Accumulated Other Comprehensive Income (Loss)	Amount Reclassified December 31, 2014	2013	Income Statement Line Item
Gains and (losses) on marketable securities and restricted investments			
	$210	$—	Other (expense) income, net
	83	—	Tax expense
	$127	$—	Total, net of tax
Gains and (losses) on derivative contracts			
Foreign exchange forward contracts	$—	$13,115	Net sales
Foreign exchange forward contracts	(501)	—	Cost of sales
Interest rate and cross currency swap contracts	(698)	(1,245)	Interest expense, net
Cross currency swap contract	(5,050)	(8,426)	Foreign currency loss, net
	(6,249)	3,444	Total before tax
	(150)	3,475	Tax expense
	$(6,099)	$(31)	Total, net of tax

23. Statement of Cash Flows

The following table presents a reconciliation of net income (loss) to net cash provided by operating activities for the years ended December 31, 2014, 2013, and 2012 (in thousands):

	2014	2013	2012
Net income (loss)	$396,918	$353,038	$(96,338)
Adjustments to reconcile net income (loss) to cash provided by operating activities:			
Depreciation, amortization and accretion	245,798	234,370	262,716
Impairment and net loss on disposal of long-lived assets	5,228	97,132	356,522
Impairment of project assets	433	—	3,253
Share-based compensation	43,810	55,079	36,971
Remeasurement of monetary assets and liabilities	8,772	(15,109)	8,509
Deferred income taxes	14,068	(20,878)	14,588
Excess tax benefit from share-based compensation arrangements	(31,166)	(35,076)	(27,373)
Provision for doubtful accounts receivable	—	2,106	4,471
Other, net	6,296	(1,073)	(4,778)
Changes in operating assets and liabilities:			
Accounts receivable, trade, unbilled and retainage	453,826	564,964	(388,039)
Prepaid expenses and other current assets	(19,947)	109,126	(28,854)
Other assets	(5,371)	(1,684)	82,120
Inventories and balance of systems parts	(99,870)	15,394	(75,626)
Project assets and deferred project costs	141,908	(316,022)	(174,532)
Accounts payable	(52,339)	(93,259)	174,319
Income taxes payable	(989)	36,307	63,489
Accrued expenses and other liabilities	(452,438)	(138,937)	506,253
Accrued solar module collection and recycling liability	26,052	10,648	44,538
Total adjustments	284,071	503,088	858,547
Net cash provided by operating activities	$680,989	$856,126	$762,209

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24. Segment and Geographical Information

We operate our business in two segments. Our components segment involves the design, manufacture, and sale of solar modules which convert sunlight into electricity. We primarily manufacture CdTe modules and have also begun manufacturing high-efficiency crystalline silicon modules. Third-party customers of our components segment include project developers, system integrators, and owners and operators of PV solar power systems.

Our second segment is our 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, (iii) operating and maintenance services, and (iv) project finance expertise. 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 such products and services are sold directly to investor owned utilities, independent power developers and producers, commercial and industrial companies, and other system owners. Additionally within our systems segment, we may hold and operate certain of our PV solar power systems based on strategic opportunities.

Our Chief Operating Decision Maker ("CODM"), consisting of certain members of senior executive staff, views both our ability to provide customers with a complete PV solar power system through the fully integrated systems segment and the manufacturing of solar modules from the components segment as the drivers of our resource allocation, profitability, and cash flows. The complete PV solar power systems sold through our systems segment drive resource allocation, profitability, and cash flows through delivering state of the art construction techniques and process management to reduce the installed cost of our PV systems, and accordingly, the systems segment is considered by our CODM as a direct contributor to our profitability. Therefore, our CODM views both our components and systems segments as contributors to our operating results.

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.

After we have determined the amount of revenue earned for our systems projects following the applicable accounting guidance for the underlying sales arrangements, we allocate module revenue from the systems segment to the components segment based on how our CODM strategically views these segments. The amount of module revenue allocated from the systems segment to the components segment is equal to an estimated average selling price for such solar modules as if the modules were sold to a third-party EPC customer through a long-term supply agreement that establishes pricing at the beginning of each year. In order to develop the estimate of the average selling price used for this revenue allocation, we utilize a combination of our actual third-party module sale transactions, our competitor benchmarking, and our internal pricing lists used to provide module price quotes to customers or potential customers. This allocation methodology and the estimated average selling prices are consistent with how our CODM views the value proposition our components business brings to a utility scale systems project and the financial information reviewed by our CODM in assessing our components business performance.

Our components and systems segments have certain of their own dedicated administrative key functions, such as accounting, legal, finance, project finance, human resources, procurement, and marketing. Costs for these functions are recorded and included within the respective selling, general and administrative costs for our components and systems segments. Our corporate key functions consist primarily of company-wide corporate tax, corporate treasury, corporate accounting/finance, corporate legal, investor relations, corporate communications, and executive

management functions. 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. Infrequent and other miscellaneous costs including restructuring and manufacturing excursions are included in the components or systems segment operating results based upon which segment incurred the underlying costs.

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Financial information about our reportable segments during the years ended December 31, 2014, 2013, and 2012 was as follows (in thousands):

	Fiscal Year Ended December 31, 2014		
	Components	Systems	Total
Net sales	$1,102,674	$2,289,140	$3,391,814
Gross profit	$93,510	$733,595	$827,105
Depreciation and amortization expense	$223,381	$23,268	$246,649
(Loss) income before income taxes	$(107,088)	$539,079	$431,991
Goodwill	$16,152	$68,833	$84,985
Total assets	$4,169,209	$2,555,230	$6,724,439

	Fiscal Year Ended December 31, 2013		
	Components	Systems	Total
Net sales	$1,173,947	$2,135,042	$3,308,989
Gross profit	$88,506	$774,248	$862,754
Depreciation and amortization expense	$211,357	$27,417	$238,774
(Loss) income before income taxes	$(222,382)	$600,762	$378,380
Goodwill	$16,152	$68,833	$84,985
Total assets	$4,180,568	$2,702,934	$6,883,502

	Fiscal Year Ended December 31, 2012		
	Components	Systems	Total
Net sales	$1,185,958	$2,182,587	$3,368,545
Gross profit	$55,762	$796,987	$852,749
Depreciation and amortization expense	$243,070	$22,320	$265,390
(Loss) before income taxes	$(687,767)	$647,963	$(39,804)
Goodwill	$—	$65,444	$65,444
Total assets	$3,920,385	$2,428,307	$6,348,692

Product Revenue

The following table sets forth the total amounts of solar module and solar power system net sales recognized for the years ended December 31, 2014, 2013, and 2012. For the purposes of the following table, (i) “Solar module revenue” is composed of total revenues from the sale of solar modules to third parties, which does not include any systems segment product or service offerings and (ii) “Solar power system revenue” is composed of total revenues from the sale of our solar power systems and related products and services including the solar modules installed in such solar power systems along with revenue generated from our PV solar power systems (in thousands):

	2014	2013	2012
Solar module revenue	$228,319	$380,869	$325,427
Solar power system revenue	3,163,495	2,928,120	3,043,118
Net sales	$3,391,814	$3,308,989	$3,368,545

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The following table presents net sales for the years ended December 31, 2014, 2013, and 2012 by geographic region, which is based on the customer country of invoicing (in thousands):

	2014	2013	2012
United States	$3,042,633	$2,831,475	$2,696,972
Germany	121,941	142,028	104,689
India	44,118	8,253	66,732
Australia	157,152	604	30,925
France	8,409	35,772	70,173
Canada	7,085	264,573	389,427
United Arab Emirates	569	21,137	—
All other foreign countries	9,907	5,147	9,627
Net sales	$3,391,814	$3,308,989	$3,368,545

The following table presents long-lived assets, excluding financial instruments, deferred tax assets, investments in unconsolidated affiliates and joint ventures, goodwill, and intangible assets at December 31, 2014 and 2013 by geographic region, based on the physical location of the assets (in thousands):

	2014	2013
United States	$1,206,333	$1,456,438
Malaysia	936,482	894,231
All other foreign countries	145,584	321,762
Long-lived assets	$2,288,399	$2,672,431

25. Concentrations of Credit and Other Risks

Customer Concentration. The following customers each comprised 10% or more of our total net sales and/or 10% or more of our total accounts receivable during the years ended December 31, 2014, 2013, and 2012 (dollars in thousands):

	2014				2013				2012			
	Net Sales	% of Total NS	A/R Outstanding	% of Total A/R	Net Sales	% of Total NS	A/R Outstanding	% of Total A/R	Net Sales	% of Total NS		
Customer #1	*	*	*	*	*	*	$ 18,959	14	%	$720,056	21	%
Customer #2	*	*	$ 18,549	14	%	*	*	*	*	*	*	
Customer #3	$1,065,862	31	%	*	*	*	*	*	*	$773,407	23	%
Customer #4	$524,678	15	%	$ 32,612	24	%	$664,669	20	%	$ 40,268	30	%	$701,648	21	%
Customer #5	*	*	*	*	*	*	$ 15,776	12	%	*	*	
Customer #6	$467,941	14	%	*	*	$584,638	18	%	$ 41,074	30	%	*	*	
Customer #7	*	*	$ 17,199	13	%	*	*	*	*	*	*	

* Net sales and/or accounts receivable to these customers were less than 10% of our total net sales and/or accounts receivable during this period.

Credit Risk. We have certain financial and derivative instruments that subject us to credit risk. These consist primarily of cash, cash equivalents, marketable securities, restricted investments, trade accounts receivable, interest rate swap contracts, cross-currency swap contracts, 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 investments, interest rate swap contracts, cross-currency contracts, 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. For the years ended December 31, 2014, 2013, and 2012, our net sales were primarily concentrated among a limited number of customers. We monitor the financial condition of our customers and perform credit evaluations whenever deemed 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.

Geographic Risk. Our solar power systems sales are predominantly in the United States. This concentration of our sales in limited geographic regions exposes us to local economic, public policy, and regulatory risks in those regions.

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Production. Our products include components that are available from a limited number of suppliers or sources. Shortages of essential components could occur due to interruptions of supply or increases in demand and could impair our ability to meet customer demand for our products. Our modules are presently produced in facilities in Perrysburg, Ohio and Kulim, Malaysia. Damage to or disruption of facilities could interrupt our business and impair our ability to generate net sales.

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INDEX TO EXHIBITS

Set forth below is a list of exhibits that are being filed or incorporated by reference into this Annual Report on Form 10-K:

Exhibit Number		Exhibit Description	Incorporated by Reference				Filed Herewith
			Form	File No.	Date of First Filing	Exhibit Number	
3.1		Amended and Restated Certificate of Incorporation of First Solar, Inc.	S-1/A	333-135574	9/18/06	3.1	
3.2		Amended and Restated Bylaws of First Solar, Inc.	8-K	001-33156	10/31/11	3.1	
4.1		Loan Agreement dated December 1, 2003, among First Solar US Manufacturing, LLC, First Solar Property, LLC and the Director of Development of the State of Ohio	S-1/A	333-135574	9/18/06	4.2	
4.2		Loan Agreement dated July 1, 2005, among First Solar US Manufacturing, LLC, First Solar Property, LLC and Director of Development of the State of Ohio	S-1/A	333-135574	9/18/06	4.3	
4.3		Waiver Letter dated June 5, 2006, from the Director of Development of the State of Ohio	S-1/A	333-135574	10/10/06	4.16	
4.4	†	Facility Agreement dated May 6, 2008 between First Solar Malaysia Sdn. Bhd., as borrower, and IKB Deutsche Industriebank AG, as arranger, NATIXIS Zweigniederlassung Deutschland, as facility agent and original lender, AKA Ausfuhrkredit-Gesellschaft mbH, as original lender, and NATIXIS Labuan Branch as security agent	8-K	001-33156	5/12/08	10.1	
4.5		First Demand Guaranty dated May 6, 2008 by First Solar Inc, as guarantor, in favor of IKB Deutsche Industriebank AG, NATIXIS Zweigniederlassung Deutschland, AKA Ausfuhrkredit-Gesellschaft mbH and NATIXIS Labuan Branch	8-K	001-33156	5/12/08	10.2	
4.6		Credit Agreement, dated as of September 4, 2009, among First Solar, Inc., First Solar Manufacturing GmbH, the lenders party thereto, JPMorgan Chase Bank, N.A., as Administrative Agent, Bank of America and The Royal Bank of Scotland plc, as Documentation Agents, and Credit Suisse, Cayman Islands Branch, as Syndication Agent	8-K	001-33156	9/10/09	10.1	
4.7		Charge of Company Shares, dated as of September 4, 2009, between First Solar, Inc., as Chargor, and JPMorgan Chase Bank, N.A., as Security Agent, relating to 66% of the shares of First Solar FE Holdings Pte. Ltd. (Singapore)	8-K	001-33156	9/10/09	10.2	
4.8		German Share Pledge Agreements, dated as of September 4, 2009, between First Solar, Inc., First Solar Holdings GmbH, First Solar Manufacturing	8-K	001-33156	9/10/09	10.3	

	GmbH, First Solar GmbH, and JPMorgan Chase Bank, N.A., as Administrative Agent				
4.9	Guarantee and Collateral Agreement, dated as of September 4, 2009, by First Solar, Inc. in favor of JPMorgan Chase Bank, N.A., as Administrative Agent	8-K	001-33156	9/10/09	10.4
4.10	Guarantee, dated as of September 8, 2009, between First Solar Holdings GmbH, First Solar GmbH, First Solar Manufacturing GmbH, as German Guarantors, and JPMorgan Chase Bank, N.A., as Administrative Agent	8-K	001-33156	9/10/09	10.5
4.11	Assignment Agreement, dated as of September 4, 2009, between First Solar Holdings GmbH and JPMorgan Chase Bank, N.A., as Administrative Agent	8-K	001-33156	9/10/09	10.6
4.12	Assignment Agreement, dated as of September 4, 2009, between First Solar GmbH and JPMorgan Chase Bank, N.A., as Administrative Agent	8-K	001-33156	9/10/09	10.7
4.13	Assignment Agreement, dated as of September 8, 2009, between First Solar Manufacturing GmbH and JPMorgan Chase Bank, N.A., as Administrative Agent	8-K	001-33156	9/10/09	10.8
4.14	Security Trust Agreement, dated as of September 4, 2009, between First Solar, Inc., First Solar Holdings GmbH, First Solar GmbH, First Solar Manufacturing GmbH, as Security Grantors, JPMorgan Chase Bank, N.A., as Administrative Agent, and the other Secured Parties party thereto	8-K	001-33156	9/10/09	10.9

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4.15	Amended and Restated Credit Agreement, dated as of October 15, 2010, among First Solar, Inc., the borrowing subsidiaries party thereto, the lenders party thereto, Bank of America N.A. and The Royal Bank of Scotland PLC, as documentation agents, Credit Suisse, Cayman Islands Branch, as syndication agent and JPMorgan Chase Bank, N.A., as administrative agent	8-K	001-33156	10/20/10	10.1
4.16	Facility Agreement dated as of August 3, 2011 among First Solar Malaysia Sdn. Bhd., Commerzbank Aktiengesellschaft, as arranger and original lender, Commerzbank Aktiengesellschaft, Luxembourg Branch, as facility agent and security agent, and Natixis Zweigniederlassung Deutschland, as arranger and original lender	10-Q	001-33156	8/5/11	10.1
4.17	First Demand Guaranty, dated as of August 3, 2011, among First Solar, Inc., First Solar Malaysia Sdn. Bhd. and Commerzbank Aktiengesellschaft, Luxembourg Branch, as facility agent and security agent	10-Q	001-33156	8/5/11	10.2
4.18	First Amendment, dated as of May 6, 2011, to the Amended and Restated Credit Agreement, dated as of October 15, 2010, among First Solar, Inc., the borrowing subsidiaries party thereto, the lenders party thereto, Bank of America, N.A. and The Royal Bank of Scotland plc, as documentation agents, Credit Suisse, Cayman Islands Branch, as syndication agent, and JPMorgan Chase Bank, N.A., as administrative agent	8-K	001-33156	5/12/11	10.1
4.19	Credit Facility Agreement, dated as of May 18, 2011, among First Solar Manufacturing GmbH, Commerzbank Aktiengesellschaft, Luxembourg Branch, as security agent, and the additional finance parties party thereto	8-K	001-33156	5/24/11	10.1
4.20	Guarantee Agreement, dates as of May 18, 2011, among First Solar, Inc., First Solar Manufacturing GmbH and Commerzbank Aktiengesellschaft, Luxembourg Branch	8-K	001-33156	5/24/11	10.2
4.21	Facility Agreement, dated June 30, 2011, among First Solar Malaysia Sdn. Bhd., as borrower, First Solar, Inc., as guarantor, CIMB Investment Bank Berhad, Maybank Investment Bank Berhad and RHB Investment Bank Berhad, as arrangers, CIMB Investment Bank Berhad as facility agent and security agent, and the original lenders party thereto	8-K	001-33156	7/7/11	10.1
4.22	Second Amendment and Waiver, dated as of June 30, 2011, to the Amended and Restated Credit Agreement, dated as of October 15, 2010, among First Solar, Inc., the lenders party thereto, Bank of	8-K	001-33156	7/14/11	10.1

	America, N.A. and The Royal Bank of Scotland plc, as documentation agents, Credit Suisse, Cayman Islands Branch, as syndication agent, and JPMorgan Chase Bank, N.A., as administrative agent				
4.23	Amendment Letter, dated as of November 8, 2011, to the Facility Agreement, dated June 30, 2011, among First Solar Malaysia Sdn. Bhd., as borrower, First Solar, Inc., as guarantor, CIMB Investment Bank Berhad, Maybank Investment Bank Berhad and RHB Investment Bank Berhad, as arrangers, CIMB Investment Bank Berhad as facility agent and security agent, and the original lenders party thereto	10-K	001-33156	2/29/12	10.1
4.24	Third Amendment, dated as of October 23, 2012 to the Amended and Restated Credit Agreement dated as of October 15, 2010, among First Solar, Inc., the lenders party thereto, Bank of America, N.A. and The Royal Bank of Scotland plc, as documentation agents, Credit Suisse, Cayman Islands Branch, as syndication agent, and JPMorgan Chase Bank, N.A., as administrative agent	8-K	001-33156	10/26/12	10.1
4.25	Amendment dated as of November 7, 2012 to the Export Financing Facility Agreement dated May 6, 2008 (as amended, the “Malaysian Facility Agreement”) among FS Malaysia, the lenders party thereto, and Natixis Zweigniederlassung Deutschland, as Facility Agent.	10-K	001-33156	2/27/13	4.25
4.26	Fourth Amendment dated as of July 15, 2013, to the Amended and Restated Credit Agreement, dated as of October 15, 2010, among First Solar, Inc., the lenders party thereto and JPMorgan Chase Bank, N.A., as administrative agent.	8-K	001-33156	7/15/13	10.1

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4.27		Amended and Restated Guarantee and Collateral Agreement, dated as of July 15, 2013, by First Solar, Inc., First Solar Electric, LLC, First Solar Electric (California), Inc. and First Solar Development, LLC in favor of JPMorgan Chase Bank, N.A., as administrative agent	8-K	001-33156	7/15/13	10.2
4.28		Second Amendment to the Malaysian Euro Facility Agreement	10-Q	001-33156	8/7/13	4.1
10.1	†	Amendment to the Framework Agreement dated April 10, 2006 on the Sale and Purchase of Solar Modules between First Solar GmbH and Blitzstrom GmbH	10-K	001-33156	3/16/07	10.02
10.2		Amended and Restated 2006 Omnibus Incentive Compensation Plan	10-Q	001-33156	5/1/09	10.2
10.3		Form of Change in Control Severance Agreement	S-1/A	333-135574	10/25/06	10.15
10.4		Form of Director and Officer Indemnification Agreement	10-K	001-33156	2/27/13	10.20
10.5		Amended and Restated Employment Agreement and Amended and Restated Change in Control Severance Agreement, each dated as of December 15, 2008, between First Solar Inc. and Carol Campbell	10-K	001-33156	2/22/10	10.30
10.6		Amendment to Employment Agreement, effective as of July 28, 2009, between First Solar, Inc. and Carol Campbell	10-K	001-33156	2/22/10	10.36
10.7		Amendment to Employment Agreement, effective as of November 2, 2009, between First Solar, Inc. and Carol Campbell	10-K	001-33156	2/22/10	10.38
10.8		First Solar, Inc. 2010 Omnibus Incentive Compensation Plan	DEF 14A	001-33156	4/20/10	App. A
10.9		First Solar, Inc. Associate Stock Purchase Plan	DEF 14A	001-33156	4/20/10	App. B
10.10		Employment Agreement, dated February 22, 2011, between First Solar, Inc. and T.L. Kallenbach	10-Q	001-33156	5/5/11	10.2
10.11		Employment Agreement, dated March 15, 2011, and Change in Control Severance Agreement, dated April 4, 2011 between First Solar, Inc. and Mark Widmar	10-Q	001-33156	5/5/11	10.3
10.12		Amendment to Non-Competition and Non-Solicitation Agreement, dated April 28, 2011, between First Solar, Inc. and Bruce Sohn	10-Q	001-33156	5/5/11	10.4
10.13		Amended and Restated Employment Agreement, effective September 1, 2011, and Change in Control Severance Agreement, dated as of April 7, 2008, between First Solar, Inc. and James G. Brown, Jr., and amended and restated effective December 1, 2008	8-K	001-33156	8/17/11	10.1
10.14		Amendment to Non-Competition and Non-Solicitation Agreement and Mitigation Clause Waiver, effective September 30, 2011, between First	8-K	001-33156	8/17/11	10.2

	Solar, Inc. and Jens Meyerhoff				
10.15	Amendment to Non-Competition and Non-Solicitation Agreement, dated November 15, 2011, between First Solar, Inc. and Robert Gillette	8-K	001-33156	11/21/11	10.1
10.16	Employment Agreement, by and between First Solar, Inc. and Michael J. Ahearn	8-K	001-33156	12/29/11	10.1
10.17	Employment Agreement, dated March 14, 2012, and Change in Control Severance Agreement, dated March 19, 2012 between First Solar, Inc. and James Hughes	10-Q	001-33156	5/4/12	10.1
10.18	Form of Key Senior Talent Equity Performance Program Grant Notice	10-Q	001-33156	5/4/12	10.2
10.19	Amendment to Employment Agreement, effective as of May 3, 2012, between First Solar, Inc. and James Hughes, and Amendment to Non-Competition and Non-Solicitation Agreement, effective as of May 3, 2012, between First Solar, Inc. and James Hughes.	8-K	001-33156	5/11/12	10.1
10.20	Employment Agreement, effective July 1, 2012, and Change in Control Severance Agreement, effective July 1, 2012 between First Solar, Inc. and Georges Antoun	10-Q	001-33156	8/3/12	10.1
10.21	Non-Competition and Non-Solicitation Agreement, effective as of April 7, 2008 between First Solar, Inc. and James Brown, Jr.	10-Q	001-33156	5/7/13	10.1

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10.22		Non-Competition and Non-Solicitation Agreement, effective as of March 15, 2011, between First Solar, Inc. and Mark Widmar	10-Q	001-33156	5/7/13	10.2	
10.23		Change in Control Severance Agreement, effective as of July 1, 2012, between First Solar, Inc. and Georges Antoun	10-Q	001-33156	5/7/13	10.3	
10.24		Amendment to Change in Control Severance Agreement	10-Q	001-33156	8/7/13	10.1	
10.25		Employment Agreement, effective September 9, 2013, and Change in Control Severance Agreement, effective September 9, 2013 between First Solar, Inc. and Joseph Kishkill	—	—	—	—	X
10.26		Employment Agreement, effective March 3, 2014, and Change in Control Severance Agreement, effective March 3, 2014 between First Solar, Inc. and Paul Kaleta	10-K	001-33156	2/26/14	10.1	
10.27		Amended and Restated Corporate Governance Guidelines dated July 30, 2014	10-Q	001-33156	8/6/14	10.1	
10.28		Restricted Cash Assignment of Deposits	10-Q	001-33156	8/6/14	10.2	
14.1		Code of Ethics	—	—	—	—	X
21.1		List of Subsidiaries of First Solar, Inc	—	—	—	—	X
23.1		Consent of Independent Registered Public Accounting Firm	—	—	—	—	X
31.01		Certification of Chief Executive Officer pursuant to Rule 13a-14(a) and 15d-14(a), as amended	—	—	—	—	X
31.02		Certification of Chief Financial Officer pursuant to Rule 13a-14(a) and 15d-14(a), as amended	—	—	—	—	X
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	—	—	—	—	X
101.INS		XBRL Instance Document	—	—	—	—	X
101.SCH		XBRL Taxonomy Extension Schema Document	—	—	—	—	X
101.DEF		XBRL Definition Linkbase Document	—	—	—	—	X
101.CAL		XBRL Taxonomy Extension Calculation Linkbase Document	—	—	—	—	X
101.LAB		XBRL Taxonomy Label Linkbase Document	—	—	—	—	X
101.PRE		XBLR Taxonomy Extension Presentation Document	—	—	—	—	X

† Confidential treatment has been requested and granted for portions of this exhibit.

* 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.