Trina Solar LTD
Form 20-F
April 24, 2015
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UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 20-F

(Mark One)

o	**REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR 12(g) OF THE SECURITIES EXCHANGE ACT OF 1934**
	OR
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
o	**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934** **For the transition period from to**
	OR
o	**SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Date of event requiring this shell company report . . . . . .

Commission file number: 001-33195

TRINA SOLAR LIMITED

(Exact name of Registrant as specified in its charter)

N/A
(Translation of Registrant s name into English)

Cayman Islands
(Jurisdiction of incorporation or organization)

No. 2 Tian He Road

Electronics Park, New District

Changzhou, Jiangsu 213031

People s Republic of China
(Address of principal executive offices)

Teresa Tan, Chief Financial Officer

Yvonne Young, Head of Investor Relations

No. 2 Tian He Road

Electronics Park, New District

Changzhou, Jiangsu 213031

People s Republic of China

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E-mail: ir@trinasolar.com
(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

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

Title of each class	Name of each exchange on which registered
American Depositary Shares, each representing 50 ordinary shares, par value $0.00001 per share	New York Stock Exchange

Securities registered or to be registered pursuant to Section 12(g) of the Act:

None
(Title of Class)

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Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:

None
(Title of Class)

Indicate the number of outstanding shares of each of the issuer s classes of capital or common stock as of the close of the period covered by the annual report.

4,606,198,382 ordinary shares, par value $0.00001 per share, as of December 31, 2014.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

x Yes o No

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.

o Yes x No

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.

x Yes o 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 during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

x Yes o No

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

Large accelerated filer x	Accelerated filer o	Non-accelerated filer o

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP x	International Financial Reporting Standards as issued by the International Accounting Standards Board o	Other o

* If Other has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow.

o Item 17 o Item 18

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

o Yes x No

(APPLICABLE ONLY TO ISSUERS INVOLVED IN BANKRUPTCY PROCEEDINGS DURING THE PAST FIVE YEARS)

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Sections 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court.

o Yes o No

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INTRODUCTION

Unless the context otherwise requires, in this annual report on Form 20-F:

- We, us, our, and our company refer to Trina Solar Limited, its predecessor entities and its subsidiaries;
- Trina refers to Trina Solar Limited;
- Trina China refers to Changzhou Trina Solar Energy Co., Ltd.;
- TST refers to Trina Solar (Changzhou) Science and Technology Co., Ltd.;
- ADSs refers to our American depositary shares, each of which represents 50 ordinary shares;
- ADRs refers to the American depository receipts, which, if issued, evidence our ADSs;
- China or PRC refers to the People s Republic of China, excluding, for the purpose of this annual report, Taiwan, Hong Kong and Macau;
- RMB or Renminbi refers to the legal currency of China, $ or U.S. dollars refers to the legal currency of the United States, and or Euro refers to the legal currency of the European Union;
- shares or ordinary shares refers to our ordinary shares, par value $0.00001 per share; and
- issued and outstanding refers to our shares that have been issued, outstanding and paid in full, for the avoidance of doubt, excluding shares that have been set aside in relation to any share incentive plan or convertible debt security.

Names of certain companies provided in this annual report are translated or transliterated from their original Chinese legal names.

Discrepancies in any table between the amounts identified as total amounts and the sum of the amounts listed therein are due to rounding.

This annual report on Form 20-F includes our audited consolidated financial statements for the years ended December 31, 2012, 2013 and 2014.

This annual report contains translations of certain Renminbi amounts into U.S. dollars at the rate of RMB6.2046 to $1.00, the noon buying rate in effect on December 31, 2014 in New York City for cable transfers of Renminbi as certified for customs purposes by the Federal Reserve Bank of New York. We make no representation that the Renminbi or U.S. dollar amounts referred to in this annual report could have been or could be converted into U.S. dollars or Renminbi, as the case may be, at any particular rate or at all. See Item 3. Key Information D. Risk Factors Risks Related to Our Company and Our Industry Fluctuations in exchange rates could adversely affect our business. On April 17, 2015, the noon buying rate was RMB6.1976 to $1.00.

We completed the initial public offering of 5,300,000 ADSs on December 22, 2006. On December 19, 2006, we listed our ADSs on the New York Stock Exchange under the symbol TSL. On November 22, 2010, our ADRs started trading on the Singapore Exchange GlobalQuote Board under the symbol K3KD.

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PART I

Item 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not Applicable.

Item 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not Applicable.

Item 3. KEY INFORMATION

A. Selected Financial and Operational Data

The following selected consolidated statement of operations data (other than ADS data) for the years ended December 31, 2012, 2013 and 2014 and the selected consolidated balance sheets data as of December 31, 2013 and 2014 have been derived from our audited financial statements included elsewhere in this annual report. The selected consolidated financial data should be read in conjunction with those financial statements and the accompanying notes and Item 5. Operating and Financial Review and Prospects below. Our consolidated financial statements are prepared and presented in accordance with United States generally accepted accounting principles, or U.S. GAAP. Our historical results do not necessarily indicate our results expected for any future periods.

Our selected consolidated statements of operations data (other than ADS data) for the years ended December 31, 2010 and 2011 and our consolidated balance sheets data as of December 31, 2010, 2011 and 2012 have been derived from our audited consolidated financial statements, which are not included in this annual report.

	Year Ended December 31,				
	2010	2011	2012	2013	2014
	(in thousands, except for share, per share, operating data and percentages)				
Consolidated Statement of Operations Data					
Net sales	$ 1,857,689	$ 2,047,902	$ 1,296,655	$ 1,774,971	$ 2,286,119
Cost of sales	1,273,328	1,715,260	1,239,412	1,556,777	1,900,547
Gross profit	584,361	332,642	57,243	218,194	385,572
Operating expenses:					

Selling expenses	75,677	100,427	118,885	132,824	135,061
General and administrative expenses	72,711	157,129	176,719	103,523	108,150
Research and development expenses	18,625	44,120	26,511	19,926	22,258
Total operating expenses	167,013	301,676	322,115	256,273	265,469
Income (loss) from operations	417,348	30,966	(264,872)	(38,079)	120,103
Foreign exchange gain (loss)	(36,156)	(27,435)	908	(13,576)	(21,934)
Interest expense	(33,952)	(35,021)	(51,887)	(48,445)	(34,886)
Interest income	2,590	3,056	8,552	3,958	2,793
Derivatives (loss) gain	9,476	(11,393)	8,542	2,180	3,422
Other income, net	216	9,317	6,797	8,696	7,250
Income (loss) before income taxes	359,522	(30,510)	(291,960)	(85,266)	76,748
Income tax (expense) benefit	(48,069)	(7,310)	25,405	13,030	(15,488)
Net income (loss)	311,453	(37,820)	(266,555)	(72,236)	61,260
Net loss (income) attributable to the noncontrolling interests		(1)	(1)	210	(1,922)
Net income (loss) attributable to Trina Solar Limited Shareholders	$ 311,453	$ (37,820)	$ (266,555)	$ (72,026)	$ 59,338
Earnings (loss) per ordinary share:					
Basic	$ 0.09	$ (0.01)	$ (0.08)	$ (0.02)	$ 0.02
Diluted	$ 0.08	$ (0.01)	$ (0.08)	$ (0.02)	$ 0.01
Earnings (loss) per ADS(2):					
Basic	$ 4.58	$ (0.54)	$ (3.77)	$ (1.01)	$ 0.76
Diluted	$ 4.18	$ (0.54)	$ (3.77)	$ (1.01)	$ 0.74
Weighted average ordinary shares outstanding:					
Basic	3,402,701,503	3,521,182,416	3,534,829,694	3,553,552,756	3,881,503,977
Diluted	3,833,713,796	3,521,182,416	3,534,829,694	3,553,552,756	4,274,694,832
Weighted average ADS outstanding:(2)					
Basic	68,054,030	70,423,648	70,696,594	71,071,055	77,630,080
Diluted	76,674,276	70,423,648	70,696,594	71,071,055	85,493,897
Consolidated Financial Data					
Gross margin(3)	31.5%	16.2%	4.4%	12.3%	16.9%
Net margin(4)	16.8%	(1.8)%	(20.6)%	(4.1)%	2.7%
Consolidated Operating Data					
PV modules shipped (in MW)(5)	1,057.0	1,512.0	1,594.0	2,584.3	3,336.2
Average selling price ($/W)	$ 1.75	$ 1.33	$ 0.78	$ 0.64	$ 0.63

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(1) The amount of net loss attributable to the noncontrolling interest is less than one thousand for the years ended December 31, 2011 and 2012.

(2) Reflects ADS ratio change effective January 2010.

(3) Gross margin represents the result of gross profit divided by net sales.

(4) Net margin represents the result of net income (loss) divided by net sales.

(5) Excludes shipment to our solar power projects segment.

	As of December 31,				
	2010	2011	2012	2013	2014
	(in thousands)				
Consolidated Balance Sheet Data					
Cash and cash equivalents	$ 752,748	$ 816,780	$ 807,276	$ 486,686	$ 392,892
Restricted cash	38,035	79,602	110,920	74,720	146,929
Inventories	79,126	249,779	318,504	244,532	350,852
Accounts receivable, net	377,317	466,537	390,157	435,092	608,149
Total current assets	1,415,139	1,768,722	1,765,487	1,521,701	1,773,346
Property, plant and equipment, net	571,467	919,727	893,340	889,752	1,253,543
Total assets	2,132,089	2,877,448	2,864,857	2,567,229	3,199,566
Short-term borrowings and current portion of long-term borrowings	158,652	389,472	875,821	935,590	820,252
Accounts payable	188,000	472,092	423,985	461,148	742,007
Total current liabilities	600,070	1,007,435	1,479,155	1,540,543	1,749,803
Accrued warranty costs	38,711	58,810	65,780	81,743	103,197
Long-term borrowings, excluding current portion	299,977	520,151	415,150	100,502	22,434
Total equity	1,173,647	1,145,325	881,785	822,479	1,001,079
Total liabilities and equity	$ 2,132,089	$ 2,877,448	$ 2,864,857	$ 2,567,229	$ 3,199,566

B. Capitalization and Indebtedness

Not Applicable.

C. Reasons for the Offer and Use of Proceeds

Not Applicable.

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D. Risk Factors

Risks Related to Our Company and Our Industry

We may be adversely affected by volatile market and industry trends, in particular, the growth for solar power projects may decline, which may reduce our revenues and earnings.

We are affected by solar power markets and industry trends. Weakened global economic conditions may affect the availability of financing, which in turn would slow the demand for photovoltaic, or PV, projects. As a result of global economic conditions, some governments may implement austerity measures that reduce the feed-in-tariffs, or FITs and other incentives designed to benefit the solar industry. In 2008 and 2009, demand for global solar power declined due to decreased availability of financing for downstream buyers of solar power products as a result of the global economic crisis. During the same period, increased manufacturing capacity combined with decreasing demand and prices caused a decline in the prices of solar power products. In 2011, a decrease in government payment to solar power producers, which were in the form of FITs and other reimbursements, and a reduction in available financing caused a decrease in the growth in the number of solar power projects in the European markets. Payments to solar power producers decreased as governments in Europe, under pressure to reduce sovereign debt levels, reduced incentives such as FITs, which require public utility companies to pay higher prices for solar power than for power generated through conventional means. Furthermore, many downstream purchasers of solar power products were unable to secure sufficient financing for the solar power projects due to the global credit crunch. As a result, many solar power producers that purchase solar power products from manufacturers like us were unable or unwilling to expand their operations. These market conditions were exacerbated by an over-supply of solar power products, primarily driven by an increase in manufacturing capacity that continued through 2011, which adversely affected the prices of solar power products.

In 2012, governments further reduced their support in the European markets that have traditionally relied upon FITs to support demand and fewer markets utilized FITs and power purchase agreements to support demand, which in the aggregate resulted in a marked decline in the global growth rate of demand for solar products. Further, in December 2013, anti-dumping and anti-subsidy duties imposed by the European Commissions on crystalline silicon photovoltaic, or CSPV, cells and modules originating in or consigned from China became effective, motivating a number of Chinese solar product manufacturers, including us, to agree to a price undertaking, pursuant to which exporters agreed not to sell more than an agreed amount of solar panels or certain related components into the European Union at a minimum price. Both the FITs reduction and the price undertaking have resulted in an increase in prices and a further decrease in demand in European markets. Although demand in other regions, including the U.S., Japan and India, as well as many other emerging markets in Asia, the Middle East and Africa, is expected to offset the decline in European demand, we cannot assure you that those increases will continue in the future and fully offset the declining demand in Europe.

The demand for solar power is also influenced by macroeconomic factors such as global economic conditions, the supply and prices of other energy products such as oil, coal and natural gas, and government regulations and policies concerning the electric utility industry. A decrease in oil prices, for example, may reduce demand for investment in alternative energy.

If these negative market and industry trends continue and demand for solar power projects and solar power products weakens as a result, our business and results of operations may be materially and adversely affected.

The determination by U.S. and European Union authorities that our export sales are in violation of international fair trade rules could impede our access to important export markets and our overall competitiveness.

In 2011, solar panel manufacturing companies in the United States filed antidumping and countervailing duty petitions with the U.S. government, which resulted in the institution of antidumping and countervailing duty investigations relating to imports into the United States of CSPV cells, whether or not assembled into modules, from China. In December 2012, following completion of those investigations by the U.S. International Trade Commission, or the Commission, and the U.S. Department of Commerce, or Commerce, antidumping and countervailing duty orders were imposed on imports into the United States covered by the investigation, including imports of our products originating from China. The orders require an effective net cash deposit rate on all imports of these covered products, which currently is set at 23.75% and may increase or decrease in the future. The current rate will be in effect until the final determination in the first administrative review, which is expected around May 2015. The actual duty rates at which entries of covered merchandise will be finally assessed may differ from the deposit rates because they are subject to completion of ongoing administrative reviews of the antidumping and countervailing duty orders. The first administrative review process is still underway, and preliminary results were published on January 8, 2015 and final results are expected to be published in the second quarter of 2015. According to the preliminary results, the anti-dumping rate proposed for approximately 20 Chinese exporters, including us, was 1.82%, significantly lower than the average net cash deposit rate initially projected. The proposed countervailing duty rate for us was 15.68%. A second administrative review is also currently underway. In February 2013, we, along with other parties, including the U.S. companies that petitioned for the investigations, filed appeals with the U.S. Court of International Trade, or the CIT, challenging various aspects of Commerce s findings. We may not be successful in our appeals, in which case the scope of the antidumping and countervailing duty orders could remain or be expanded.

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Also, on December 31, 2013, SolarWorld Industries America, Inc., or SolarWorld, a U.S. producer of solar cells and panels, filed a separate petition with the U.S. government resulting in the institution of new antidumping and countervailing duty investigations against imports from China. The petitions accuse Chinese producers of certain CSPV cells and modules of dumping their products in the United States and receiving countervailable subsidies from the Chinese government. This action excludes from its scope certain products, including any products that are covered by the antidumping and countervailing duty orders imposed in 2012. This trade action also accuses Taiwanese producers of certain CSPV cells and modules of dumping their products in the United States. These petitions seek to subject modules assembled in China using solar cells produce outside of China to antidumping and countervailing duties. On December 17, 2014, Commerce issued final rulings that imports of certain CSPV cells and modules were dumped in the United States from China and Taiwan and that imports of certain CSPV cells and modules from China received subsidies. On these imports we received an anti-dumping duty rate of 26.71% and a countervailing duty rate of 49.79%, which will be in effect until the final determination of the first administrative review. On January 21, 2015, the Commission affirmed that imports of certain CSPV cells and modules from mainland China and Taiwan materially injure the domestic industry. The actual duty rates at which entries of covered merchandise will be finally assessed may differ from the announced deposit rates, because they will be subject to completion of administrative reviews of these antidumping and countervailing duty orders. We expect the first administrative reviews to be completed by the first half of 2017. We are considering whether to file an appeal of the final determinations issued by Commerce and the Commission.

On September 6, 2012 and November 8, 2012, the European Commission announced the initiation of antidumping and anti-subsidy investigations, respectively, concerning imports into the European Union of CSPV modules and key components (i.e., cells and wafers) originating in China. On December 5, 2013, the Council of the European Union announced its final decision imposing antidumping and anti-subsidy duties on imports of CSPV cells and modules originating in or consigned from China. An average duty of 47.7%, consisting of both antidumping and anti-subsidy duties, are applicable for a period of two years beginning on December 6, 2013 to imports from Chinese solar panel exporters who, like us, cooperated with the European Commission s investigations. However, on the same day, the European Commission accepted a price undertaking by Chinese export producers in connection with the antidumping and anti-subsidy proceedings. As a result, imports from Chinese solar panel exporters that are made pursuant to the price undertaking are exempt from the final antidumping and anti-subsidy duties imposed by the European Union. We have agreed to comply with the minimum price and other conditions set forth in the undertaking so that our exported products will be exempt from the antidumping and anti-subsidy duties imposed by the European Commission. The European Commission monitors compliance on an ongoing basis, and there have been allegations of non-compliance to the price undertaking by certain Chinese export producers. If the price undertaking is withdrawn because the European Commission determined that these Chinese export producers are not complying with the price undertaking, the above-described duties would be applied on our exports to the European markets and could materially and adversely affect our affiliated European Union operations and increase our cost of selling into the region, which could negatively affect our financial conditions and results of operations.

It is also possible that other antidumping or countervailing duty or other import restrictive proceedings will be initiated in additional jurisdictions. For example, in November 2012, India initiated antidumping investigations against solar cell imports from China, the United States, Malaysia and Taiwan, and in May 2014, India s Department of Commerce recommended imposing duties on electricity produced on solar cell imports from these countries before India s Ministry of Finance decided against imposing any such duties in September 2014. Further, on May 14, 2014, Australia initiated an antidumping investigation against certain CSPV modules or panels exported to Australia from China. Although our policy requires that all of our export sales comply with international trade practices, we cannot guarantee that the government agencies in the jurisdictions in which actions are brought will not impose trade remedy actions. Under the antidumping and countervailing duty laws, significant additional duties may be imposed on imports of our products into these countries, which increase our costs of accessing these additional markets. As a result of the duties imposed by the relevant authorities, or if duties are imposed on our PRC-manufactured products, we may adjust our business strategy for selling into these jurisdictions. Any change in our business strategy would create a number of operational and legal uncertainties. Any of the above scenarios may materially and adversely impact our sales, thereby limiting our opportunities for growth.

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We have been named as a defendant in certain legal and administrative actions that may have a material adverse impact on our operating results and financial condition.

We must defend against legal and administrative actions described in Item 8 of this annual report, Item 8. Financial Information A. Consolidated Statements and Other Financial Information Legal and Administrative Proceedings. These include various trade actions as well as lawsuits brought by the trustees of Solyndra LLC and Energy Conversion Devices Liquidation Trust, against which the defendants, including us, filed motions to dismiss the claims in their entirety. The motion to dismiss the Solyndra LLC trustee s lawsuit was denied by the court and discovery is proceeding in that case. The motion to dismiss Energy Conversion Devices Liquidation Trust s lawsuit was granted by the district court, though the plaintiff has filed a motion for reconsideration of the district court s order and the court has not yet issued a decision. We will continue to defend ourselves in these cases, although we cannot be certain that we will be successful in these efforts. We also cannot be certain that we will be able to successfully defend ourselves against these claims if either case is brought to trial. We will consider appealing the outcome of these legal and administrative actions should our initial defense be unsuccessful. Although we will vigorously defend these cases we are currently unable to estimate the possible loss or possible range of loss, if any, associated with the resolution of these legal and administrative actions and disputes. Any unfavorable outcome from these actions and disputes, including an appeal of the judgment or outcome in these actions and disputes, may have a material adverse effect on our consolidated financial position, results of operations, or cash flows in the future. The legal and administrative proceedings may consume a material portion of our cash resources and divert management s attention from the day-to-day operations of our company, all of which could harm our business. There can be no assurance that we will prevail in any such appeal and any adverse outcome of these cases could have a material adverse effect on our business or results of operations.

A significant reduction or elimination of economic incentives or change in government policies may have a material adverse effect on our business and prospects.

Demand for our products depends substantially on government incentives which aim to promote greater use of solar power. In many countries in which we are currently, or intend to become, active, the solar power markets, particularly the market of on-grid PV systems, would not be commercially viable without government incentives. This is because the cost of generating electricity from solar power currently exceeds, and we believe will continue to exceed for the foreseeable future, the costs of generating electricity from conventional or non-solar renewable energy sources.

The scope of the government incentives for solar power depends, to a large extent, on political and policy developments relating to environmental concerns in a given country, which could lead to a significant reduction in or a discontinuation of the support for renewable energies in such country. Federal, state and local governmental bodies in many of our primary-targeted markets, notably, Germany, Italy, the United Kingdom and other countries in Europe, China, the United States, Australia, India, Japan, as well as other markets in Asia, Africa, the Middle East, Latin America, and the Caribbean Islands have provided economic incentives in the form of capital cost rebates, feed-in tariffs, tax credits and other incentives to end users, distributors, system integrators and manufacturers of solar power products. Policy shifts could reduce or eliminate these government economic incentives altogether.

However, as the solar power industry continues to develop, these government economic incentives have been reduced and could continue to be reduced or be eliminated altogether. For example, in December 2010, the Spanish government reduced the maximum allowable annual operating hours for which PV systems could earn FIT payments. Germany further reduced its feed-in tariffs in the beginning of 2012 by 15% to up to 24.43 Euro cents per kilowatt hour for rooftop systems and up to 18.76 Euro cents per kilowatt hour for ground-based systems. In September 2012, Germany introduced a further reduction in feed-in tariffs of 1% monthly for roof-based systems while reducing or eliminating feed-in tariffs for ground-based systems. Reductions in FIT programs continued in 2012, 2013 and 2014 across Europe, including Germany, Italy, Spain, Romania and Czech. All such reductions may result in a significant fall in the price of PV products in order to support continued demand. In 2012, 2013 and 2014, Germany accounted for 33.1%, 10.4% and 1.0%, respectively, of our net sales and Spain accounted

for 1.3%, 2.3% and 0.1%, respectively, of our net sales. We believe that uncertainty in political and policy developments may lead to increased competition among solar manufacturers. Electric utility companies that have significant political lobbying powers may also seek changes in the relevant legislation in their markets that may adversely affect the development and commercial acceptance of solar energy. Further, austerity measures being implemented by many countries attempting to lower national spending may reduce incentives to the solar industry. A significant reduction in the scope or discontinuation of government incentive programs, especially those in our target markets, could cause demand for our products and our revenues to decline, and have a material adverse effect on our business, financial condition, results of operations and prospects.

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Demand for our products may be adversely affected by the effects of the credit environment on our customers and seasonal variations.

Europe, the United States and international economies are in the midst of a prolonged period of slow economic growth. In particular, the credit and financial crises, terrorist acts and similar events, continued turmoil in the Middle East or war in general could contribute to a slowdown of the market demand for products that require significant initial capital expenditures, including solar power products. For example, global economics, capital markets and credit disruptions have resulted in slower investments in new installation projects that make use of solar power products. If the current economic recovery slows, stalls or reverses, we may experience decreases in the demand for our solar power products, which may harm our operating results.

Global economics, capital markets and credit disruptions also pose risks for our customers. Although we have benefited from historically low interest rates that have made it more attractive for our customers to use credit to purchase our products, interest rates may rise soon, which could increase the cost of financing purchases of our products and may reduce our customers profits and investors expected returns on investment. There can be no assurance that our customers will be able to borrow money on a timely basis or on reasonable terms, which could have a negative impact on demand for our products. If global economic growth remains slow, it could result in a decrease in the demand for our solar power products, which may harm our operating results. These same factors may adversely impact our existing or future sales agreements, including increasing the likelihood of contractual breaches by our counterparties. Our sales are affected by interest rate fluctuations and the availability of liquidity, and would be adversely affected by increases in interest rates or liquidity constraints. Rising interest rates may also make certain alternative investments more attractive to investors and therefore lead to a decline in demand for our solar power products, which could have a material adverse effect on our business, results of operations, financial conditions and cash flows.

Our sales are also affected by seasonal variations in demand linked to construction cycles and weather conditions. Because of this, comparisons of sales and operating results between different periods within a single financial year, or between different periods in different years, are not necessarily meaningful and cannot be relied on as indicators of our performance. Seasonality may cause our working capital and other cash flow requirements to vary depending on the variability in the volume and timing of sales. These factors, among other things, make forecasting more difficult and may reduce our ability to manage working capital and to predict financial results accurately.

Fluctuations in polysilicon prices may affect our margins.

Polysilicon is an essential raw material used in the production of solar cells and modules. Prior to the second half of 2008, there was an industry-wide shortage of polysilicon, primarily as a result of the growing demand for solar power products. In the past, increases in the price of polysilicon have increased our cost of sales and impacted our margins. Polysilicon production capacity expanded rapidly in 2009, which coupled with the global economic downturn, led to an oversupply of high-purity silicon in 2009, which aligned with the oversupply of solar wafers, cells and modules resulting in substantial downward pressure on prices throughout the value chain in 2011 until the second half of 2013. According to Solarbuzz, as demand increased during 2013, polysilicon spot prices began to stabilize and during the second half of 2013 through the first half of 2014 spot prices increased. Polysilicon production increased in 2014 due to higher prices, which weakened the upward pressures on spot prices. One of the main determining factors of polysilicon prices is upstream supply, which has been increasing since the beginning of 2014. According to Solarbuzz, annual polysilicon supply is forecasted to grow by 21.8% in 2015 compared to 2014, and prices are expected to rise in the first quarter of 2015 and then decrease during the rest of 2015. Further, the gap between average spot prices and contract prices for polysilicon used in PV applications has narrowed considerably in 2014 as previously entered into long-term contracts expired, were renegotiated to be priced by referencing to the prevailing market price, or were cancelled.

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We purchase polysilicon from a limited number of international and domestic suppliers. Consistent with market practice, our medium and long-term supply contracts generally contain price adjustment provisions that offer both parties the right to adjust contract price when the fluctuation of market price during a specified period has exceeded a threshold as agreed to by both parties. If the market price of polysilicon increases significantly in the future, our counterparties may renegotiate contract prices with us based on the then market price. Moreover, as the prices of other silicon-based raw materials, including ingots and wafers, are correlated to the price of polysilicon, an increase in the price of polysilicon would likely lead to increases in the prices of other silicon-based raw materials that we source from third parties. Due to the volatility of polysilicon prices, in 2012, we also renegotiated our wafer purchase amounts and prices under a long-term framework agreement with a third party to more closely track market prices. We cannot assure you that our polysilicon procurement strategy will be successful in ensuring that we have an adequate supply of polysilicon at commercially viable prices to meet our requirements. Further, if the price of polysilicon increases faster than the increase in the price of PV modules, we may be unable to pass this increase to our customers, or if the price of PV modules decreases more quickly than the decrease in the price of polysilicon, our results of operations could be materially and adversely affected.

We continue to rely on a limited number of third-party suppliers and manufacturers for silicon-based raw materials for our products and toll services, which could prevent us from delivering our products to our customers within required time frames and result in sales and installation delays, cancellations, liquidated damages and loss of market share.

We purchase silicon-based raw materials, including polysilicon, ingots and wafers, from a limited number of domestic and international suppliers, and from time to time we source or contract toll services from third party manufacturers to manufacture some of our wafers. We purchase non-silicon-based raw materials from many sources. If we fail to develop or maintain our relationships with the key third party suppliers or manufacturers, we may be unable to manufacture our products timely or our products may only be available at a higher cost or after a long delay. If we do not deliver products to our customers within the required time frames, we may experience order cancellations, loss of market share and legal action.

Furthermore, any decrease in the availability of financing may have a significant negative impact on suppliers and manufacturers of raw materials. Suppliers typically require a significant amount of cash to fund their production and operations, to meet contractual obligations arising from previous expansions of manufacturing facilities, as well as for research and development activities. The inability of our suppliers to access capital or the insolvency of our suppliers could lead to their failure to deliver raw materials to us. Our inability to obtain raw materials in a timely manner from suppliers could have a material adverse effect on our business, financial conditions and results of operations.

If we do not successfully renegotiate our medium-term and long-term contracts with our polysilicon and wafer suppliers, our raw material costs and our excess inventory may increase.

We purchase polysilicon from a limited number of international and domestic suppliers using short-term contracts, as well as medium-term and long-term contracts which we previously entered into. Several of these medium-term and long-term contracts are partially pre-paid. From the fourth quarter of 2008, the price of polysilicon decreased rapidly due to the increased supply of polysilicon that resulted from intensive investments in silicon manufacturing. As a result of the decrease in the price of polysilicon in late 2008 and early 2009, we renegotiated most of our medium-term and long-term contracts to reduce the purchase price, thereby reducing our costs. Since 2011, we have renegotiated several medium-term and long-term supply contracts that required us to purchase polysilicon at a pre-determined price or quantity to more closely link our purchase costs with market prices. Beginning in 2012, we have renegotiated our wafer purchase quantity annually and price monthly under a long-term framework agreement with a third party to more closely track market prices.

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See Item 4. Information on the Company B. Business Overview Suppliers and Contractors Manufacturing Segment for more information. If we are required to renegotiate our polysilicon and wafer contracts in the future and we are unable to reach an agreement with terms favorable to us, we may be placed at a competitive disadvantage compared to our competitors, and our costs could increase and our earnings could decline. In addition, if demand for our PV products decreases, yet our supply agreements require us to purchase more polysilicon or wafers than required to meet our actual customer demand, we may incur costs associated with carrying excess inventory. To the extent we are not able to pass these increased costs on to our customers, our business, cash flows, financial condition and results of operations may be materially and adversely affected.

Our future success depends in part on our ability to expand our business into solar power projects markets. Any failure to successfully implement this strategy could have a material adverse effect on our growth, business prospects and results of operations in future periods.

Our current business strategy includes plans to expand into selected solar power projects markets, which we believe are a natural extension of our vertically integrated business model. Historically, the solar module manufacturing business has accounted for the large majority of our net sales but as we continue to expand our business into the solar power projects segment of the industry, we expect that our solar power projects business will contribute an increasingly large portion of our net sales. These expansion plans may include investments in project companies and joint ventures and forming strategic alliances with third parties to balance system technologies, engineering, procurement and construction services, and related financing needs. These plans may require additional capital expenditures, which could be used in pursuit of other opportunities and investments. Additionally, our experience in the solar power products manufacturing industry may not be as relevant or applicable in downstream markets. We may also face intense competition from companies with greater experience or established presence in the targeted downstream markets or competition from our industry peers with similar expansion plans. Furthermore, we may not be able to manage entities which we invest in or provide adequate resources to such entities to maximize the return on our investments. We may not be able to secure the government approvals or licenses required for construction and operation of solar power projects in a timely manner, or at all. In the case of potential joint ventures and strategic alliances with third parties, we may face risks associated with the sharing of proprietary information, loss of control of operations that are material to our business and profit sharing arrangements. We may also consider acquisitions of existing downstream players, in which we may face difficulties related to the integration of the operations and personnel of acquired businesses and the division of resources between our existing and acquired operations.

We cannot assure you that we will be successful in expanding our business into solar power projects markets along the solar power product value chain. Any failure to successfully identify, execute and integrate our acquisitions, investments, joint ventures and alliances as part of entering into projects markets may have a material adverse impact on our growth, business prospects and results of operations, which could lead to a decline in the price of our ADSs.

We may not be able to locate third party buyers for our solar projects on a timely manner, or at all, or we may not be able to timely renew or replace expiring power purchase agreements, or PPAs, or other contractual arrangements with agreements containing equivalent terms and conditions.

Upon completing solar projects, we either sell them to third party buyers, or operate them under PPAs or other contractual arrangements with utility or grid operators. For those projects we intend to sell, if we are not able to locate third party buyers and agree to a purchase and sales contract on terms and conditions favorable to us and in a timely manner, or at all, our business, financial condition and results of operations could be materially and adversely affected. In addition, substantially all of our build-to-own solar power projects are located in China, where local subsidiaries of the State Grid Corporation of China, or the State Grid, purchase nearly all of the electricity we generate pursuant to PPAs. Our PPAs for projects located in China generally have terms of four to ten years and are subject to renewal by the parties when the original term expires. However, the PRC central government guarantees the FIT at a fixed price for all solar power projects approved by China s National

Development and Reform Commission, or NDRC, for at least 20 years in principle. If we are unable to renew the PPAs when they expire, we may not be able to replace them with agreements of equivalent terms, or at all, or we may experience significant delays or incur additional costs related to securing replacements. Although the local subsidiaries of the State Grid are required under PRC law to purchase all electricity generated by renewable energy producers within their coverage areas, if, for any reason, the local subsidiaries of the State Grid are unable or unwilling to fulfill their obligations or otherwise terminate agreements prior to their expiration, our business, financial condition and results of operations could be materially and adversely affected.

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Solar power projects located in China can only receive subsidies from the PRC government after they are listed in the Renewable Energy Electricity Subsidy Catalog issued by China s Ministry of Finance, the NDRC, and the National Energy Administration from time to time, or the Subsidy Catalog.

Solar power projects located in China can only receive central government subsidies after completing the administrative and perfunctory procedures with the relevant authorities of finance, pricing and energy to be listed in the Subsidy Catalog. In order to be listed in the Subsidy Catalog, ground-mounted projects must submit applications to the relevant provincial authorities and rooftop projects must submit applications to the local grid companies in the area where the projects are located. After preliminary review of the applications, the relevant provincial authorities and the local grid companies will report to China s Ministry of Finance, the NDRC, and the National Energy Administration.

The Ministry of Finance, the NDRC and the National Energy Administration review the applications of all solar power projects and decide whether to list the projects in the Subsidy Catalog. In 2013, these agencies instituted a number of measures to standardize the approval process and the settlement of subsidies, but there have been significant delays in the listing of projects in the Subsidy Catalog, at times until even after electricity has been sold to the power grid, which has delayed the payment of the government subsidies. As of the date of this annual report, we have not received subsidies for our build-to-own projects located in China that have met all of the measures of the approval process because they have not been included in the most recent Subsidy Catalog. If we do not receive subsidies for our projects in a timely manner or at all, our business, cash flows, financial condition and results of operations may be materially and adversely affected.

Our ability to expand the pipeline of our projects business in several key markets exposes us to a number of risks and uncertainties.

As a greater proportion of our net sales will be derived from our solar power projects business, we will be increasingly exposed to the risks associated with solar power projects. Further, our future success largely depends on our ability to expand our solar power project pipeline. The risks and uncertainties associated with our projects business and our ability to expand our solar power project pipeline include:

- the need to raise funds to develop greenfield or purchase late-stage solar power projects, which we may be unable to obtain on commercially reasonable terms or at all;

- the uncertainty of being able to sell the projects, receive full payment for them upon completion, or receive payment in a timely manner;

- delays and cost overruns as a result of a number of factors, many of which are beyond our control, including delays in regulatory approvals, construction, grid-connection and customer acceptance testing;

- delays or denial of required approvals, permits or licenses by relevant government authorities in connection with the construction, grid-connection and operation of solar power projects;

- failure to negotiate favorable payment terms with components and services suppliers;
- unforeseeable engineering problems, construction or other unexpected delays and contractor performance shortfalls;
- labor, components and materials supply delays, shortages or disruptions, or work stoppages;
- failure to execute PPAs or other arrangements that are commercially acceptable to us;
- diversion of significant management attention and other resources; and
- failure to execute our project pipeline expansion plan effectively.

If we are unable to successfully expand our projects business, and in particular, our solar power project pipeline, we may be unable to expand our business, maintain our competitive position, improve our profitability, and generate the cash flows we have currently forecasted.

Some of the suppliers of polysilicon with whom we have entered into long-term contracts may not be able to produce polysilicon of sufficient quantity and quality or on schedule to meet our manufacturing requirements.

Manufacturing polysilicon is a highly complex process and our suppliers may not be able to produce polysilicon of sufficient quantity and quality or on schedule to meet our wafer manufacturing requirements. Minor deviations in the manufacturing process can also cause substantial decreases in yield and, in some cases, cause production to be suspended or result in minimal output. If shipments of polysilicon from our suppliers experience major delays or our suppliers are unable to supply us with polysilicon as planned, we may suffer a setback to our raw material procurement, which could materially and adversely affect our growth strategy and our results of operations. Moreover, we may be involved in disputes to retrieve prepayments we made for the polysilicon delivery, which would expose us to risks of losing the prepayment or entering into settlements which may result in losses to us. In addition, the polysilicon supplied by suppliers may contain quality defects. For example, PV modules produced using polysilicon of substandard quality would result in lower cell efficiency and conversion rates than that which the supplier has claimed or provided a warranty for. From time to time, we may engage in negotiations and disputes with certain suppliers that supplied us with polysilicon with quality defects. Any litigation arising out of the disputes could subject us to potentially expensive legal expenses, distract management from the day-to-day operation of our business and expose us to risks for which appropriate damages may not be awarded to us, all of which could materially and adversely affect our business and financial condition.

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Prepayments to our polysilicon suppliers and equipment suppliers expose us to the credit risks of those suppliers and may increase our costs and expenses, which could in turn have a material adverse effect on our liquidity.

Under supply contracts with several of our multi-year polysilicon and our equipment suppliers, consistent with industry practice, we have made prepayments to our suppliers prior to the scheduled delivery dates for polysilicon and equipment. In many such cases, we made the prepayments without receiving collateral for such payments. As a result, our claims for such payments would rank as unsecured claims, which would expose us to the credit risks of our suppliers in the event of their insolvency or bankruptcy. Our claims against the defaulting suppliers would rank below those of secured creditors, which would undermine our chances of obtaining the return of our prepayments. Furthermore, if demand for our products decreases, we may incur costs associated with carrying excess materials. Accordingly, any of the above scenarios may have a material adverse effect on our financial condition and results of operations.

We must comply with certain financial and other covenants under the terms of our debt instruments and the failure to do so may put us in default under those instruments.

Many of our loan agreements include financial covenants and broad default provisions. The financial covenants primarily include current ratios, quick ratios, debt to asset ratios, contingent liability ratios and minimum equity requirements, which, in general, govern our existing long-term debt and debt we may incur in the future. These covenants could limit our ability to plan for or react to market conditions or to meet our capital needs in a timely manner and complying with these covenants we may require us to curtail some of our operations and growth plans. In addition, any global or regional economic deterioration may cause us to incur significant net losses or force us to assume considerable liabilities, which would adversely impact our ability to comply with the financial and other covenants of our outstanding loans. If our creditors refuse to grant waivers for any non-compliance with these covenants, such non-compliance will constitute an event of default which may accelerate the amounts due under the applicable loan agreements. Some of our loan agreements also contain cross-default clauses, which could enable creditors under our debt instruments to declare an event of default should there be an event of default on our other loan agreements.

We have on occasion failed to comply with certain financial covenants in some of our loan agreements. For example, as of August 31, 2014, Trina China was not in compliance with the current ratio and quick ratio requirements of loans from China Development Bank, and Trina Solar (Luxembourg) Holdings S.A.R.L. was not in compliance with the gearing ratio for loans from China Development Bank. On September 19, 2014, Trina China and Trina Solar (Luxembourg) Holdings S.A.R.L. each obtained waiver letters from China Development Bank waiving past breaches and revising those financial covenants.

Although we are currently in compliance with our existing financial and other covenants under the terms of our debt instruments, we cannot assure you that we will be able to remain in compliance with those covenants in the future. We may not be able to cure future violations or obtain a waiver on a timely basis in order to avoid a default. An event of default under any agreement governing our existing or future debt, if not cured by us or waived by our creditors, could have a material adverse effect on our liquidity, financial condition and results of operations.

We have significant outstanding bank borrowings, outstanding convertible senior notes and capital expenditure needs, and we may not be able to arrange adequate financing when our outstanding borrowings mature or when capital expenditures are required.

We typically require a significant amount of cash to fund our operations, especially for prepayments or loans to suppliers to secure our polysilicon supply requirements. We also will require a significant amount of cash to meet future capital requirements, including the expansion of our PV product manufacturing facilities and research and development activities, in order to remain competitive. Future acquisitions, expansions, market changes or other developments may cause us to require additional funds. As of December 31, 2012, 2013 and 2014, our aggregate outstanding borrowings were $1,291.0 million, $1,036.1 million and $842.7 million, respectively, of which approximately $875.8 million, $935.6 million and $820.3 million, respectively, were due within one year. We also had $172.5 million 3.5% convertible senior notes due 2019 and $115 million 4.0% convertible senior notes due 2019 as of December 31, 2014. As of December 31, 2014, we had $392.9 million in cash and cash equivalents and $146.9 million in restricted cash.

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We have historically negotiated with our lenders to renew or rollover our loans shortly before they mature. However, we cannot assure you that we will be able to renew or rollover these borrowing upon maturity in the future. In the event that we are unable to renew or rollover these borrowings, or if we are unable to obtain sufficient alternative funding at reasonable terms to fulfill relevant repayment obligation, we will have to repay these borrowings with cash generated by our operating activities. Our business might not generate sufficient cash flow from operations to repay these borrowings, some of which are secured by significant amounts of our assets, and at the same time fund our capital expenditures. If we are unable to make scheduled repayments in connection with our debt or other fixed payment obligations as they become due, we may need to renegotiate the terms and conditions of those obligations or obtain additional equity or debt financing. We cannot assure you that our renegotiation efforts would be successful or timely or that we would be able to refinance our obligations on acceptable terms or at all.

In addition, repaying these borrowings and financing our capital expenditures with cash generated by our operating activities will divert our financial resources from the requirements of our ongoing operations and future growth, and may have a material adverse effect on our business, financial condition and future prospects. If we are unable to obtain funding in a timely manner or on commercially acceptable terms, or at all, our growth prospects and future profitability may decrease materially. Moreover, future turmoil in the credit markets and the potential impact on the liquidity of financial institutions may have an adverse effect on our ability to fund our business through borrowings, under either existing or newly created instruments in the public or private markets on terms that we believe to be reasonable, if at all. Failure to secure any necessary financing in a timely manner and on favorable terms could have a material adverse effect on our growth strategy, financial performance and market price of ADSs and could require us to delay or abandon critical development plans.

Because the markets in which we compete are highly competitive and many of our competitors have greater resources than us, we may not be able to compete successfully and we may lose or be unable to gain market share.

The market for solar power products is competitive and evolves quickly. We face intense competition, which in the past has resulted in price reductions, reduced margins or loss of market share. We compete with other PV module manufacturing companies, including dedicated PV manufacturers such as First Solar Inc., Yingli Green Energy Holding Co., Ltd., Canadian Solar, Inc., JinkoSolar Holding Co., Ltd., JA Solar Holdings Co., Ltd. as well as multinational conglomerates such as Sharp Electronic Corporation and Mitsubishi Electric Corporation. We may also face competition in the downstream solar power business from competitors such as Canadian Solar Inc., JinkoSolar Holding Co., Ltd., and Yingli Green Energy Holding Co., Ltd., as well as the large Chinese state-owned electric utility enterprises in the downstream solar power business in China. Some of our competitors may have a stronger market position than ours, more sophisticated technologies and products, greater resources and better name recognition than we do. Further, some of our competitors are developing and are currently producing products based on new solar power technologies, such as thin-film technology, which may ultimately have costs similar to, or lower than, our projected costs.

The barriers to entry are relatively low in the PV module manufacturing business, given that manufacturing PV modules is labor intensive and requires limited technology. As the shortage of polysilicon has eased, supply chain management and financial strength have become less significant barriers to entry and many new competitors may enter the industry and cause it to become over-saturated. Some mid-stream solar power products manufacturers have been seeking to move downstream to strengthen their position in regional markets. In addition, we may also face new competition from manufacturers developing thin film and other PV technologies that are designed to offer economic or performance advantages, several of which have already announced their intention to start production of solar cells or module products. Decreases in polysilicon prices and increases in PV module production could result in substantial downward pressure on the price of PV modules and intensify the competition we face.

Some of our current and potential competitors have longer operating histories, access to a larger customer base, stronger relationships with customers, access to greater resources, and greater economies of scale, financing, sales and marketing, manufacturing, distribution, research and development, technical and other advantages over us. As a result, they may be able to respond more quickly to changing customer demands or

market conditions or to devote greater resources to the development, promotion and sales of their products than we can. Our business relies on sales of our PV modules, and our competitors with more diversified product offerings may be better positioned to withstand a decline in the demand for PV modules. New competitors or alliances among existing competitors could emerge and rapidly acquire a significant market share, which would harm our business. Moreover, the key entry barriers to the downstream solar power business at present consist of availability of financing, availability of experienced technicians and executives who are familiar with the industry and the implementation of market access standards. If these barriers disappear or become easier to surmount, new competitors may successfully enter into the market, resulting in increased competition and loss of our market share, which could adversely affect our operating and net margins. If we fail to compete successfully, our business would suffer and we may lose or be unable to gain market share.

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Our dependence on a limited number of customers may cause significant fluctuations or declines in our revenues.

We currently sell a significant portion of our PV modules to a limited number of customers. In 2012, 2013 and 2014, sales to our top five customers accounted for approximately 25.1%, 18.7% and 34.7%, respectively, of our total net sales. Our largest customer contributed approximately 13.2% of our net sales in 2014. Sales to our customers are typically made through non-exclusive, short-term arrangements. We anticipate that our dependence on a limited number of customers will continue for the foreseeable future. Consequently, any one of the following events may cause material fluctuations or declines in our revenues:

- reduction, delay or cancellation of orders from one or more of our significant customers;
- selection of competing products by one or more of our significant customers;
- loss of one or more of our significant customers due to disputes, dissatisfaction with our products or otherwise and our failure to attract additional or replacement customers; and
- failure of any of our significant customers to make timely payment for our products.

We are exposed to the credit risk of these customers, some of which are new customers with whom we have not historically had extensive business dealings. Some of our overseas credit sales are insured against non-payment by our customers. The amount of insurance coverage for each transaction is based on a rating assigned by the insurer to the customer, based on that customer s credit history. However, we cannot assure you that all of our accounts receivable are sufficiently covered or that the insurer will be able to make payments on our claims. The failure of any of these significant customers to meet their payment obligations would materially and adversely affect our financial position, liquidity and results of operations.

The practice of requiring customers to make advance payments when they place orders with us has declined, and we have experienced and will continue to experience increased needs to finance our working capital requirements and are exposed to increased credit risk.

We have historically required our customers to make an advance payment of a certain percentage of their orders, a business practice that helped us to manage our accounts receivable, prepay our suppliers and reduce the amount of funds that we needed to finance our working capital requirements. In line with market trends, this practice of requiring our customers to make advance payments is on the decline, which in turn has increased pressure to increase our working capital turnover or obtain additional financing to fund our working capital requirements. In 2014, a majority of our revenues were derived from credit sales, generally with payment schedules due according to negotiated contracts. In addition, some of our customers pay us through drawn upon acceptance, open account and letter of credit terms, which typically take approximately 90 days to 120 days to process in order for us to be paid, although in some instances the settlement period may be longer. Despite the more lenient payment terms, any of our customers may fail to meet their payment obligations, especially due to the global economic crisis and the resulting

decrease in the availability of financing, which would materially and adversely affect our financial position, liquidity and results of operations.

We may experience difficulty in achieving acceptable yields and product performance as a result of manufacturing problems.

The technology for the manufacturing of silicon ingots and wafers is complex, requires costly equipment and is continuously being modified in an effort to improve yields and product performance. Microscopic impurities such as dust and other contaminants, difficulties in the manufacturing process, disruptions in the supply of utilities or defects in the key materials and tools used to manufacture wafers can cause a percentage of the wafers to be rejected, which in each case negatively affects our yields. We have, from time to time, experienced production difficulties that have caused manufacturing delays and lower than expected yields.

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Because our manufacturing capabilities are concentrated in our manufacturing facilities in China, any problem in our facilities may limit our ability to manufacture products. We may encounter problems in our manufacturing facilities as a result of, among other things, production failures, construction delays, human errors, equipment malfunction or process contamination, which could seriously harm our operations. We may also experience fires, floods, droughts, power losses and similar events beyond our control that would affect our facilities. For example, shortages or suspensions of power supplied to us have occasionally occurred due to severe thunderstorms in the area, and have disrupted our operations and caused severe damages to wafers in the process. A disruption to any step of our manufacturing process will require us to repeat each step and recycle the silicon debris, thus adversely affecting our yields. Operating hazards and natural disasters may cause interruption to our operations, property and/or environmental damage as well as personal injuries, and each of these incidents could have a material adverse impact on our results of operations. Although we carry business interruption insurance, losses incurred or payments required to be made by us due to operating hazards or natural disasters that are not fully insured may have a material adverse effect on our financial condition and results of operations.

We plan to build or acquire new facilities to increase our annual manufacturing capacity of ingots, wafers, cells, and modules from 2,000 megawatts, or MW, 1,700 MW, 3,100 MW and 4,000 MW, respectively, as of December 31, 2014 to 2,900 MW, 2,300 MW, 4,100 MW and 4,400 MW, respectively, as of December 31, 2015. We plan to incur capital expenditures of up to $370 million to accomplish our 2015 expansion plans in our manufacturing segment. If we fail to implement that plan as expected, experience a delay in the ramp up or fail to achieve our targeted yields, our business and results of operations may be materially and adversely affected.

Problems with product quality or product performance could damage our reputation, or result in a decrease in customers and revenues, unexpected expenses or loss of market share, and may cause us to incur significant warranty expenses.

Our products may contain defects that are not detected until after they are shipped or are installed because we cannot test for all possible scenarios. Unlike PV modules, which are subject to certain uniform international standards, solar cells generally are not subject to uniform international standards, and it is often difficult to determine whether solar power product defects are a result of defective solar cells, other defective components of PV modules or other reasons. Furthermore, the solar wafers and other components that we purchase from third-party suppliers are typically sold to us with no or only limited warranties. Also, as many of our customers place orders for bulk deliveries, the large number of items delivered increases the likelihood that a defective or low quality module may be delivered to a customer. We have received in the past, and may receive from time to time in the future, complaints from certain customers that portions of our PV modules have quality deficiencies. For example, in certain instances in the past, customers raised concerns about the stated versus actual performance output of some of our PV modules. We determined that these concerns resulted from differences in calibration standards we used. However, the corrective actions and procedures that we took may turn out to be inadequate to prevent further similar incidents or to protect against future errors or defects. If we deliver PV module products that do not satisfy our customers or end users quality requirements, or if there is a perception that our products are of poor quality, our credibility and the market acceptance and sales of our PV module products could be harmed. We may also incur substantial expense to replace products that do not meet our quality standards.

Our PV modules had typically been sold with a two or five year warranty for defects in materials and product workmanship and a minimum power output warranty of up to 25 years following the date of purchase or installation. In 2011, we extended the product workmanship warranty from two or five years to 10 years and began to guarantee that module power output will not decrease by more than approximately 0.7% per year after the initial year of service. We believe our warranty periods are consistent with industry practice. We only began to sell PV modules in November 2004. Although we conduct accelerated reliability testing of our PV modules, our PV modules have not been and cannot be tested in an environment simulating the 25-year warranty period. As a result, we may be subject to unexpected warranty expense and associated harm to our financial results for as long as 25 years after the sale of our products. Our warranty provisions for the years ended December 31, 2012, 2013 and 2014 were $12.5 million, $16.6 million and $21.6 million, respectively. Any increase in the defect rate of our products would cause us to increase the amount of our warranty reserves and have a correspondingly negative impact on our operating results. Furthermore, widespread product failures may damage our market reputation, reduce our market share and cause our sales to decline.

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We may not be successful in the commercial production of new products, which could adversely affect our business and prospects.

We may develop and produce new products from time to time, such as high-efficiency monocrystalline and multicrystalline modules. In 2012, we introduced our Honey cell technology, which we have used to develop and manufacture a number of new products, and in January 2015 we launched two new high-efficiency multicrystalline and monocrystalline Honey Plus modules that we believe offer significant upgrades on our previous Honey modules. The two modules are expected to become available in select markets in the first half of 2015 with a worldwide launch scheduled in 2016. However, there is no guarantee that we will be able to successfully launch these products or that they, or any other products that we develop, will become commercially successfully. We may be unable to generate sufficient customer demand for our new products if we are unable to develop and produce new products that provide the expected performance in a cost-effective manner. If we fail to generate demand for our new products, our business and prospects may be adversely affected and we may be unable to recoup our investment in the development and production of such products.

Existing regulations and policies and changes to these regulations and policies may present technical, regulatory and economic barriers to the purchase and use of solar power products, which may significantly reduce demand for our products.

The market for electricity generation products is heavily influenced by government regulations and policies concerning the electric utility industry, as well as policies adopted by electric utilities. These regulations and policies often relate to electricity pricing and technical interconnection of customer-owned electricity generation. In a number of countries, these regulations and policies are being modified and may continue to be modified. Customer purchases of, or further investment in the research and development of, alternative energy sources, including solar power technology, could be deterred by these regulations and policies, which could result in a significant reduction in the demand for our products. For example, without a regulatory mandated exception for solar power systems, utility customers are often charged interconnection or standby fees for putting distributed power generation on the electric utility grid. These fees could increase the cost to our customers of using our solar power products and make them less desirable, thereby harming our business, prospects, financial condition and results of operations.

We anticipate that our products and their installation will be subject to oversight and regulation in accordance with national and local regulations relating to building codes, safety, environmental protection, utility interconnection and metering and related matters. It is difficult to track the requirements of individual jurisdictions and design products to comply with the varying standards. Any new government regulations or utility policies pertaining to our solar power products may result in significant additional expenses to us and, as a result, could cause a significant reduction in demand for our solar power products.

If solar power technology is not adopted widely, or sufficient demand for solar power products does not develop or takes longer to develop than we anticipate, our revenues may further decline and we may be unable to sustain our profitability.

The solar power market is at a relatively early stage of development, and the extent of acceptance of solar power products is uncertain. Market data on the solar power industry are not as readily available as those for other more established industries where trends can be assessed more reliably from data gathered over a longer period of time. We sell and market our products to a growing number of worldwide markets where government incentives are accelerating the adoption of solar power. In recent years, we have also increased our sales in newer and emerging solar power markets, which include the United Kingdom, India and Japan, as well as other markets in Asia, Africa, the Middle East, Latin America, and the Caribbean Islands. Many factors may affect the viability of widespread adoption of solar power technology and demand for solar power products in our targeted markets, including:

- availability of government incentives to support the development of the solar power industry;

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- availability and access to grid infrastructure, including interconnection facilities, for solar power producers;

- success of other alternative energy generation technologies, such as wind power, hydroelectric power and biomass;

- fluctuations in economic and market conditions that affect the viability of conventional and other renewable energy sources, such as increases or decreases in the prices of oil and other fossil fuels;

- capital expenditures by end users of solar power products, which tend to decrease when the economy slows down; and

- deregulation of the electric power industry and broader energy industry.

If solar power technology is not adopted widely or sufficient demand for solar power products does not develop or takes longer to develop than we anticipate, our revenues may suffer and we may be unable to sustain our profitability.

Further technological changes in the solar power industry could render our products uncompetitive or obsolete, which could reduce our market share and cause our sales and profit to decline.

The solar power market is characterized by evolving technologies and standards that result in improved features, such as more efficient and higher power output, improved aesthetics and smaller size. This requires us to develop new solar power products and enhance existing products to keep pace with evolving technologies and changing customer requirements. A variety of competing solar technologies that other companies may develop could prove to be more cost-effective and perform better than our technologies. For example, thin-film technologies are competing technologies in the solar power industry. According to Solarbuzz, thin-film production was estimated to be 4.4 gigawatt, or GW, compared to approximately 45.5 GW for crystalline technology, during 2014. Thin-film technologies allow for lower production costs for solar cells by using lower amounts of semiconductor materials. Thin-film solar cells generally have a lower conversion efficiency rate than crystalline solar cells. Further development in competing solar power technologies may result in lower manufacturing costs or higher product performance than those expected from our PV modules. We will need to invest significant financial resources in research and development to maintain our market position, keep pace with technological advances in the solar power industry and effectively compete in the future. Our failure to further refine our technology, enhance our existing solar power products, or develop and introduce new products, could cause our products to become uncompetitive or obsolete, which could reduce our market share and cause our revenues to decline.

Non-compliance with present or future construction and environmental regulations may result in potentially significant monetary damages and fines.

In the past, we began constructing and operating facilities without having obtained all of the necessary construction and environmental permits. Although we have subsequently obtained most of the construction and environmental permits and approvals for these facilities, we could be subject to fines or penalties for our past non-compliance and for those permits and approvals that we have not yet obtained.

Because our manufacturing processes generate noise, waste water, gaseous wastes and other industrial wastes, we are required to comply with national and local environmental regulations. If we fail to comply with present or future environmental regulations, we may be required to pay substantial fines, suspend production or cease operations. Any failure by us to control the use or to adequately restrict the discharge of hazardous substances could subject us to potentially significant monetary damages and fines or suspensions in our business operations, which would have a materially adverse effect on our business and results of operations.

In particular, the manufacturing processes for producing polysilicon employ processes that generate toxic waste products, including the highly volatile and highly toxic substance silicon-tetrachloride. We purchase our polysilicon from our suppliers in China, South Korea and Germany. If any of our suppliers fails to comply with environmental regulations for the production of polysilicon and the discharge of the highly toxic waste products, we may face negative publicity which may have a material adverse effect on our business and results of operations. Furthermore, if any of our suppliers are forced to suspend or shut down production due to violations of environmental regulations, we may not be able to secure enough polysilicon for our production needs on commercially reasonable terms, or at all.

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In addition, we have received all permits and approvals necessary for the solar projects that were grid-connected as of December 31, 2014, except for the national environmental permit for our solar power project located in Yancheng, Jiangsu Province, China, which has been approved by the provincial environmental authority and is currently under review by the national environmental authority. The approval from the provincial environmental authority allowed us to connect the solar power project in Yancheng to the grid while we await final approval from the national environmental authority. Without these permits and approvals, we may be ordered to suspend construction and rectify the non-compliance, be charged a fine and, in the worst case scenario, be required to demolish solar power projects, which may materially and adversely affect our business and financial condition.

The failure to comply with PRC land laws and regulations regarding the lease of government allocated land use rights may materially and adversely affect our business, financial condition, results of operations and prospects.

We lease government allocated land use rights for our 120 MW solar power projects that are currently under construction in Yancheng City, Jiangsu Province. The lease contract was entered into in October 2012 and has a term of 20 years. However, these leases may not meet certain land-related legal requirements under PRC laws and regulations. According to the Interim Measures on Administration of Government Allocated Land Use Right, the lease of government allocated land use rights must first receive approval from the appropriate land administration departments, followed by a series of procedures that the owner of the government allocated land use right must complete, including signing the land use right grant contract and paying the land grant fee. Upon completion of these procedures, the landlord and the lessee must go through the registration formalities in respect of the leasehold interests. Although our lease of government allocated land use rights in Yancheng has been approved by the local land administration department, because we have not yet completed certain statutory procedures, our lease has not been properly registered and thus our leasehold interests may not be legally protected. We are in the process of working with the landlord to complete the required procedures, but we cannot ensure that the registration process will be completed in a timely manner or at all. If because of a failure to complete the registration process we are unable to continue using these lands, our business and financial condition could be materially and adversely affected.

Our future success substantially depends on our ability to significantly expand both our manufacturing capacity and output and solar power projects development capabilities, which exposes us to a number of risks and uncertainties.

Our future success depends on our ability to significantly increase both our manufacturing capacity and output. If we are unable to do so, we may be unable to expand our business, decrease our costs per watt, maintain our competitive position and improve our profitability. Our ability to establish additional manufacturing capacity and increase output is subject to significant risks and uncertainties, including:

- the need to raise additional funds to purchase raw materials or to build additional manufacturing facilities, which we may be unable to obtain on commercially viable terms or at all;

- delays and cost overruns as a result of a number of factors, many of which are beyond our control, such as increases in the price of polysilicon and problems with equipment vendors, particularly with respect to major equipment such as ingot pulling or growing machines;

- delays or denial of required approvals by relevant government authorities;

- diversion of significant management attention and other resources; and

- failure to execute our expansion plan effectively.

If we are unable to establish or successfully operate additional manufacturing capacity, or if we encounter any of the risks described above, we may be unable to expand our business as planned. Moreover, even if we do expand our manufacturing capacity we might not be able to generate sufficient customer demand for our solar power products to support our increased production levels.

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In particular, we believe that the expansion of our manufacturing capacity, including overseas, is an integral part of our strategy to achieve a grid parity cost structure during the solar industry consolidation. Our ability to meet our estimate for the scale of production needed to achieve grid parity is affected by a number of factors, including our ability to improve and maintain the degree of vertical integration and to increase our efficiencies and margins, the likelihood that we may approach or reach a point of diminishing returns as we continue to expand our scale, the average purchase price we will pay for silicon in the future to meet our expansion requirements, and the cost of conventional grid electricity which will determine at which point grid parity can be reached. We might not be able to meet our desired scale of production in order to fully implement our strategy. By expanding some of our module manufacturing outside of the PRC, we also subject ourselves to a number of additional risks, including risks related to interacting with foreign government authorities and foreign laws and regulations.

In addition, in order to increase our production output of solar PV products, it may be necessary to outsource certain phases of the production process, such as the manufacturing of silicon wafers, to third party manufacturers. Outsourcing portions of the production process leave us more vulnerable to fluctuations in the costs of outsourced products and could further reduce our profit margins. In addition, outsourcing exposes us to quality control, payment, delivery and a number of other risks that, if realized, could materially and adversely affect our business and results of operations.

Our business depends substantially on the continuing efforts of our executive officers, and our business may be severely disrupted if we lose their services.

Our future success depends substantially on the continued services of our executive officers, especially Mr. Jifan Gao, our chairman and chief executive officer. If one or more of our executive officers or key employees were unable or unwilling to continue in their present positions, we might not be able to replace them easily or at all. Our business may be severely disrupted, our financial condition and results of operations may be materially and adversely affected, and we may incur additional expenses to recruit, train and retain personnel. Since our industry is characterized by high demand and intense competition for talent, we also may not be able to attract or retain additional highly skilled employees or other key personnel that we will need to achieve our strategic objectives. As we are still a relatively young company and our business has grown rapidly, our ability to train and integrate new employees into our operations may not meet the growing demands of our business.

If any of our executive officers or key employees joins a competitor or forms a competing company, we may lose customers, suppliers, know-how and key professionals and staff members. Each of our executive officers has entered into an employment agreement with us, which contains non-competition provisions. If any dispute arises between our executive officers and us, these agreements may not be enforceable in China in light of the uncertainties with China s legal system, or in another country where they obtain employment. See Risks Related to Doing Business in China Uncertainties with respect to the Chinese legal system could have a material adverse effect on us.

If we are unable to attract, train and retain qualified technical 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 qualified technical personnel, particularly those with expertise in the solar power industry. There is substantial competition for qualified technical personnel, and we might not be able to attract or retain our qualified technical personnel. If we are unable to do so, our business may be materially and adversely affected.

If we fail to manage our growth effectively, particularly the growth of our new operating segment for solar power projects our business may be adversely affected.

We have experienced a period of rapid growth and expansion, in particular relating to our solar power projects business, that has placed, and continues to place, significant strain on our management personnel, systems and resources. To accommodate our growth, we anticipate that we will need to implement a variety of new and upgraded operational and financial systems, procedures and controls, including the improvement of our accounting and other internal management systems, all of which require substantial management efforts. We also will need to continue to expand, train, manage and motivate our workforce, manage our customer relationships and manage our relationship with foundries and assembly and testing houses. All of these endeavors will require substantial management effort and skill and incurrence of additional expenditures. We might not be able to manage our growth effectively, and any failure to do so may have a material adverse effect on our business.

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We face risks associated with the marketing, distribution and sale of our solar power products internationally, and if we are unable to effectively manage these risks, they could impair our ability to expand our business abroad.

In 2012, 2013 and 2014, we sold approximately 87.0%, 66.7% and 67.3%, respectively, of our products to customers outside of China. The marketing, distribution and sale of our solar power products in the international markets expose us to a number of risks, including:

- fluctuations in currency exchange rates;
- difficulty in engaging and retaining distributors who are knowledgeable about, and can function effectively in, overseas markets;
- increased costs associated with maintaining marketing efforts in various countries;
- difficulty and costs relating to compliance with the different commercial and legal requirements of the overseas markets in which we offer our products;
- trade barriers such as export requirements, tariffs, taxes and other restrictions and expenses, which could increase the prices of our products and make us less competitive in some countries; and
- demand for solar power products in overseas markets as influenced by the global economic downturn and its effects.

We may be exposed to intellectual property infringement or misappropriation claims by third parties, which, if determined adversely to us, could cause us to pay significant damage awards.

Our success depends largely on our ability to use and develop our technology and know-how without infringing the intellectual property rights of third parties. The validity and scope of claims relating to solar power technology patents involve complex scientific, legal and factual issues 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, to pay ongoing royalties, or to redesign our products or subject us to injunctions prohibiting the manufacturing and sale of our products or the use of our technologies. Protracted litigations could also result in our customers or potential customers deferring or limiting their purchase or use of our products until resolution of such

litigation.

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.

We rely primarily on patent, trademark, trade secret, copyright law and other contractual restrictions to protect our intellectual property. Nevertheless, these afford only limited protection and the actions we take to protect our intellectual property rights may not be adequate. Third parties, including current and former employees, may infringe or misappropriate our proprietary technologies or other intellectual property rights, which could have a material adverse effect on our business, financial condition or 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. An adverse determination in any such litigation will impair our intellectual property rights and may harm our business, prospects and reputation. Implementation of PRC intellectual property-related laws has historically been lacking, primarily because of ambiguities in the PRC laws and difficulties in enforcement. Accordingly, intellectual property rights and confidentiality protections in China may not be as effective as in the United States or other countries.

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We have limited insurance coverage and may incur losses resulting from product liability claims.

As with other solar power product manufacturers, we are exposed to risks associated with product liability claims should the use of our solar power products results in injury. Since our products generate electricity, it is possible that users could be injured or killed by our products as a result of product malfunctions, defects, improper installation or other causes. We began commercial shipment of our PV modules in November 2004 and we cannot predict whether product liability claims will be brought against us in the future or the effect of any resulting negative publicity on our business. We have limited worldwide product liability insurance coverage for our products manufactured in China. Product liability claims successfully brought against us in excess of our coverage amount could result in monetary damages and require us to make significant payments.

If we fail to maintain an effective system of internal control over financial reporting, we may lose investor confidence in the reliability of our financial statements.

We are subject to reporting obligations under the U.S. securities laws. The Securities and Exchange Commission, or SEC, as required by Section 404 of the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, adopted rules requiring every public company to include a management report on such company s internal control over financial reporting in its annual report, which contains management s assessment of the effectiveness of the company s internal control over financial reporting. In addition, an independent registered public accounting firm must render an opinion on the effectiveness of the company s internal control over financial reporting.

Our management has concluded that our internal control over financial reporting is effective as of December 31, 2014. See Item 15. Controls and Procedures. If we fail to maintain effective internal control over financial reporting in the future, it could result in the loss of investor confidence in the reliability of our financial statements and negatively impact the trading price of our ADSs. We have incurred and anticipate that we will continue to incur considerable costs, management time and other resources in an effort to comply with Section 404 and other requirements of the Sarbanes-Oxley Act.

Our independent registered public accounting firm may be temporarily suspended from practicing before the SEC, if it is unable to continue to satisfy SEC investigation requests in the future. If a delay in completion of our audit process occurs as a result, we could be unable to timely file certain reports with the SEC, which may lead to the delisting of our stock.

We have substantially all of our operations in China. Certain of our independent registered public accounting firm s audit documentation related to their audit reports included in this annual report are located in China, and certain audit procedures are taken place within China s borders. The Public Company Accounting Oversight Board, or the PCAOB, is currently unable to conduct inspections in China or review audit documentation located within China without the approval of Chinese authorities.

On January 22, 2014, Judge Cameron Elliot, an SEC administrative law judge, issued an initial decision suspending the Chinese member firms of the Big Four accounting firms, including our independent registered public accounting firm s network, from, among other things, practicing before the SEC for six months. In February 2014, the initial decision was appealed. In February 2015, the Chinese member firms of the Big Four accounting firms reached a settlement with the SEC over the dispute in relation to access to such accounting firms audit documents. As part of the settlement, each Chinese member firms of the Big Four accounting firms will pay US$500,000 to the SEC while Chinese member firms of

the Big Four accounting firms will not be suspended from practicing before the SEC unless it fails to comply with certain compliance and cooperation requirements from the SEC.

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Our independent registered public accounting firm currently relies on its Chinese member firm for assistance in completing the audit work associated with our operation in China. If the settlement terms are not adhered to, Chinese member firms of Big Four accounting firms may be suspended from practicing before the SEC which could in turn delay the timely filing of our financial statements with the SEC. In addition, it could be difficult for us to timely identify and engage another qualified independent auditor to replace our independent auditor. A delinquency in our filings with the SEC may result in the initiation of the delisting procedures, which could adversely harm our reputation and have other material adverse effects on our results of operation and financial condition.

Our independent registered public accounting firm s audit documentation related to their audit reports included in our annual report may include audit documentation located in China. PCAOB currently cannot inspect audit documentation located in China and, as such, you may be deprived of the benefits of such inspection.

Our independent registered public accounting firm issued an audit opinion on the financial statements included in our annual report filed with the SEC. As auditors of companies that are traded publicly in the United States and a firm registered with the PCAOB, our auditor is required by the laws of the United States to undergo regular inspections by the PCAOB. However, work papers located in China are not currently inspected by the PCAOB because the PCAOB is currently unable to conduct inspections without the approval of the Chinese authorities.

Inspections of certain other firms that the PCAOB has conducted outside of China have identified deficiencies in those firms audit procedures and quality control procedures, which may be addressed as part of the inspection process to improve future audit quality. However, the PCAOB is currently unable to inspect an auditor s audit work related to a company s operations in China and where such documentation of the audit work is located in China. As a result, our investors may be deprived of the benefits of PCAOB s oversight of our auditors through such inspections.

The inability of the PCAOB to conduct inspections of our auditors work papers in China makes it more difficult to evaluate the effectiveness of our auditor s audit procedures or quality control procedures as compared to auditors outside of China that are subject to PCAOB inspections. Investors may consequently lose confidence in our reported financial information and procedures and the quality of our financial statements.

Fluctuations in exchange rates could adversely affect our business.

The value of the Renminbi against the U.S. dollar, Euro and other currencies is affected by, among other things, changes in China s political and economic conditions and China s foreign exchange policies. On July 21, 2005, the PRC government changed its decade-old policy of pegging the value of the Renminbi to the U.S. dollar. Under the new policy, the Renminbi was permitted to fluctuate within a narrow and managed band against a basket of certain foreign currencies. This change in policy caused the Renminbi to appreciate approximately 21.5% against the U.S. dollar over the following three years. However, from July 2008 until June 2010, the Renminbi traded stably within a narrow range against the U.S. dollar. In June 2010, the People s Bank of China announced that the PRC government would reform the Renminbi exchange rate regime and increase the flexibility of the exchange rate. Between June 30, 2010 and December 31, 2013, the value of the Renminbi appreciated approximately 12.0% against the U.S. dollar, although in 2014, the value of the Renminbi depreciated approximately 2.5% against the U.S. dollar. From December 31, 2014 through April 17, 2015, the value of the Renminbi appreciated approximately 0.1% against the U.S. dollar. We cannot predict how government policy will impact the Renminbi exchange rate going forward or whether new policies will be adopted by the PRC government.

Most of our sales are currently denominated in Renminbi, U.S. dollars, Euros, GBP and Japanese Yen, while a substantial portion of our costs and expenses is denominated in Renminbi, with the remainder in U.S. dollars. Fluctuations in exchange rates, particularly among the U.S. dollar, Renminbi, Euros, GBP and Japanese Yen, may affect our net profit margins and could result in fluctuations in foreign currency exchange and operating gains and losses. We had a foreign exchange loss of approximately $21.9 million in 2014. We cannot predict the impact of future exchange rate fluctuations on our results of operations and may incur net foreign currency losses in the future. In addition, as we rely entirely on dividends paid to us by our operating subsidiaries, a significant portion of which are in China, any significant fluctuation of the Renminbi may have a material adverse effect on our revenues and financial condition, and the value of, and any dividends payable on, our ordinary shares.

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Starting from October 2008, we have entered into a series of foreign currency forward contracts with several commercial banks to hedge our exposure to foreign currency exchange risk. As of December 31, 2014, we had foreign currency forward contracts with a total contract value of approximately $220.0 million. We do not use foreign currency forward contracts to hedge all of our foreign currency denominated commitments. As with all hedging instruments, there are risks associated with the use of foreign currency forward contracts. While the use of such foreign currency forward contracts provides us with protection from certain fluctuations in foreign currency exchange, we forgo the potential benefits that might result from favorable fluctuations in foreign currency exchange. Any default by the counterparties to these transactions could adversely affect our financial condition and results of operations. Furthermore, these financial hedging transactions may not provide adequate protection against future foreign currency exchange rate fluctuations and, consequently, such fluctuations could adversely affect our financial condition and results of operations. See Item 11. Quantitative and Qualitative Disclosures about Market Risk Foreign Exchange Risk.

We may be classified as a passive foreign investment company, which could result in adverse U.S. federal income tax consequences to U.S. Holders of our ADSs or ordinary shares.

Based on the market price of our ADSs, the value of our assets, and the composition of our income and assets, we do not believe we were a passive foreign investment company, or PFIC, for U.S. federal income tax purposes for our taxable year ended December 31, 2014 and do not expect to become a PFIC for the current taxable year ending December 31, 2015. However, the application of the PFIC rules is subject to uncertainty in several respects, and we cannot assure you the U.S. Internal Revenue Service will not take a contrary position. A non-U.S. corporation will be a PFIC for any taxable year if either (i) at least 75% of its gross income for such year is passive income or (ii) at least 50% of the value of its assets (based on an average of the quarterly values of the assets) during such year is attributable to assets that produce passive income or are held for the production of passive income.

A separate determination must be made after the close of each taxable year as to whether we were a PFIC for that year. Changes in the composition of our income and assets or the value of our assets may cause us to become a PFIC for the current year or any subsequent year. The determination of whether we are or will become a PFIC for any taxable year may depend, in part, upon the value of our goodwill and other intangibles not reflected on our balance sheet (which may be determined based upon the market value of the ADSs or ordinary shares from time to time, which may be volatile) and may also be affected by how, and how quickly, we spend our liquid assets and the cash raised in offerings. Among other matters, if our market capitalization is less than anticipated or subsequently declines, we may be or become a PFIC for the current or future taxable years. Further, while we believe our classification methodology and valuation approach is reasonable, it is possible that the IRS may challenge our classification or valuation of our goodwill and other intangibles, which may result in our company being or becoming classified as a PFIC for the current or one or more future taxable years.

If we are a PFIC for any taxable year during which a U.S. Holder (as defined in Item 10. Additional Information E. Taxation United States Federal Income Taxation) holds an ADS or an ordinary share, certain adverse U.S. federal income tax consequences could apply to such U.S. Holder. See Item 10. Additional Information E. Taxation United States Federal Income Taxation Passive Foreign Investment Company.

Risks Related to Doing Business in China

Adverse changes in political and economic policies of the PRC government could have a material adverse effect on the overall economic growth of China, which could reduce the demand for our products and materially and adversely affect our competitive position.

Substantially all of our business operations are conducted in China and some of our sales are made in China. Accordingly, our business, financial condition, results of operations and prospects are affected significantly by economic, political and legal developments in China. The Chinese economy differs from the economies of most developed countries in many respects, including:

- the amount of government involvement;
- the level of development;

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- the growth rate;
- the control of foreign exchange; and
- the allocation of resources.

While the Chinese economy has grown significantly in the past 30 years, the growth has been uneven, both geographically and among various sectors of the economy. The PRC government has implemented various measures to encourage economic growth and guide the allocation of resources. Some of these measures benefit the overall Chinese economy, but may also have a negative effect on us. For example, our financial condition and results of operations may be adversely affected by government control over capital investments or changes in tax regulations that are applicable to us.

The Chinese economy has been transitioning from a planned economy to a more market-oriented economy. Although in recent years the PRC government has implemented measures emphasizing the utilization of market forces for economic reform, the reduction of state ownership of productive assets and the establishment of sound corporate governance in business enterprises, a substantial portion of the productive assets in China is still owned by the PRC government. The continued control of these assets and other aspects of the national economy by the PRC government could materially and adversely affect our business. The PRC government also exercises significant control over Chinese economic growth through the allocation of resources, controlling payment of foreign currency-denominated obligations, setting monetary policy and providing preferential treatment to particular industries or companies. Efforts by the PRC government to control the pace of growth of the Chinese economy could result in decreased capital expenditure by solar energy users, which in turn could reduce demand for our products.

Uncertainties with respect to the Chinese legal system could have a material adverse effect on us.

We conduct substantially all of our manufacturing operations through our wholly-owned subsidiaries, Trina China and TST, both of which are limited liability companies established in China. Trina China and TST are generally subject to laws and regulations applicable to foreign investment in China and, in particular, laws applicable to wholly foreign-owned enterprises. The PRC legal system is based on written statutes. Prior court decisions may be cited for reference but have limited precedential value. Since 1979, PRC legislation and regulations have significantly enhanced the protections afforded to various forms of foreign investments in China. However, since these laws and regulations are relatively new and the PRC legal system continues to rapidly evolve, the interpretations of many laws, regulations and rules are not always consistent and enforcement of these laws, regulations and rules involves uncertainties. We cannot predict the effect of future developments in the PRC legal system, including the promulgation of new laws, changes to existing laws or the interpretation or enforcement thereof, the preemption of local regulations by national laws, or the overturn of local government decisions by the superior government. These uncertainties may limit legal protections available to us. In addition, any litigation in China may be protracted and result in substantial costs and diversion of resources and management attention.

Solar power projects are highly regulated in China and we may fail to comply with laws and regulations regarding the development, construction and operation of solar power projects.

The development, construction and operation of solar power projects are highly regulated in China. Our operations must comply with various laws and regulations, including those relating to project approvals and filings, land use, planning and construction, environmental protection, fire control and electricity production and transmission. Failing to obtain or make the required approvals, permits, licenses, filings or to comply with the conditions associated therewith could result in fines, sanctions, suspensions, revocations or prevent us from renewing approvals, permits or licenses, or even subject us to criminal penalties, any of which could have a material adverse effect on our business, financial condition and results of operations. In addition, any new government regulations pertaining to solar power projects may result in significant additional expenses to the development, construction and operation of our solar power projects located in China and, as a result, could cause a significant reduction in demand for our solar power projects and services. We cannot assure you that we will be able to promptly and adequately adjust to changes in laws and regulations, which may materially and adversely affect our business, financial condition and results of operations.

Our ability to make distributions and other payments to our shareholders depends to a significant extent upon the distribution of earnings and other payments made by Trina China and TST.

We conduct substantially all of our operations through Trina China and TST. Our ability to make distributions or other payments to our shareholders depends on payments from Trina China and TST, whose ability to make such payments is subject to PRC regulations. Regulations in the PRC currently permit payment of dividends only out of accumulated profits as determined in accordance with accounting standards and regulations in China. According to the relevant PRC laws and regulations applicable to Trina China and TST and their respective articles of association, Trina China and TST are required to set aside at least 10% of its after-tax profit based on PRC accounting standards each year to its general reserves until the accumulative amount of these reserves reaches 50% of its registered capital. These reserves are not distributable as cash dividends. As of December 31, 2014, these general reserves amounted to $49.7 million, accounting for 8.2% of the registered capital of Trina China and TST. In addition, under the PRC Enterprise Income Tax Law and its Implementation Regulations, or the EIT Law, which became effective January 1, 2008, dividends from Trina China to us are subject to a 10% withholding tax to the extent that we are considered a non-resident enterprise under the EIT Law. See The expiration or reduction of tax incentives by the PRC government may have a material adverse effect on our results of operations and Item 4. Information on the Company B. Business Overview Regulation Tax. Furthermore, if Trina China incurs debt on its own behalf in the future, the instruments governing the debt may restrict its ability to pay dividends or make other distributions to us.

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Restrictions on currency exchange may limit our ability to receive and use our revenues effectively.

Certain portions of our revenues and expenses are denominated in Renminbi. If our revenues denominated in Renminbi increase or expenses denominated in Renminbi decrease in the future, we may need to convert a portion of our revenues into other currencies to meet our foreign currency obligations, including, among others, payment of dividends declared, if any, in respect of our ordinary shares or ADSs. Under China s existing foreign exchange regulations, foreign currency under current account transactions such as dividend payments and trade-related transactions are generally convertible. Accordingly, Trina China is able to pay dividends in foreign currencies without prior approval from the State Administration of Foreign Exchange, or the SAFE, by complying with certain procedural requirements. However, the PRC government could take further measures in the future to restrict access to foreign currencies for current account transactions.

Foreign exchange transactions by Trina China under capital accounts continue to be subject to significant foreign exchange controls and require the approval of, or registration with, PRC governmental authorities. In particular, if either Trina China or TST borrows foreign currency loans from us or other foreign lenders, these loans must be registered with the SAFE, and if we finance Trina China and TST by means of additional capital contributions, these capital contributions must be approved by certain government authorities including the Ministry of Commerce, or MOFCOM, or its local counterparts. These limitations could affect the ability of Trina China to obtain foreign exchange through debt or equity financing.

SAFE regulations may limit our ability to finance our PRC subsidiaries effectively and affect the value of your investment and may make it more difficult for us to pursue growth through acquisition.

If we finance our PRC subsidiaries through additional capital contributions, the MOFCOM in China or its local counterpart must approve the amount of these capital contributions. On August 29, 2008, SAFE promulgated Circular 142, a notice regulating the conversion by a foreign-invested company of foreign currency into Renminbi by restricting how the converted Renminbi may be used. The notice requires that Renminbi converted from the foreign currency-denominated capital of a foreign-invested company may only be used for purposes within the business scope approved by the applicable governmental authority and may not be used for equity investments in the PRC unless otherwise provided by laws and regulations. In addition, SAFE strengthened its oversight of the flow and use of Renminbi funds converted from the foreign currency denominated capital of a foreign-invested company. The use of such Renminbi may not be changed without approval from SAFE, and may not be used to repay Renminbi loans if the proceeds of such loans have not yet been used for purposes within the company s approved business scope. Furthermore, on November 9, 2010, SAFE promulgated a notice on relevant issues concerning strengthening the administration of foreign exchange business, which requires the authenticity of settlement of net proceeds from an offshore offering to be closely examined and the net proceeds to be settled in the manner described in the offering documents. In order to further reform the foreign exchange administration system, SAFE issued the Circular on Reform of Administration Model of the Settlement of Foreign Currency Capital of Foreign-Invested Enterprises on March 30, 2015, or Circular 19, which will take effect from June 1, 2015 and will replace the SAFE Circular 142. Circular 19 allows foreign invested enterprises to settle their foreign exchange capital on a discretionary basis according to the actual needs of their business operations and provides procedures by which a foreign-invested company may convert and use equity investments made in foreign currencies. Circular 19 also reiterates, however, the principle that Renminbi converted from the foreign currency-denominated capital of a foreign-invested company may not be used, either directly or indirectly, for purposes beyond its business scope. Since Circular 19 was just promulgated, there are uncertainties as to how it will be interpreted and implemented in practice.

Violations of Circular 142 may result in severe penalties, including substantial fines as set forth in the Foreign Exchange Administration Regulations. We cannot assure you that we will be able to complete the necessary government registrations or obtain the necessary government approvals on a timely basis, if at all, with respect to future loans by us to our PRC subsidiaries or with respect to future capital contributions by

us to our PRC subsidiaries. If we fail to complete such registrations or obtain such approvals, our ability to contribute additional capital to fund our PRC operations may be negatively affected, which could materially adversely affect our liquidity and our ability to fund and expand our business.

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The expiration or reduction of tax incentives by the PRC government may have a material adverse effect on our results of operations.

The EIT Law imposes a uniform tax rate of 25% on all PRC enterprises, including foreign-invested enterprises, and eliminates or modifies most of the tax exemptions, reductions and preferential treatments available under the previous tax laws and regulations. Under the EIT Law, certain enterprises may benefit from a preferential tax rate of 15% if they qualify as high and new technology enterprises strongly supported by the State, subject to certain general factors and conditions described therein. In September 2008, Trina China obtained the High and New Technology Enterprise Certificate with a valid term of three years starting from 2008. In 2011, Trina China renewed its High and New Technology Enterprise Certificate, effective from 2011 to 2013, entitling it to a preferential income tax rate of 15% from 2008 through 2013. Also, in 2011, TST obtained the High and New Technology Enterprise Certificate, effective from 2011 to 2013 and is entitled to a preferential income tax rate of 15%. In 2014, Trina China and TST renewed their High and New Technology Enterprise Certificates, effective from 2014 to 2016, which entitle both of them to a preferential income tax rate of 15% from 2014 through 2016. If either Trina China or TST fails to maintain the high and new technology enterprise qualification, their applicable rate of enterprise income tax, or EIT, may increase to up to 25%, which could have a material adverse effect on our results of operations. We cannot assure you that we will be able to maintain our current effective tax rate in the future. Any discontinuation of preferential tax treatment or any increase of the EIT rate applicable to Trina China could have a material adverse effect on our financial condition and results of operations.

The dividends we receive from our PRC subsidiaries and our global income may be subject to PRC tax under the EIT Law, which would have a material adverse effect on our results of operations; our foreign ADS holders may be subject to a PRC withholding tax upon the dividends payable by us and upon gains realized on the sale of the ADSs, if we are classified as a PRC resident enterprise.

Under the EIT Law, dividends, interests, rents and royalties payable by a foreign-invested enterprise in the PRC to its foreign investor who is a non-resident enterprise, as well as gains on transfers of shares of a foreign-invested enterprise in the PRC by such a foreign investor, will be subject to a 10% withholding tax, unless such non-resident enterprise s jurisdiction of incorporation has a tax treaty with the PRC that provides for a reduced rate of withholding tax. The Cayman Islands, where Trina is incorporated, does not have such a tax treaty with the PRC. Therefore, if Trina is considered a non-resident enterprise for purposes of the EIT Law, this 10% withholding tax imposed on dividends paid to Trina by its PRC subsidiaries would reduce Trina s net income and have an adverse effect on Trina s operating results.

Under the EIT Law, an enterprise established outside the PRC with its de facto management body within the PRC is considered a resident enterprise and will be subject to the enterprise income tax at the rate of 25% on its worldwide income. The de facto management body is defined as the organizational body that effectively exercises overall management and control over production and business operations, human resources, finance and accounting, and properties of the enterprise. The State Administration of Taxation, or SAT, issued the Notice Regarding the Determination of Chinese-Controlled Offshore Incorporated Enterprises as PRC Tax Resident Enterprises on the Basis of De Facto Management Bodies, or SAT Circular 82, on April 22, 2009. SAT Circular 82 provides certain criteria for determining whether the de facto management body of an offshore-incorporated enterprise controlled by PRC enterprises is located in China. On July 27, 2011, the SAT issued Administrative Measures of Enterprise Income Tax of Chinese-controlled Offshore Incorporated Resident Enterprises (Trial), or Bulletin 45, which became effective on September 1, 2011, to provide further guidance on the implementation of SAT Circular 82. Bulletin 45 further prescribes the rules concerning the recognition, administration and taxation of an enterprise incorporated offshore and controlled by a PRC enterprise or PRC enterprise group. Bulletin 45 provides two ways for determining whether a foreign enterprise controlled by a PRC enterprise or a PRC enterprise group should be treated as a resident enterprise. First, the offshore enterprise may decide on its own whether its de facto management body is located in China based on the criteria set forth in Circular 82, and, if it makes such determination, it must apply to the competent tax bureau to be treated as a resident enterprise. Second, the tax authority may, after investigating, determine that the offshore enterprise is a resident enterprise. Although SAT Circular 82 only applies to offshore enterprises controlled by PRC enterprises and not those controlled by PRC or foreign individuals or foreign enterprises, the criteria set forth therein may reflect the SAT s general position on how the de facto management body test should be applied in determining the tax resident status of offshore enterprises, regardless of whether they are controlled by PRC or foreign enterprises or individuals. Considering that most of our management is currently located in the PRC, we may be considered a resident enterprise and may therefore be subject to the EIT at 25% on our global income other than dividends from our PRC subsidiaries, which could significantly

increase our tax burden and materially adversely affect our cash flow and profitability. Notwithstanding the foregoing provision, the EIT Law also provides that, if a resident enterprise directly invests in another resident enterprise, the dividends received by the investing resident enterprise from the invested enterprise are exempted from income tax, subject to certain conditions. Therefore, if Trina is classified as a resident enterprise, the dividends received from its PRC subsidiary may be exempted from income tax. However, it remains unclear how the PRC tax authorities will interpret the PRC tax resident treatment of an offshore company, like Trina, having ownership interest in a PRC enterprise.

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Moreover, under the EIT Law, a withholding tax at the rate of 10% is applicable to dividends payable to investors that are non-resident enterprises, which do not have an establishment or place of business in the PRC, or which have such establishment or place of business but the relevant income is not effectively connected with the establishment or place of business, to the extent such interest or dividends have their sources within the PRC unless such non-resident enterprises can claim treaty protection. As such, these non-resident enterprises would enjoy a reduced withholding tax from treaty. Similarly, any gain realized on the transfer of ADSs or shares by such investors is also subject to a 10% withholding tax if such gain is regarded as income derived from sources within the PRC. If Trina is considered a PRC resident enterprise, it is likely that the dividends Trina pays with respect to its ordinary shares or ADSs, or the gain you may realize from the transfer of Trina s ordinary shares or ADSs, would be treated as income derived from sources within the PRC and be subject to PRC withholding tax.

Under the PRC Individual Income Tax Law, or IITL, if we are treated as a PRC resident enterprise, it is possible that non-resident individual investors of our shares or ADSs would be subject to PRC individual income tax at a rate of 20% on dividends paid to such investors and any capital gains realized from the transfer of our ordinary shares, ADSs or both, if such dividends or capital gains are deemed income derived from sources within the PRC, except in the case of individuals that qualify for a lower rate under a tax treaty. Under the PRC-U.S. tax treaty, a 10% preferential rate of withholding tax will apply to dividends provided that the recipients are U.S. tax residents that are eligible for the benefits of the PRC-U.S. tax treaty. A non-resident individual is an individual who has no domicile in the PRC and does not stay within the PRC or has stayed within the PRC for less than one year. Pursuant to the IITL and its implementation rules, for purposes of the PRC capital gains tax, the taxable income will be based on the total income obtained from the transfer of our ordinary shares or ADSs minus all the costs and expenses that are permitted under PRC tax laws to be deducted from the income.

We face uncertainty with respect to indirect transfers of equity interests in PRC resident enterprises by their non-PRC holding companies.

The State Administration of Taxation has promulgated several rules and notices to tighten the scrutiny over acquisition transactions in recent years, including the Notice on Strengthening Administration of Enterprise Income Tax for Share Transfers by Non-PRC Resident Enterprises in 2009 with retroactive effect from January 1, 2008, or SAT Circular 698, the Notice on Several Issues Regarding the Income Tax of Non-PRC Resident Enterprises in 2011, or SAT Circular 24, and the Notice on Certain Corporate Income Tax Matters on Indirect Transfer of Properties by Non-PRC Resident Enterprises in February 2015, or SAT Circular 7. Pursuant to these rules and notices, if a non-PRC resident enterprise transfers its equity interests in a PRC tax resident enterprise, this non-PRC resident transferor must report to the tax authorities at the place where the PRC tax resident enterprise is located and will be subject to a PRC withholding tax of up to 10%. In addition, if a non-PRC resident enterprise indirectly transfers so-called PRC Taxable Properties, referring to properties of an establishment or a place of business in China, real estate properties in China and equity investments in a PRC tax resident enterprise, by disposition of the equity interests in an overseas non-public holding company without a reasonable commercial purpose and resulting in the avoidance of PRC EIT, the transfer will be re-characterized as a direct transfer of the PRC Taxable Properties and gains derived from the transfer may be subject to a PRC withholding tax of up to 10%. SAT Circular 7 has listed several factors to be taken into consideration by the tax authorities in determining if an indirect transfer has a reasonable commercial purpose. However, despite these factors, an indirect transfer satisfying all the following criteria will be deemed to lack reasonable commercial purpose and be taxable under the PRC laws: (i) 75% or more of the equity value of the intermediary enterprise being transferred is derived directly or indirectly from PRC Taxable Properties; (ii) at any time during the one year period before the indirect transfer, 90% or more of the asset value of the intermediary enterprise (excluding cash) is comprised directly or indirectly of investments in the PRC, or 90% or more of its income is derived directly or indirectly from the PRC; (iii) the functions performed and risks assumed by the intermediary enterprise and any of its subsidiaries that directly or indirectly hold the PRC Taxable Properties are limited and are insufficient to prove their economic substance; and (iv) the foreign tax payable on the gain derived from the indirect transfer of the PRC Taxable Properties is lower than the potential Chinese tax on the direct transfer of those assets. Nevertheless, the indirect transfers falling into the scope of the safe harbor under SAT Circular 7 may not be subject to PRC tax. The safe harbor includes qualified group restructurings, public market trades and exemptions under tax treaties.

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Under SAT Circular 7 and other PRC tax regulations, in case of an indirect transfer, entities or individuals obligated to pay the transfer price to the transferor must act as withholding agents and are required to withhold the PRC tax from the transfer price. If they fail to do so, the seller is required to report and pay the PRC tax to the PRC tax authorities. If neither party complies with the tax payment or withholding obligations under SAT Circular 7, the tax authority may impose penalties such as late payment interest on the seller. In addition, the tax authority may also hold the withholding agents liable and impose a penalty of 50% to 300% of the unpaid tax on them. The penalty imposed on the purchasers may be reduced or waived if the withholding agents have submitted the relevant materials in connection with the indirect transfer to the PRC tax authorities in accordance with SAT Circular 7.

However, as these rules and notices are relatively new, there is uncertainty as to their implementation and future development. As a result, we may become at risk of being taxed under these rules and notices and we may be required to expend valuable resources to comply with or to establish that we should not be taxed under these rules and notices, which may materially adversely affect our financial condition and results of operations or those non-PRC resident investors investments in us.

The approval of the China Securities Regulatory Commission might have been required in connection with our initial public offering, and, if required, we could be subject to sanction, fines and other penalties.

On August 8, 2006, six PRC regulatory agencies, including the China Securities Regulatory Commission, or the CSRC, promulgated the Regulation on Mergers and Acquisitions of Domestic Companies by Foreign Investors, or the M&A Rules, which became effective on September 8, 2006 and was amended on June 22, 2009. The M&A Rules, among other things, require offshore special purpose vehicles, formed for overseas listing purposes through acquisitions of PRC domestic companies and controlled by PRC enterprises or individuals, to obtain the approval of the CSRC prior to publicly listing their securities on an overseas stock exchange. On September 21, 2006, the CSRC published a notice specifying the documents and materials that are required to be submitted for obtaining CSRC approval. Based on the advice we received from Fangda Partners, our PRC counsel, we did not seek the CSRC approval in connection with our initial public offering as we believed that this regulation did not apply to us and that CSRC approval was not required because (1) Trina was not a special purpose vehicle formed for the purpose of acquiring a PRC domestic company because Trina China was a foreign-invested enterprise before it was acquired by Trina, and, accordingly, Trina China did not fall within the definition of a PRC domestic company as set forth in the new regulation; and (2) such acquisition was completed before the new regulation became effective.

Uncertainty still exists as to how the M&A Rules will be interpreted and implemented, and the opinion of our PRC counsel is subject to any new laws, regulations, rules and their detailed implementations in the future in any form relating to the M&A Rules. If the CSRC or other PRC regulatory body subsequently determines that the CSRC s approval was required for our initial public offering, we may face sanctions by the CSRC or other PRC regulatory agencies. In that case, these regulatory agencies may impose fines and penalties on our operations in the PRC, limit our operating privileges in the PRC, restrict or prohibit payment or remittance of dividends by Trina China, or take other actions that could have a material adverse effect on our business, financial condition, results of operations, reputation and prospects, as well as the trading price of our ADSs.

The regulations also established additional procedures and requirements that could make merger and acquisition activities by foreign investors more time-consuming and complex, including requirements in some instances that the MOFCOM be notified in advance of any change-of-control transaction in which a foreign investor takes control of a PRC domestic enterprise. As we may grow our business in part by acquiring complementary businesses in the future, complying with the requirements of the new regulations to complete such transactions could be time-consuming, and any required approval processes, including obtaining approval from the MOFCOM, may delay or inhibit our ability to complete such transactions. Any such delay or inability to obtain applicable approvals to complete our potential future acquisitions could affect our ability to expand our business or maintain our market share.

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We may be subject to Regulations on National Security Review of Merger and Acquisition by Foreign Investors, which could jeopardize future transactions.

On February 3, 2011, the State Council promulgated Circular No. 6, a notice on the establishment of the security review system for mergers and acquisitions of domestic enterprises by foreign investors, which became effective on March 3, 2011. To implement Circular No. 6, the MOFCOM promulgated the MOFCOM Security Review Rules on August 25, 2011 which became effective on September 1, 2011. According to Circular No. 6 and the MOFCOM Security Review Rules, a national security review is required for certain mergers and acquisitions by foreign investors of enterprises relating to national defense and certain mergers and acquisitions by which foreign investors may acquire de facto control of domestic enterprises raising national security concerns. When deciding whether a specific merger or acquisition of a domestic enterprise by foreign investors is subject to the national security review, the MOFCOM will review the substance and actual impact of the transaction and the foreign investors are prohibited from bypassing the national security review requirement by structuring transactions through proxies, trusts, indirect investments, leases, loans, control through contractual arrangements or offshore transactions. In addition, if a merger or acquisition by foreign investors which was not submitted for national security review, or was determined to have no impact on national security after such review, but thereafter, due to changed elements, including modification of the merger, change of business activities or acquisition transaction or amendment of the relevant agreements or documents and other changes, involves an enterprise relating to national defense or a change of de facto control of a domestic enterprise raising national security concerns such that it becomes subject to national security review, the foreign investor to such merger or acquisition will be required to file an application for national security review with the MOFCOM. Currently, there are no public provisions or official interpretations specifically providing that our current businesses fall within the scope of national security review and there is no requirement that foreign investors to those merger and acquisition transactions completed prior to the promulgation of the Circular No. 6 take initiatives to submit such transactions to MOFCOM for national security review. However, as the MOFCOM Security Review Rules and the Circular No. 6 are relatively new and there is no clear statutory interpretation on their implementation, there is no assurance that the relevant PRC regulatory authorities will have the same view as us when applying them. Moreover, there exists the possibility that our future merger and acquisition transactions will be subject to the national security review under the MOFCOM Security Review Rules and the Circular No. 6.

Regulations relating to offshore investment activities by PRC residents may limit our ability to acquire PRC companies and could adversely affect our business, financial condition and results of operations. The regulations also establish more complex procedures for acquisitions by foreign investors, which could make it more difficult to pursue growth through acquisitions.

In October 2005, SAFE promulgated a regulation known as SAFE Circular 75 that states that if PRC residents use assets or equity interests in their PRC entities as capital contributions to establish offshore companies or inject assets or equity interests of their PRC entities into offshore companies to raise capital overseas, they must register with local SAFE branches with respect to their overseas investments in offshore companies.

On July 4, 2014, SAFE promulgated the Circular on Relevant Issues Concerning Foreign Exchange Control on Domestic Residents Offshore Investment and Financing and Roundtrip Investment through Special Purpose Vehicles, or SAFE Circular 37, which replaced the SAFE Circular 75. SAFE Circular 37 requires PRC residents to register with local branches of SAFE in connection with their direct establishment or indirect control of an offshore entity, for the purpose of overseas investment and financing, with such PRC residents legally owned assets or equity interests in domestic enterprises or offshore assets or interests, referred to in SAFE Circular 37 as a special purpose vehicle . The term control under SAFE Circular 37 is broadly defined as the operation rights, beneficiary rights or decision-making rights acquired by the PRC residents in the offshore special purpose vehicles or PRC companies by such means as acquisition, trust, proxy, voting rights, repurchase, convertible bonds or other arrangements. SAFE Circular 37 further requires amendment to the registration in the event of any significant changes with respect to the special purpose vehicle, such as increase or decrease of capital contributed by PRC individuals, share transfer or exchange, merger, division or other material event. In the event that a PRC shareholder holding interests in a special purpose vehicle fails to fulfill the required SAFE registration, the PRC subsidiaries of that special purpose vehicle may be prohibited from distributing profits to the offshore parent and from carrying out subsequent cross-border foreign exchange activities, and the special purpose vehicle may be restricted in its ability to contribute

additional capital into its PRC subsidiary. Moreover, failure to comply with the various SAFE registration requirements described above could result in liability under PRC law for evasion of foreign exchange controls.

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While we believe our shareholders who have confirmed to us that they are PRC residents have taken actions available to them to comply with SAFE Circular 75 and they are still in the process of updating their SAFE registration to reflect the recent changes to our group structure, we have urged relevant shareholders and beneficial owners to make the necessary applications, filings and amendments as required under SAFE Circular 37 and other related rules. As SAFE Circular 37 was recently promulgated, there are substantial uncertainties on how this new rule will be implemented and interpreted. We cannot assure you that our current shareholders and/or beneficial owners or their shareholders or beneficial owners can successfully comply with registration requirements under SAFE Circular 37 and subsequent implementation rules in a timely fashion or at all. Any future failure by any of our shareholders who is a PRC resident, or controlled by a PRC resident, to comply with relevant requirements under these regulation could subject our company to fines or sanctions imposed by the PRC government, including restrictions on our PRC subsidiaries ability to pay dividends or make distributions to us and our ability to increase our investment in or to provide loans to such PRC subsidiaries.

Furthermore, it is unclear how these regulations, and any future regulation concerning offshore or cross-border transactions, will be interpreted, amended and implemented by the relevant government authorities. We cannot predict how these regulations will affect our business operations or future strategy. For example, we may be subject to a more stringent review and approval process with respect to our foreign exchange activities, such as remittance of dividends and foreign-currency-denominated borrowings, which may adversely affect our financial condition and results of operations.

On December 25, 2006, the People s Bank of China promulgated the Measures for Administration of Individual Foreign Exchange. On January 5, 2007, the SAFE promulgated Implementation Rules for those measures and on February 15, 2012, the SAFE promulgated the notice on issuers concerning the Foreign Exchange Administration for Domestic Individuals Participating in Stock Incentive Plan of Overseas Listed Company which terminated the Operating Procedures on Administration of Foreign Exchange regarding PRC individuals Participation in Employee Share Ownership Plans and Employee Stock Option Plans of Overseas Listed Company issued by SAFE on March 28, 2007 (collectively, referred to as the Individual Foreign Exchange Rules). According to the Individual Foreign Exchange Rules, PRC citizens who are granted shares or share options by a company listed on an overseas stock market according to its employee share option or share incentive plan are required to register with the SAFE or its local counterparts by following certain procedures. We and our employees who are PRC citizens and individual beneficiary owners, or have been granted restricted shares or share options, are subject to the Individual Foreign Exchange Rules and its relevant implementation regulations. The failure of our PRC individual beneficiary owners and the restricted holders to complete their SAFE registrations pursuant to the SAFE Jiangsu Branch s requirement or the Individual Foreign Exchange Rules may subject these PRC citizens to fines and legal sanctions and may also limit our ability to contribute additional capital into our PRC subsidiaries, limit our PRC subsidiaries ability to distribute dividends to us or otherwise materially adversely affect our business.

In addition, the Ministry of Finance and the SAT have issued circulars concerning individual income taxes relating to employee share options. Under these circulars, our employees working in the PRC who exercise share options will be subject to PRC individual income tax. The tax base for the employment income would be the fair market value of the received shares at the time of vesting minus the corresponding consideration paid by the employees for the shares. Our PRC subsidiaries have obligations to file documents related to employee share options with relevant tax authorities and to withhold individual income taxes of those employees who exercise their share options. If our employees fail to pay or we fail to withhold their income taxes according to applicable PRC laws and regulations, we may face fines ranging from 50% to 300% of the overdue taxes.

Labor laws in the PRC may adversely affect our results of operations.

On June 29, 2007, the PRC government promulgated the Labor Contract Law of the PRC, or the PRC Labor Contract Law, which became effective on January 1, 2008. On September 3, 2008, the PRC government promulgated the Implementing Rules on PRC Labor Contract Law, or the Implementing Rules. The PRC Labor Contract Law and the Implementing Rules impose requirements concerning contracts entered into

between an employer and its employees and establish time limits for probationary periods and for how long an employee can be placed in fixed-term labor contracts. According to the PRC Labor Contract Law and the Implementing Rules, employers must pay their employees wages equal to or above the local minimum wage standards, establish labor safety and workplace sanitation systems, comply with national labor rules and standards and provide employees with appropriate training regarding workplace safety. Furthermore, if we enforce the non-compete provision in a labor contract, we have to compensate the employee on a monthly basis during the term of the non-compete period after the termination or expiration of the labor contract, which may cause additional expenses to us.

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In addition, the PRC regulatory authorities have enacted a variety of laws and regulations regarding social insurance and housing funds. Pursuant to these laws and regulations, PRC companies have to make contributions to the relevant local social insurance and housing funds regulatory authorities for their employees. Due to the limited period of effectiveness of the PRC Labor Contract Law and the Implementing Rules and the lack of clarity with respect to their implementation and potential penalties and fines, it is uncertain how they will impact our current employment policies and practices. Therefore, we cannot assure you that our employment policies and practices do not, or will not, violate these laws and regulations and that we will not be subject to related penalties, fines or legal fees. If we are subject to large penalties or fees related to these laws and regulations, our business, financial condition and results of operations may be materially and adversely affected.

We face risks related to health epidemics and other outbreaks.

Our business could be adversely affected by the effects of swine flu, avian flu, SARS or other epidemics or outbreaks. There have been reports on the occurrences of avian flu in various parts of China, including a few confirmed human cases and deaths. In 2009, an outbreak of swine flu occurred in Mexico and the United States and the World Health Organization declared a level 6 flu pandemic, its highest pandemic alert phase, indicating a global pandemic underway. Any prolonged occurrence or recurrence of swine flu, avian flu, SARS or other adverse public health developments in China or any of the major markets in which we do business may have a material adverse effect on our business and operations. These could include our ability to travel or ship our products outside of China and to designated markets, as well as temporary closure of our manufacturing facilities, logistic facilities and/or our customers facilities, leading to delayed or cancelled orders. Any severe travel or shipment restrictions and closures would severely disrupt our operations and adversely affect our business and results of operations. We have not adopted any written preventive measures or contingency plans to combat any future outbreak of swine flu, avian flu, SARS or any other epidemic.

Risks Related to Our Ordinary Shares and ADSs

The market price of our ADSs has been and is likely to continue to be highly volatile.

The market price of our ADSs has been and is likely to continue to be highly volatile and subject to wide fluctuations in response to factors including the following:

- announcements of technological or competitive developments;
- regulatory developments in our target markets affecting us, our customers or our competitors;
- announcements of studies and reports relating to the conversion efficiencies of our products or those of our competitors;
- actual or anticipated fluctuations in our quarterly operating results;

- changes in financial estimates by securities research analysts;

- changes in the economic performance or market valuations of other solar power companies;

- addition or departure of our executive officers and key research personnel;

- financial blogs, Internet chat room or other media forms which publish unsubstantiated opinions or claims in support of undisclosed trades, including short selling, of our ADSs;

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- announcements regarding patent litigation or the issuance of patents to us or our competitors;
- conditions affecting general economic performance in the United States;
- fluctuations in the exchange rates between the U.S. dollar, the Euro and Renminbi;
- release or expiry of lock-up or other transfer restrictions on our outstanding ordinary shares;
- patent litigation and other intellectual property disputes;
- litigation and other disputes with our long-term suppliers;
- SEC investigation or private securities litigation;
- the release or expiration of lock-up or other transfer restrictions on our outstanding ADSs; and
- sales or anticipated sales of additional ADSs.

In addition, the securities market has from time to time experienced significant price and volume fluctuations that are not related to the operating performance of particular companies. These market fluctuations may also have a material and adverse effect on the market price of our ADSs.

Changes in the accounting guidelines relating to the borrowed ADS could decrease our earnings per share and potentially the ADS price.

We have entered into ADS lending agreements with the underwriters of our ADS offering registered on prospectus supplement dated September 30, 2014 and the accompanying prospectus dated June 4, 2014. We entered into these ADS lending agreements to facilitate transactions by which investors in our convertible senior notes may hedge their investment. Subject to certain terms of the ADS lending agreements, these borrowed ADSs must be returned to us by October 15, 2019 or earlier in certain circumstances. The borrowed ADSs will be legally issued, but will not be considered outstanding for accounting purposes under U.S. GAAP. If these guidelines were to change in the

future, we may be required to treat the borrowed ADSs as outstanding for purpose of computing earnings per share, our earnings per share would be reduced and the ADS price could decrease, possibly significantly.

Holders of our ADSs do not have the same voting rights as the holders of our ordinary shares and may not receive voting materials in time to be able to exercise their right to vote.

Holders of our ADSs are not treated as shareholders. Instead, the depositary will be treated as the holder of the shares underlying the ADSs. Holders of our ADSs, however, may exercise some of the shareholders rights through the depositary and have the right to withdraw the shares underlying their ADSs from the deposit facility.

Except as described in this annual report and provided in the deposit agreement, holders of our ADSs will not be able to exercise voting rights attaching to the shares evidenced by our ADSs directly. Holders of our ADSs may instruct the depositary to exercise the voting rights attaching to the shares represented by the ADSs. If no instructions are received by the depositary on or before a date established by the depositary, the depositary may deem the holders to have instructed it to give a discretionary proxy to a person designated by us to exercise their voting rights. Holders of our ADSs may not receive voting materials in time to instruct the depositary to vote, and holders of our ADSs, or persons who hold their ADSs through brokers, dealers or other third parties, might not have the opportunity to exercise a right to vote.

We have adopted a shareholders rights plan, which, together with the other anti-takeover provisions of our articles of association, could discourage a third party from acquiring us, which could limit our shareholders opportunity to sell their shares, including ordinary shares represented by our ADSs, at a premium.

In November 2006, we adopted our amended and restated articles of association, which became effective immediately upon completion of our initial public offering in December 2006. Our current articles of association contain provisions that have the potential to limit the ability of others to acquire control of our company or cause us to engage in change-of-control transactions. In November 2008, our board of directors adopted a shareholders rights plan. Under this rights plan, one right was distributed with respect to each of our ordinary shares outstanding at the closing of business on December 1, 2008. These rights entitle the holders to purchase ordinary shares from us at half of the market price at the time of purchase in the event that a person or group obtains ownership of 15% or more of our ordinary shares (including by acquisition of the ADSs representing an ownership interest in the ordinary shares) or enters into an acquisition transaction without the approval of our board of directors.

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This rights plan and the other anti-takeover provisions of our articles of association could have the effect of depriving our shareholders of an opportunity to sell their shares at a premium over prevailing market prices by discouraging third parties from seeking to obtain control of our company in a tender offer or similar transaction. Our existing authorized ordinary shares confer on the holders of our ordinary shares equal rights, privileges and restrictions. Our board of directors may, without further action by our shareholders, issue additional ordinary shares, or issue shares of a preferred class and attach to such shares special rights, privileges or restrictions, which may be different from those associated with our ordinary shares, up to the amount of the authorized capital and the number of authorized shares of our company. Preferred shares could also be issued with terms calculated to delay or prevent a change in control of our company or make removal of management more difficult. If our board of directors decides to issue ordinary shares or preferred shares, the price of our ADSs and the notes may fall and the voting and other rights of the holders of our ordinary shares and ADSs may be materially and adversely affected.

Holders of our ADSs may not be able to participate in rights offerings that are made available to our shareholders, and may not receive cash dividends if it is impractical to make them available to them.

We may from time to time distribute rights to our shareholders, including rights to acquire our securities. Under the deposit agreement, the depositary bank will not make rights available to holders of our ADSs unless the distribution to ADS holders of both the rights and any related securities are either registered under the Securities Act of 1933, as amended, or the Securities Act, or exempted from registration under the Securities Act with respect to all holders of ADSs. We are under no obligation to file a registration statement with respect to any such rights or securities or to endeavor to cause such a registration statement to be declared effective. Moreover, we may not be able to establish an exemption from registration under the Securities Act. Accordingly, holders of our ADSs may be unable to participate in our rights offerings and may experience dilution in their holdings.

In addition, the depositary of our ADSs has agreed to pay to holders of our ADSs the cash dividends or other distributions it or the custodian receives on our ordinary shares or other deposited securities after deducting its fees and expenses. Holders of our ADSs will receive these distributions in proportion to the number of ordinary shares their ADSs represent. However, the depositary may, at its discretion, decide that it is inequitable or impractical to make a distribution available to any holders of ADSs. For example, the depositary may determine that it is not practicable to distribute certain property through the mail, or that the value of certain distributions may be less than the cost of mailing them. In these cases, the depositary may decide not to distribute such property and holders of our ADSs will not receive such distribution.

Holders of our ADSs may be subject to limitations on transfer of their ADSs.

Our ADSs are transferable on the books of the depositary. However, the depositary may close its transfer books at any time or from time to time when it deems expedient in connection with the performance of its duties. In addition, the depositary may refuse to deliver, transfer or register transfers of ADSs generally when our books or the books of the depositary are closed, or at any time if we or the depositary deem it advisable to do so because of any requirement of law or of any government or governmental body, or under any provision of the deposit agreement, or for any other reason.

You may face difficulties in protecting your interests because we are incorporated under Cayman Islands law.

Our corporate affairs are governed by our memorandum and articles of association, the Companies Law, Cap. 22 (Law 3 of 1961, as consolidated and revised) of the Cayman Islands and the common law of the Cayman Islands. The rights of shareholders to take action against the directors, actions by minority shareholders and the fiduciary responsibilities of our directors to us under Cayman Islands law are to a large extent governed by the common law of the Cayman Islands. The common law of the Cayman Islands is derived in part from comparatively limited judicial precedent in the Cayman Islands as well as that from English common law, which has persuasive, but not binding, authority on a court in the Cayman Islands. The rights of our shareholders and the fiduciary responsibilities of our directors under Cayman Islands law are not as clearly established as they would be under statutes or judicial precedent in some jurisdictions in the United States. In particular, the Cayman Islands has a less developed body of securities laws than the United States. In addition, some U.S. states, such as Delaware, have more fully developed and judicially interpreted bodies of corporate law than the Cayman Islands. As a result of all of the above, shareholders of a Cayman Islands company may have more difficulty in protecting their interests in the face of actions taken by management, members of the board of directors or controlling shareholders than they would as shareholders of a company incorporated in a jurisdiction in the United States. The limitations described above will also apply to the depositary, which is treated as the holder of the shares underlying our ADSs.

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You may have difficulty enforcing judgments obtained against us.

We are a Cayman Islands company and substantially all of our assets are located outside of the United States. Substantially all of our current operations are conducted in the PRC. In addition, most of our directors and officers are nationals and residents of countries other than the United States. A substantial portion of the assets of these persons are located outside the United States. As a result, it may be difficult for you to effect service of process within the United States upon these persons. It may also be difficult for you to enforce in U.S. courts judgments obtained in U.S. courts based on the civil liability provisions of the U.S. federal securities laws against us and our officers and directors, most of whom are not residents in the United States and the substantial majority of whose assets are located outside of the United States. In addition, there is uncertainty as to whether the courts of the Cayman Islands or the PRC would recognize or enforce judgments of U.S. courts.

Item 4. INFORMATION ON THE COMPANY

A. History and Development of the Company

Our legal and commercial name is Trina Solar Limited. Our predecessor company, Trina China, was incorporated in December 1997. In anticipation of our initial public offering, we incorporated Trina, a listing vehicle, as an exempted company limited by shares under the laws of the Cayman Islands on March 14, 2006. Trina acquired all of the equity interests in Trina China through a series of transactions that have been accounted for as a recapitalization and Trina China became our wholly-owned subsidiary. We have conducted substantially all of our operations through Trina China. In December 2006, we completed our initial public offering of our ADSs and listed our ADSs on the New York Stock Exchange. In June 2007, we completed a follow-on public offering of 5,406,280 ADSs sold by us and certain selling shareholders. In July 2008, we completed public offerings of $138 million aggregate principal amount of convertible senior notes due 2013, all of which we redeemed, together with all accrued but unpaid interest, as of the maturity date on July 15, 2013, and 8,146,388 ADSs for a related ADS borrowing facility. In August 2009, we completed a follow-on public offering of 5,175,000 ADSs. In March 2010, we completed another follow-on public offering of 9,085,000 ADSs. In June 2014, we completed a private placement of $172.5 million aggregate principal amount of 3.5% convertible senior notes due 2019, and a concurrent follow-on public offering of 10,120,000 ADSs. In October 2014, we completed a private placement of $115 million aggregate principal amount of 4.0% convertible senior notes due 2019, and a concurrent follow-on public offering of 10,333,785 ADSs, 2,504,000 ADSs of which were sold by us and 7,829,785 ADSs of which were loaned pursuant to an ADS borrowing facility related to the concurrent private placement of senior notes.

Our principal executive offices are located at No. 2 Tian He Road, Electronics Park, New District, Changzhou, Jiangsu 213031, People s Republic of China. Our telephone number at this address is (+86) 519 8548-2008 and our fax number is (+86) 519 8517-6025. Our registered office in the Cayman Islands is located at the offices of Codan Trust Company (Cayman) Limited, Cricket Square, Hutchins Drive, P.O. Box 2681, Grand Cayman, KY1-1111, Cayman Islands.

For information regarding our principal capital expenditures, see D. Property, Plants and Equipment.

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Investor inquiries should be directed to us at the address and telephone number of our principal executive offices set forth above. Our website is http://www.trinasolar.com. The information contained on our website does not form part of this annual report. Our agent for service of process in the United States is CT Corporation System located at 111 Eighth Avenue, New York, New York 10011.

B. Business Overview

Overview

We are a large-scale integrated solar power products manufacturer and solar system developer based in China with a global distribution network covering Europe, Asia, North America, Australia and Africa. Since we began our solar power products business in 2004, we have integrated the manufacturing of ingots, wafers and solar cells for use in our PV module production. Our PV modules provide reliable and environmentally-friendly electric power for residential, commercial, industrial and other applications worldwide. We also develop, design, construct, operate and sell solar power projects that primarily use the solar modules we manufacture. Beginning in 2014, we have two reportable operating segments consisting of the manufacturing segment and the solar power projects segment.

We produce standard monocrystalline PV modules ranging from between 210 watts, or W, and 215 W to between 270 W and 275 W in power output and multicrystalline PV modules ranging from between 250 W and 265 W to between 300 W to 315 W in power output. We build our PV modules to general specifications, as well as to our customers and end-users specifications. We sell and market our products worldwide, including China and the United States, where government incentives have accelerated the adoption of solar power. In recent years, we have also increased our sales in newer and emerging solar power markets, which include the United Kingdom, India and Japan, as well as other markets in Asia, Africa, the Middle East, Latin America, and the Caribbean Islands. We have established regional headquarters and offices located in Europe, North America and Asia to target sales and distribution in those markets. We primarily sell our products to wholesalers, power plant developers and operators and PV system integrators, including Solar City, Vivint, Essco, AMEC, SunEdison Products Singapore, Pte. Ltd., Lightsource Renewable Energy Limited, Anesco Limited, Enerparc AG, Sanshin Electronics Co., Ltd., TBEA Co., Ltd., Shanghai Electric Power Design Institute Co., Ltd. and China Huadian Engineering Co., Ltd.

We have expanded into the downstream solar power projects market. In 2014, we completed and connected 211.1 MW of build-to-own projects, completed 40.0 MW of build-to-own projects that had not yet been connected, and completed and sold 73.8 MW of build-to-sell projects in China and Europe. We anticipate completing between 700 MW and 750 MW of projects during 2015, including significant projects in the PRC, as well as Europe, Japan, and India. Our integrated manufacturing model and experience as a provider of high quality solar solutions have allowed us to successfully grow our solar power project business and develop a strong solar project pipeline to support future expansion.

As of December 31, 2014, we had an annual manufacturing capacity of ingots of approximately 2,000 MW, wafers of approximately 1,700 MW, cells of approximately 3,100 MW and modules of approximately 4,000 MW. In order to fill the gap between our needs for PV cells and our ingots and wafer manufacturing capacities that was created by strong market demand, and to achieve export cost advantages to certain markets, we contract toll services from third party manufacturers to process ingots and wafers and source wafers from our suppliers and strategic partners. Subsequently, we have developed relationships with various domestic and international suppliers of ingots and wafers.

We purchase polysilicon from our network of over ten suppliers, including several leading global producers of polysilicon, and have developed strong relationships with our suppliers. To reduce raw material costs, we continue to focus our research and development on improving solar cell conversion efficiency and enhancing manufacturing yields. Our research and development platform has been further enhanced by our research and development laboratory that we were commissioned by the PRC Ministry of Science and Technology to establish in the Changzhou PV Park, or the PV Park, located adjacent to our headquarters. We began using the research and development laboratory in PV Park, or the PV Park Lab, in March 2012 and in November 2013, it was accredited by China s Ministry of Science and Technology.

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We began our research and development efforts in solar power products in 1999. We began our system integration business in 2002, our PV module business in late 2004, and our production of solar cells in April 2007. We began to develop solar power projects in 2009, and strategically entered the solar power project market in 2013. In 2012, 2013 and 2014, we generated net sales of $1,296.7 million, $1,775.0 million and $2,286.1 million, respectively. We recorded a net loss of $266.6 million, a net loss of $72.2 million and a net income of $61.3 million in 2012, 2013 and 2014, respectively.

Products and Projects

Beginning in 2014, we have two reportable operating segments:

- ***Manufacturing segment***. We design, develop, manufacture and sell high efficiency PV modules world-wide, and integrate the manufacturing of ingots, wafers and solar cells for use in our PV module production; and

- ***Solar power projects segment***. We design, construct, sell and/or operate solar power projects in China and overseas.

Our manufacturing segment designs, develops, manufactures and sells high efficiency PV modules world-wide. The manufacturing segment is comprised of the production of mono- and multi-crystalline silicon ingots, wafers, cells and related products and the subsequent assembly and marketing of PV modules. PV modules are arrays of interconnected solar cells encased in a weatherproof frame. We produce standard solar monocrystalline modules ranging from between 210 W and 215 W to between 270 W and 275 W in power output and multicrystalline modules ranging from between 250 W and 265 W to between 300 W and 315W in power output, built to general specifications for use in a wide range of residential, commercial, industrial and other solar power generation systems. The variation in power output is based on the conversion efficiency of the cells used in our PV modules, as well as the types of cells. We assemble PV modules either from monocrystalline or multicrystalline cells. We also design and produce PV modules based on our customers and end-users specifications. Our PV modules are sealed, weatherproof and able to withstand high levels of ultraviolet radiation and moisture. We sell our module products under our own brand.

Our solar power projects segment designs, constructs, operates and sells solar power projects in China, the United Kingdom, Japan, the Middle East and India. We engage in the full life-cycle of solar projects development including project selection, design, financing, permitting, engineering, procurement, construction, installation, monitoring, operation and maintenance. We either sell completed solar projects to third party buyers, or operate them under the PPAs, or other contractual arrangements with utility or grid operators.

Manufacturing Segment

We manufacture ingots, wafers, cells and modules. We plan to build or acquire new facilities to increase our annual manufacturing capacity of ingots, wafers, cells, and modules from 2,000 MW, 1,700 MW, 3,100 MW and 4,000 MW, respectively, as of December 31, 2014 to 2,900 MW, 2,300 MW, 4,100 MW and 4,400 MW as of December 31, 2015. This increase will take place as we improve the efficiency of our current

facilities and build new greenfield facilities. We also seek for opportunities to access new production capacity that will strategically complement our current capacity through acquisitions or partnerships. We plan to incur capital expenditures of up to $370 million to accomplish our 2015 expansion plans in our manufacturing segment. The following table sets forth our manufacturing capacity and production output in MW equivalent of module production as a result of our expansion for each of our facilities.

Manufacturing Facility	Manufacturing Commencement Date	Annual Manufacturing Capacity as of December 31, 2014	Production Output for the Year Ended December 31, 2014	Estimated Maximum Annual Manufacturing Capacity as of December 31, 2015
Silicon ingots	August 2005	2,000 MW(1)	2,000 MW	2,900 MW
Silicon wafers	February 2006	1,700 MW(1)	1,610 MW	2,300 MW
Solar cells	April 2007	3,100 MW(1)	2,764 MW	4,100 MW
PV modules	November 2004	4,000 MW(1)	3,287 MW(2)	4,400 MW

(1) Approximate figures.

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(2) Includes modules produced but not shipped as of December 31, 2014.

- *Silicon feedstock*. We purchase polysilicon from various suppliers, including silicon distributors, silicon manufacturers, semiconductor manufacturers and silicon processing companies. Our ability to mix the materials in the right proportion is critical to the production of high-quality silicon ingots. In the fourth quarter of 2014, we had an average silicon usage of approximately 5.3 grams per watt, compared to approximately 5.3 and 5.4 grams per watt in the fourth quarters of 2013 and 2012, respectively.

- *Ingots*. We began commercial production of multicrystalline ingots in November 2007. As of December 31, 2014, we had 179 directional solidification system, or DSS, furnaces for the manufacturing of multicrystalline ingots, which can yield 2,000 MW of modules annually based on current manufacturing processes. To produce multicrystalline ingots, molten silicon is changed into a block through a casting process in a DSS furnace. Crystallization starts by gradually cooling the crucibles in order to create multicrystalline ingot blocks. The resulting ingot blocks consist of multiple smaller crystals as opposed to the single crystal of a monocrystalline ingot.

- *Wafers*. We began manufacturing wafers in February 2006. Currently, we slice monocrystalline and multicrystalline wafers to a thickness of approximately 185 microns, while maintaining a low breakage rate. After the ingots are inspected, monocrystalline ingots are squared by squaring machines. Through high-precision cutting techniques, the squared ingots are then sliced into wafers by wire saws using steel wires and silicon carbon powder. To produce multicrystalline wafers, multicrystalline ingots are first cut into pre-determined sizes. After a testing process, the multicrystalline ingots are cropped and the usable parts of the ingots are sliced into wafers by wire saws by the same high-precision cutting techniques used for slicing monocrystalline wafers, while the unusable parts are melted down for reuse. After being inserted into frames, the wafers go through a cleansing process to remove debris from the previous processes, and are then dried. Wafers are inspected for contaminants then packed and transferred to our solar cell production facilities. Our annual wafer manufacturing capacity as of December 31, 2014 was approximately 1,700 MW based on current manufacturing processes.

We fulfill some of our wafer requirements by sourcing from strategic partners. We will continue to source wafers through long-term supply agreements in order to fill the gap between our PV cell and module manufacturing capacity and our wafer manufacturing capacity and to achieve import cost advantages to certain markets. As a result, we have developed relationships with various domestic and international suppliers of wafers. From time to time, we also fulfilled some of our ingot and wafer requirements through toll services from our strategic partners. We will continue to contract toll services from third party manufacturers to process ingots and wafers in the future.

- *Solar cells*. We currently produce our own solar cells for use in our PV modules. To reduce our dependence on third-party solar cell manufacturers and to increase our efficiencies both in solar cell and PV module manufacturing, we began the production of monocrystalline cells in April 2007 and achieved a conversion efficiency of up to 20% as of December 31, 2014 on a test production line basis. In November 2007, we began producing multicrystalline cells and achieved a conversion efficiency of up to 18.3% as of December 31, 2014 on a mass production basis. As of December 31, 2014, we had 72 production lines with an annual manufacturing capacity of approximately 3,100 MW.

To manufacture solar cells, the crystalline silicon wafer is used as the base substrate. After cleaning and texturing the surface, an emitter is formed through a diffusion process. The front and back sides of the wafer are then isolated using the plasma etching technique, the oxide formed during the diffusion process is removed and thus an electrical field is formed. We then apply an anti-reflective coating to the surface of the cell using plasma enhanced chemical vapors to enhance the absorption of sunlight. The front and back sides of the cell are screen printed with

metallic inks and the cell then undergoes a fire treatment in order to preserve its mechanical and electrical properties. The cell is tested and classified according to its parameters.

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We have also selectively entered into short-term agreements to both purchase and sell solar cells with commercially favorable terms to meet the fluctuations in PV module demand, or to achieve import cost advantages to certain markets.

- *PV modules*. We began module manufacturing in November 2004. We increased our annual manufacturing capacity of modules from approximately 6 MW per year as of November 2004 to approximately 4,000 MW per year as of December 31, 2014.

To assemble PV modules, we interconnect multiple solar cells by taping and stringing the cells into a desired electrical configuration. The interconnected cells are laid out, laminated in a vacuum, cured by heating and then packaged in a protective light-weight aluminum frame. Through this labor-intensive process, our PV modules are sealed and become weatherproof and are able to withstand high levels of ultraviolet radiation and moisture.

PV module assembly remains a labor intensive process. We leverage China s lower labor costs by using a greater degree of labor in our manufacturing process when it proves to be more efficient and cost-effective than using automated equipment. We are in close proximity to Chinese solar equipment manufacturers that offer much of the solar manufacturing equipment we require at competitive prices compared to similar machinery offered by international solar equipment manufacturers.

Solar Power Projects Segment

We design and construct, in order to operate or sell, solar power projects in China, the United Kingdom, Japan, the Middle East and India. This segment enables us to cover the downstream business of our manufacturing segment and capture additional portions of the value chain in the solar industry. We engage in the full life-cycle of developing and operating solar power projects, including project selection, design, permitting, engineering, procurement, construction, installation, monitoring, operation and maintenance. We began to develop solar power projects in 2009, and strategically entered the solar power project market in 2013. Our solar power projects segment has grown significantly in the past three years. The solar power projects business is growing quickly in China, supported by favorable government policies, and we expect this segment to be strategically important to us and continue to grow.

Solar Power Projects Development Process

Our solar power projects development process primarily consists of the following stages:

- *Project selection*. We search for project opportunities inside and outside of China. Our business team closely monitors solar power projects market and gathers market intelligence to identify project development opportunities. We engage reputable law firms and consulting firms led by our internal due diligence team to conduct feasibility studies of the potential projects and select projects based on such studies. As we consider undertaking new solar power projects, we weigh a number of factors including location, local policies and regulatory environment, the availability of funding for both us and prospective purchasers and potential internal rate of returns.

- *Project financing.* We typically include project financing plans in our feasibility studies and implement such plans after obtaining internal approval for the projects. Usually we finance 25% to 30% of our projects using our own funds and 70% to 75% through external financing such as short-term bridge debt financing or long-term project loans collateralized by project assets.

- *Permitting and approval*. We generally obtain permits and approvals for solar projects using our internal team and collaborating with other developers. We may also acquire projects that are in various stages of the permitting and approval process. The permits and approvals required for solar power projects varies depending on project location.

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- *Project design, engineering, procurement and construction*. Our engineering team generally designs solar power projects with the goal of optimizing the performance of our projects while minimizing construction and operational costs and risks. We hire independent third-party contractors to construct our solar projects and we screen them based on their experience, reputation, credibility, safety and compliance record and other criteria. We use solar modules that we produce and procure inverters and other equipment from third party suppliers.

- *Build-to-sell projects*. We usually determine whether a project is a build-to-sell project before commencing construction. Most of our overseas projects are build-to-sell projects. We actively market our build-to-sell projects throughout the development process, and usually are able to identify and engage purchasers before the completion of construction.

- *Operation and Maintenance for build-to-own projects*. Most of our build-to-own projects are located in China. We operate and maintain our build-to-own projects after they start operating, which requires signing grid-connection agreements and/or PPAs with the local grid companies. After the project is connected to the grid, we are responsible for operation and maintenance of the project, which we supply internally or sub-contract to external service providers.

Our Project Portfolio

In 2014, we completed and connected 211.1 MW of build-to-own projects, completed 40.0 MW of build-to-own project that had not yet been connected, and completed and sold 73.8 MW of build-to-sell projects. In the first quarter of 2014, we successfully sold our 50.0 MW build-to-sell project in Wuwei, Gansu Province to Huadian Fuxin Energy Corporation Limited. In October and December 2014, we sold a total of 23.8 MW build-to-sell projects in the United Kingdom to funds managed by Foresight Group LLP.

As of December 31, 2014, our completed and connected projects consisted of eight build-to-own projects with a total designed capacity of 233.3 MW located in China, Greece, Italy and the United Sates. Our completed but not yet connected projects consisted of one 40.0 MW project located in China. Our projects under construction included four projects with a total designed capacity of 380.0 MW, including a 50.0 MW build-to-sell project in the United Kingdom and three build-to-own projects with a total designed capacity of 330.0 MW located in China, all of which are expected to be completed and connected to the grid in 2015. Our projects in pipeline as of December 31, 2014 included 39 projects with a total designed capacity of 446.6 MW, including 213.4 MW build-to-sell projects and 233.2 MW build-to-own projects. Projects in pipeline are those projects that have been internally approved to start the permitting process but have not started construction.

As of December 31, 2014, our build-to-sell project portfolio mainly consisted of:

- one project under construction with a designed capacity of 50.0 MW located in the United Kingdom; and

- 24 projects in pipeline with a total designed capacity of 213.4 MW, including 188.4 MW of projects located in Japan and 25.0 MW of projects located in the United Kingdom.

As of December 31, 2014, our build-to-own project portfolio mainly consisted of:

- eight completed and connected projects with a total designed capacity of 233.3 MW, consisting of two ground-mounted solar power projects with total capacity of 210.0 MW and a 1.1 MW industrial rooftop solar power project in China, two solar power projects in Greece with a total designed capacity of 16.0 MW, a 2.0 MW solar power project in Italy, and two solar power projects in the United States with a total designed capacity of 4.2 MW. The 22.2 MW of overseas projects were completed and connected to the grid in 2013. 210.0 MW of ground-mounted solar power projects and a 1.1 MW industrial rooftop solar power project located in China were connected to the grid in December 2014;

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- one 40.0 MW completed but not yet connected project located in China;

- three projects under construction with a total designed capacity of 330.0 MW, which are located in China and are expected to be completed in 2015. In August 2014, we entered into a share purchase agreement to acquire 90% of the equity interest in Yunnan Metallurgical New Energy, which held a 300.0 MW project under development in southern Yunnan Province, which is expected to be completed in 2015. We completed the share transfer registration with the Yunnan Administration for Industry and Commerce in September 2014; and

- 15 projects in pipeline with a total designed capacity of 233.2 MW, including 14 solar power projects with a total designed capacity of 220.7 MW located in China and one 12.5 MW solar power project located in India.

The following table sets forth our project portfolio in our strategic markets as of December 31, 2014:

	Completed Projects			Projects Under Construction			Projects in Pipeline		
	Build-to-sell	Build-to-own	Sub-total	Build-to-sell	Build-to-own	Sub-total	Build-to-sell	Build-to-own	Sub-total
					(in MW)				
China		251.1(1)	251.1(1)		330.0	330.0		220.7	220.7
Europe		18.0	18.0	50.0		50.0	25.0		25.0
Japan							188.4		188.4
Others		4.2	4.2					12.5	12.5
Total		273.3	273.3	50.0	330.0	380.0	213.4	233.2	446.6

(1) Consists of 211.1 MW of projects completed and connected and a 40.0 MW project completed and not yet connected.

In March 2015, we completed the 50.0 MW build-to-sell solar power station in the United Kingdom, and we entered into an agreement to sell the 50.0 MW build-to-sell solar power station to Bluefield Solar Income Fund Limited in March 2015.

Suppliers and Contractors

Manufacturing Segment

Our manufacturing business depends on our ability to obtain silicon-based raw materials, including polysilicon, ingots and wafers. We procure polysilicon primarily from domestic and international manufacturers. In addition to our headquarters, we have three offices located in the United States, Asia and Europe to conduct procurement activities. We believe our procurement team s geographical proximity to the supply sources helps us better communicate with the suppliers and respond to them more efficiently. We believe our efforts to procure silicon-based raw materials from various sources will enable us to better control the silicon supply chain, increase manufacturing efficiency, and reduce margin pressure.

We have entered into medium-term and long-term supply contracts to procure silicon feedstock of different grades with Chinese and international suppliers, which provide us with the ability to meet our future requirements. These medium-term and long-term suppliers include Jiangsu Zhongneng Polysilicon Technology Development Co., Ltd., or Jiangsu Zhongneng, and Changzhou GCL Photovoltaic Technology Co., Ltd., or GCL (Changzhou), both of which are wholly-owned subsidiaries of GCL-Poly Energy Holdings Limited, or GCL-Poly. Our medium-term and long-term contracts have delivery terms from 2008 up to 2020 and variable prices. Generally we negotiate purchase quantities annually. These contracts also require us to make an advance payment of a certain negotiated amount. In 2012, 2013 and 2014, we successfully renegotiated several medium-term and long-term supply contracts that required us to purchase polysilicon and wafer at a predetermined quantity at prevailing prices during the month of delivery, which more closely link our purchase costs with market prices.

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To secure sufficient feedstock to support our planned sales growth, in March 2008, we entered into an eight-year framework polysilicon supply agreement with Jiangsu Zhongneng, a supplier of polysilicon based in Jiangsu, China. In August 2008, we expanded the scope of the supply of polysilicon under this agreement to wafers. In August 2009, we extended the term of this supply agreement by another five years. In December 2010, Jiangsu Zhongneng assigned all of its obligations and rights under this supply agreement with respect to the wafer supply to GCL (Changzhou), a wafer supplier based in Jiangsu, China. Under a supplemental framework long-term agreement we entered into in March 2010 with Jiangsu Zhongneng, Jiangsu Zhongneng has agreed to supply to us up to an aggregate of 27,220 tons of polysilicon through 2020. Under a supplemental framework long-term wafer supply agreement we entered into with GCL (Changzhou) in January 2011, GCL (Changzhou) has agreed to supply to us wafers sufficient to produce up to an aggregate of 19,737 MW of PV modules over ten years from January 2011 to December 2020, and we have agreed to procure not less than 50% of our outsourced wafer requirement from GCL (Changzhou) each year during the term of the agreement. Under our agreements with GCL (Changzhou) and Jiangsu Zhongneng, the prices of the polysilicon and wafers were initially predetermined subject to periodic adjustments. Due to the volatility of polysilicon prices, we have negotiated actual polysilicon and wafer purchase amounts and prices under our long-term framework agreement with GCL from time to time. For example, in March 2013, January 2014 and February 2015, we entered into supplemental agreements with GCL (Changzhou) and Jiangsu Zhongneng to modify our total wafer and polysilicon purchase quantities for 2013, 2014 and 2015, respectively, among other things. We expect to further negotiate our purchase commitments in the future taking into account market conditions.

In recent years, we have sourced ingots for wafer slicing, silver paste for cell production, and ribbon for module assembly from the new production facilities established by our key suppliers in the PV Park adjacent to our headquarters. Sourcing from suppliers located within the PV Park and expanding our close-in supply system to cover a greater number of vendors allows us to collaborate with our vendors for better inventory and production management control, better monitoring of supply quality and easy access to onsite inventory.

Solar Power Projects Segment

We use solar modules that we produced in our solar power projects, which generally constitutes a substantial portion of the average total costs. We procure inverters and other equipment of solar power projects from a broad range of reputable suppliers. We hire and supervise reputable local third-party contractors to construct solar power projects. Our internal engineering team typically designs, operates and maintains our solar power projects located in China, and we engage third-party service providers to provide design, operation and maintenance services for our solar power projects located overseas. We employ a number of measures to manage and monitor the performance of our contractors in terms of both quality and delivery schedule, including on-site supervisors, periodic inspections and reports. Under the construction agreements, we are generally entitled to compensation if our contractors fail to meet the prescribed quality requirements and deadlines.

Quality Assurance

Manufacturing Segment

We have an experienced quality management team that includes manufacturing quality control, supply chain quality management, customer quality support, quality reliability assurance, quality assurance system, calibration center and continual improvement office. We have established and maintain quality management systems in accordance with the requirements of ISO9001:2008 and reliability assurance systems in accordance with the requirements of JIS Q8901:2012. We have also obtained RoHS and REACH certification. We own one of the key national laboratories for PV science and technology, which has obtained ISO/IEC17025 certification from China National Accreditation Service for Conformity Assessment and test capabilities in the key laboratory that satisfy IEC61215/IEC61730 and UL1703 test requirements. Our products

have obtained certification in accordance with the standards of IEC61215:2005, IEC61730:2004 and UL1703:2012. In 2014, we won the Changzhou Mayor Award for Quality and the Rheinland Star Photovoltaic Module Award granted by TUV Rheinland.

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In May 2010, we entered into a strategic partnership agreement with TÜV Rheinland Group, or TÜV Rheinland, Underwriters Laboratories Inc., or Underwriters Laboratories, and China General Certification Center, three of the leading certification bodies. Under the agreement, TÜV Rheinland, Underwriters Laboratories and China General Certification Center will perform product certification tests at our Changzhou PV testing center and other facilities, allowing us to introduce our newest certified product lines in the shortest time to our customers. In October 2012, the testing center for key national PV science and technology laboratories at Trina Solar received the official certification issued by Underwriters Laboratories, which recognizes our testing center as Underwriters Laboratories first global PV customer data program testing center.

In June 2012, we announced that we have achieved what is believed to be a new world record for laboratory-tested multicrystalline module power output, with a standard-size Honey Ultra (1650x992mm) module reaching a peak of 284.7 watts. The record was set using our Honey cell technology and the result was confirmed by TÜV Rheinland. In 2013, we also played a leading role in establishing international standards relating to packaging protection technology for PV modules (SEMI PV44-0513) and testing methods for the content of vinyl acetate in ethylene-vinyl acetate applied in PV modules using thermal gravimetric analysis (SEMI PV45-0513).

Our outstanding quality management team, advanced quality management systems, international first-class quality management hardware and environmental protection initiatives ensure our products are continually of a high quality to satisfy our customers, while also achieving our sustainable development goals.

The following table sets forth the major certifications we have received and major test standards our products have met as of December 31, 2014.

Certification Test Date	Certification or Test Standard	Relevant Products
November 2014	ISO 9001:2008 quality management system certification	Design, manufacture and sales of ingots, casting, silicon wafers, solar cells and PV solar modules; design, sales and service of PV application product; design, sales, installation and service of PV system
December 2014	ISO 14001:2004 environmental management system	Design, manufacture and sales of silicon, ingots, casting, silicon wafers, solar cells and PV solar modules
January 2014	OHSAS18001 occupational health and safety management system	Design, manufacture and sales of silicon, ingots, casting, silicon wafers, solar cells and PV solar modules
May 2014	ISO 14064-1:2006 Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals	Design, manufacture and sales of silicon, ingots, casting, silicon wafers, solar cells and PV solar modules
November 2014	PAS2050:2011 product carbon footprint certification	TSM-PC05A PV modules TSM-PC14 PV modules

		TSM-PDG5 PV modules
November 2014	ISO/TS 14067:2013	TSM-PC05A PV modules TSM-PC14 PV modules TSM-PDG5 PV modules
December 2014	JIS Q 8901 Certification from TÜV Rheinland	PV modules

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Certification Test Date	Certification or Test Standard	Relevant Products
December 2009	RoHS certification	PV modules
June 2014	REACH certification	PV modules
June 2013	ISO/IEC17025 CNAS laboratory accreditation certification	PV product testing center
August 2006, June 2007, July 2007, February 2009, April 2009, May 2009, June 2009, November 2009, October 2010, December 2010, February 2011, March 2011, April 2011, May 2011, June 2011, July 2011, November 2011, January 2012, February 2012, December 2012, August 2013, September 2013, December 2013, February 2014, June 2014, August 2014, September 2014	TÜV Rheinland product certification	PV modules sold in Europe
May 2009, April 2011, June 2011, December 2013	TÜV SÜD product certification	PV modules sold in Europe
May 2010, July 2011, August 2011, May 2012, November 2014	MCS certification	PV modules sold in UK
April 2008, February 2010, November 2011, February 2012, November 2012	Golden Sun product certification	PV modules sold in China
February 2009, May 2009, September 2009, December 2010, November 2011, December 2011, June 2012	KEMCO product certification	PV modules sold in Korea
March 2009, October 2009, May 2010, October 2010, February 2011, February 2015	JET product certification	PV modules sold in Japan
February 2012	J-pec listing	PV modules sold in Japan
February 2011, September 2011, March 2012, October 2012, December 2013	Clean Energy Council (CEC)	PV modules sold in Australia
October 2011, April 2012, September 2013, March 2014	SII product certification	PV modules sold in Israel
August 2008, July 2009, April 2011, May 2011, June 2011, August 2011, September 2011, January 2012, July 2012,	UL 1703 certification	PV modules sold in North America

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Certification Test Date	Certification or Test Standard	Relevant Products
November 2012, March 2013, April 2013, August 2013, February 2014		
January 2010, March 2010, January 2011, November 2011, January 2014	CSA certification(UL1703)	PV modules sold in North America
July 2011, October 2011, September 2014	Ammonia test	Special requirement from customer
May 2011, October 2011, November 2012, September 2014	Salt mist test	Special requirement from customer
December 2011, February 2012	European Module certification	PV modules sold in Italy
November 2012	Client Test Data Program	PV product
November 2012, August 2014	Sand blast test	PV modules
July 2012, December 2012, January 2013, June 2013, December 2013, January 2014, August 2014	PID testing	PC05, PC14
July 2013	International Electrotechnical Commission (IEC) 61730-2 standard certification with Class A Fire Safety	PDG5 module

Solar Power Projects Segment

We have strict and comprehensive quality control standards and measures in every stage of the solar projects development process. We conduct comprehensive market due diligence to identify solar projects that have projected internal returns that meet our standards. Our experienced and qualified engineering team designs the projects with technical specifications that provide for the quality and performance of our solar power plants. Solar modules used in our solar power projects are from our manufacturing business that have the certifications and meet test standards discussed above. These solar modules typically come with a two to five-year warranty for defects in material and workmanship and a minimum power output warranty of up to 25 years following the date of purchase or installation. We closely monitor and supervise construction contractors as part of the quality control process, who also typically provide warranties and performance guarantees of up to five years. Our operating and maintenance team and third party service providers tests, checks and continuously monitors the quality and performance of our operating solar power projects.

Customers and Markets

Manufacturing Segment

In our manufacturing segment, we currently sell our PV modules primarily to power plant developers and operators, wholesalers and PV system integrators. We focus on different types of clients depending largely upon the demand in specific markets. We work with solar power plant

developers and operators, who tend to be large volume purchasers, by supplying PV modules for downstream projects. PV system integrators typically design and sell integrated systems that include our branded PV modules along with other system components. Some of the PV system integrators also resell our modules to other system integrators. Our major customers in 2014 included Solar City, Vivint, Essco, AMEC, SunEdison Products Singapore, Pte. Ltd., Lightsource Renewable Energy Limited, Anesco Limited, Enerparc AG, Sanshin Electronics Co., Ltd., TBEA Co., Ltd., Shanghai Electric Power Design Institute Co., Ltd. and China Huadian Engineering Co., Ltd. We have a quality customer base as many of our customers are well-known wholesalers and system integrators in their respective markets and are expanding to become multinational PV companies.

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A small number of customers have historically accounted for a significant portion of our net sales. Our top five customers collectively accounted for approximately 25.1%, 18.7% and 34.7% of our net sales in 2012, 2013 and 2014, respectively. Our largest customer contributed approximately 13.2% of our net sales in 2014.

We currently sell most of our PV modules to customers located in China, the United States, Japan and Europe. Solar manufacturers like us have capitalized on government and regulatory policies promoting solar power in many jurisdictions. In order to continue growing our sales and to reduce our exposure to any particular market segment, we intend to broaden our geographic presence and customer base. China, the United States and Japan are our most important markets; we significantly expanded our sales of PV modules to solar power markets in China, the United States and Japan in 2014. In 2014, China, the United States and Japan accounted for 32.7%, 27.8% and 20.0% of our net sales, respectively, showing that we have been increasing our market presence globally and building our brand as one of the top global solar brands.

To enhance our sales capabilities in the European, American and Asian (excluding China) markets, we have established regional headquarters in San Jose, Zurich, and Singapore. We also have established sales and project development offices in Beijing, Shanghai, Tokyo, Abu Dhabi, Sydney, Chengdu, Urumqi and Santiago, all to support our growing base of customers and to seek out business development opportunities in the regions. We also plan to drive our sales growth through expansion into downstream arrangements in major markets such as system integrations and project developments. We believe these actions will help reduce the effects of reduced incentives from the governments of certain European countries.

The following table sets forth our total net sales by geographical region for the periods indicated:

	Year Ended December 31,					
	2012		2013		2014	
Region	Total Net Sales	Percent	Total Net Sales	Percent	Total Net Sales	Percent
	(in thousands, except for percentages)					
China	$ 167,953	13.0%	$ 591,071	33.3%	$ 747,811	32.7%
Europe	622,908	48.0	548,557	30.9	219,291	9.6
United States	331,213	25.5	302,270	17.0	634,446	27.8
Japan	38,565	3.0	147,403	8.3	457,901	20.0
Others(1)	136,016	10.5	185,670	10.5	226,670	9.9
Total	$ 1,296,655	100.0%	$ 1,774,971	100.0%	$ 2,286,119	100.0%

(1) Includes India, which in 2014 accounted for $67.3 million, or 2.9%, in total net sales, and Australia, which in 2014 accounted for $40.6 million, or 1.8%, in total net sales.

We conduct our PV module sales typically through short-term contracts with terms of one year or less or, to a lesser extent, long-term sales or framework agreements with terms of generally one to two years. Our short-term contracts provide for an agreed sales volume at a fixed price. Our long-term sales or framework agreements provide for a fixed sales volume or a fixed range of sales volume to be determined generally two to three quarters before the scheduled shipment date. Prices for long-term sales or framework agreements are generally determined one month prior to the start of the quarter of the scheduled shipment date. Compared to short-term contracts, we believe our long-term sales or framework agreements not only provide us with better visibility into future revenues, but also help us enhance our relationships with our customers.

We may require advance payments depending on the credit status of our customer, our relationship with the customer, market demand and the terms of the particular contract. Our contracts with customers stipulate different post-delivery payment schedules based on the credit worthiness of the customer. Our accounts receivable turnover days were approximately 99 days in 2014, compared to 90 days in 2013, because we sold more modules to certain Chinese customers with relatively longer credit terms. Some of our overseas credit sales are insured against non-payment by our customers. The amount of insurance coverage for each transaction is based on a rating assigned by the insurer to the customer, based on that customer s credit history.

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Pursuant to our sales contracts, we provide customers with warranty services. Our PV modules have typically been sold with a two to five year warranty for defects in materials and workmanship and a minimum power output warranty for up to 25 years following the date of purchase or installation. In 2011, we extended the product workmanship warranty to ten years and began to guarantee that module power output will not decrease by more than approximately 0.7% per year after the initial year of service.

We seek to better serve our customers and end users by setting up local offices with sales and marketing, sales support and logistics teams close to them. We are also expanding our range of value-added services to customers. We service residential and commercial end-customers through a network of local distributors and system integrator partners. For distributors and system integrators, we provide marketing support, logistics support that minimizes handling and administrative costs, and pre-sale and post-sale supports that include customized product selection, technological and installation support. In January 2012, we announced the offering of a three-pronged service solution featuring complementary design services, high performance Honey modules and the rapid install Trinamount racking system, a proprietary system to mount PV modules onto residential and commercial rooftops. For our customers in the utility sector, we will continue to provide a greater level of pre-sale due diligence and technical input to facilitate their procurement.

Solar Power Projects Segment

We sell our build-to-sell projects to predetermined or committed purchasers and our build-to-own projects sell electricity to the local transmission grid. Purchasers of build-to-sell projects include large utility companies or other power producers that desire to sell the electricity from the projects to local power suppliers. We focus on countries and regions where the solar power industry is growing rapidly and expected to have sustainable growth supported by favorable government policies, such as China.

Sales and Marketing

Manufacturing Segment

Over the years, we have expanded our distribution network globally. While our core solar module customer base continues to expand in China and the United States, we continue to grow our sales and distribution channels into newer and emerging solar power markets, which include the United Kingdom, India and Japan, as well as other markets in Asia, Africa, the Middle East, Latin America, and the Caribbean Islands. To grow our sales and reduce exposure to any particular market, we have broadened our geographic presence and diversified our sales among distributors, wholesalers, power plant developers and operators, PV system integrators and regional and national grid operators through increased sales and marketing and customer support efforts.

To further expand our distribution network and enhance our sales and delivery capabilities, we have established regional headquarters, warehouse operations and have major sales offices in the locations listed below. Our localized offices will continue to be supported by our global operations and administration headquarters located in Changzhou, China.

Global Headquarters
Changzhou, China
Regional Headquarters
San Jose, California, US (January 2010)
Zurich, Switzerland (January 2010)
Singapore (November 2011)
Warehouse Operations
Rotterdam, the Netherlands (December 2008)
San Jose, California, US (June 2009)

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Sales Offices
Beijing, China (July 2010)
Shanghai, China (July 2010)
Tokyo, Japan (February 2010)
Abu Dhabi, United Arab Emirates (December 2011)
Sydney, Australia (May 2011)
Chengdu, China (March 2012)
Urumqi, China (March 2012)
Santiago, Chile (September 2012)

Our marketing programs include participation in industry conferences, trade fairs and public relations events. Our sales and marketing group works closely with our research and development and manufacturing groups to coordinate our product development activities, product launches and ongoing demand and supply planning.

Solar Power Projects Segment

We diligently conducts market due diligence, routinely meet with industry players and interested investors, and attends industry conferences and events to identify project development opportunities. Our business team has extensive industry expertise and significant experience in working with government authorities and developing new projects for our target markets, especially in China. With respect to our build-to-sell projects, our business team generally actively identifies and pursues potential purchasers before commencing construction. With respect to our build-to-own projects, we focus on markets with favorable government policies that guarantee or provide favorable financial incentives for the purchase of solar power by local or national grid companies.

Intellectual Property

In manufacturing our solar power products, we use know-how available in the public domain and unpatented know-how developed in-house. We rely on a combination of trade secrets and employee contractual protections to establish and protect our proprietary rights. We believe that many elements of our solar power products and manufacturing processes involve proprietary know-how, technology or data that are not coverable by patents or patent applications, including technical processes, equipment designs, algorithms and procedures. We have taken security measures to protect these elements. All senior research and development personnel employed by us have entered into confidentiality, non-competition and proprietary information agreements with us. These agreements address intellectual property protection issues and require our employees to assign to us all of the inventions, designs and technologies they develop during their terms of employment with us.

We obtained an additional 104 patents in 2014. As of December 31, 2014, we had 637 issued patents, including five jointly owned by third parties, and 395 patent applications pending in China. Our issued patents and our pending patent applications mainly relate to technology that we are currently using, including technology relating to improvements to the solar power product manufacturing process and integration of construction elements into our PV modules or solar systems. 92 of our issued patents and patent applications relate to technology that we do not use in our current production of solar power products. As we expand our product portfolio, continue our expansion into solar cell manufacturing and enter into polysilicon manufacturing in the future, we believe that the development and protection of our intellectual property will become more important to our business. We intend to continue to assess appropriate opportunities for patent protection of those aspects of our technology that we believe provide a significant competitive advantage to us.

We have registered as a trademark the logo Trina in China, the European Union, Japan, Singapore, Switzerland, Morocco, Taiwan, Thailand, Croatia, Canada, South Korea, the Philippines, Australia, the United States, the United Arab Emirates and Vietnam. We have registered as a trademark the logo Trinasolar in China, the United States, Canada, the European Union, Australia, the United Arab Emirates, Croatia, Thailand, the Philippines, Japan, Singapore, Switzerland, Morocco, Taiwan, South Korea, India, Vietnam and Turkey and the logo TSM in the European Union, Australia, China, Croatia, Japan, Morocco, South Korea, Singapore, Switzerland, Turkey, the United States and Vietnam. We have pending trademark registration applications for the logos Trina and Trinasolar in Pakistan, Indonesia and several other countries. We filed a trademark registration application for the logo in the PRC in December 2007 and in Taiwan in September 2009. We also registered as a trademark the logo MeSolar in China, Croatia, Singapore, Canada, Morocco, Turkey, the United Arab Emirates, Thailand, the European Union, Taiwan, Japan, Australia and Switzerland and registered as a trademark the logo YouSolar in China, the United States, Australia, Morocco, the United Arab Emirates, Taiwan, Japan, South Korea, Croatia, the European Union, Thailand, Philippines, Turkey, Vietnam, Switzerland and Singapore. We have filed trademark registration applications for the logo Trinasolar in China, the European Union, Croatia, South Korea, Singapore, Japan and several other countries. We have also recently filed European Community Trade Mark (CTM) registration for the logo Honey and Comax in twenty-seven European Union member states and will extend the registration to other states afterwards. Additionally, we have filed the trademark registration applications for the logos , , , , , , and individually with the trademark office in the PRC in November 2009, and we also filed the trademark registration applications for the logo Smart energy together with the trademark office in the PRC in September 2012. We filed trademark registrations for the logos Trina and Trinasolar in Brazil, Costa Rica, Malaysia, Jordan and Chile in 2013, and also filed trademark registrations in 80 countries and regions under the Madrid Agreement and the Madrid Protocol. We also filed trademark registration for the logo , Trinahome and Trinamap in China during 2013. In December 2012, the trademarks and TrinaSolar were certified as well-known trademarks of Changzhou City. In December 2013, the trademark was certified as well-known trademark of Jiangsu Province. In 2014, we filed trademark registrations for the logos Trinasmart and Dualglass in China, and the logo Smart energy together was registered in Classes 6, 9,11, 14, 19, 25, 28, 39 and 40 in China.

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Competition

The market for solar power products is competitive and it evolves quickly. We expect to face increasing competition, which may result in price reductions, reduced margins or loss of market share. We believe that the key competitive factors in the market for PV modules include:

- manufacturing efficiency;
- power efficiency and performance;
- price;
- strength of supplier relationships;
- aesthetic appearance of PV modules; and
- brand name and reputation.

We compete with other PV module manufacturing companies, including dedicated PV manufacturers such as First Solar Inc., Yingli Green Energy Holding Co., Ltd., Canadian Solar, Inc., JinkoSolar Holding Co., Ltd., and JA Solar Holdings Co., Ltd. as well as multinational conglomerates such as Sharp Electronic Corporation and Mitsubishi Electric Corporation. We may also face competition in the downstream solar power business from competitors such as Canadian Solar Inc., JinkoSolar Holding Co., Ltd., and Yingli Green Energy Holding Co., Ltd., as well as the large Chinese state-owned electric utility enterprises in the downstream business in China. Some of our competitors may have a stronger market position than ours, more sophisticated technologies and products, greater resources and better name recognition than we do. Further, many of our competitors are developing and are currently producing products based on new solar power technologies, such as thin-film technology, which may ultimately have costs similar to, or lower than, our projected costs.

The barriers to entry are relatively low in the PV module manufacturing business, given that manufacturing PV modules is labor intensive and requires limited technology. As the shortage of polysilicon has eased, supply chain management and financial strength have become less significant barriers to entry and many new competitors may enter the industry and cause it to become over-saturated. Some mid-stream solar power products manufacturers have been seeking to move downstream to strengthen their position in regional markets. In addition, we may also face new competition from manufacturers developing thin film and other PV technologies that are designed to offer economic or performance advantages, several of which have already announced their intention to start production of solar cells or module products. Decreases in polysilicon prices and increases in PV module production could result in substantial downward pressure on the price of PV modules and

intensify the competition we face.

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Environmental Matters

We believe we have obtained the environmental permits necessary to conduct our business. Our manufacturing processes generate noise, waste water, gaseous wastes and other industrial wastes. However, we have devoted efforts to reduce such wastes to acceptable levels. We have installed various types of anti-pollution equipment in our facilities to reduce, treat and, where feasible, recycle the wastes generated in our manufacturing process. We maintain programs to reduce electricity consumption, water consumption, waste water and greenhouse gas emission since operation and aim to achieve sustainable development and a low carbon footprint. In connection with our module production activities, we have significantly reduced electricity consumption, water consumption, waste water emissions, and greenhouse gas emissions in our production.

Our solar power projects business is usually supported by environmental laws and policies, and receives government subsidies or other financial incentives because it produces clean and renewable energy. For example, the Renewable Energy Law of the PRC sets forth policies to encourage the development and utilization of solar power and other renewable energy. The Circular on Improving Policies on the On-grid Tariffs of Solar Power Generation issued by the NDRC of China provides that the FIT for solar power projects be RMB1.00 per kWh. See Regulation section below. During our project development process, we often prepare environmental impact assessment reports as part of the permitting process. During the construction stage, we comply with environmental laws and regulations relating to construction. Once operational, our solar power projects do not generate industrial waste.

We believe we are currently in compliance with all applicable environmental laws and regulations. Our operations are subject to regulation and periodic monitoring by local environmental protection authorities. If we fail to comply with present or future environmental laws and regulations, we could be subject to fines, suspension of production or a cessation of operations.

Insurance

We maintain property insurance policies with reputable insurance companies for covering our equipment, facilities, buildings and their improvements, and office furniture. These insurance policies cover losses due to fire, earthquake, flood and a wide range of other natural disasters. We maintain director and officer liability insurance for our directors and executive officers. We have limited worldwide product liability insurance coverage for our products manufactured in China. We consider our insurance coverage to be in line with other manufacturing companies of similar size in China. However, significant damage to any of our manufacturing facilities, whether as a result of fire or other causes, could have a material adverse effect on our results of operation. We paid an aggregate of approximately $15.5 million in insurance premiums in 2014.

Some of our overseas credit sales are insured against non-payment by our customers. The amount of insurance coverage for each transaction is based on a rating assigned by the insurer to the customer, based on that customer s credit history.

Regulation

This section sets forth a summary of the most significant regulations or requirements that affect our business activities in China or our shareholders right to receive dividends and other distributions from us.

Renewable Energy Law and Other Government Directives

In February 2005, China enacted its Renewable Energy Law, which became effective on January 1, 2006 and was amended on December 26, 2009. The Renewable Energy Law sets forth policies to encourage the development and use of solar energy and other non-fossil energy. The law sets forth the national policy to encourage and support the use of solar and other renewable energy and the use of on-grid generation. It also authorizes the relevant pricing authorities to set favorable prices for the purchase of electricity generated by solar and other renewable power generation systems. The law imposes mandatory obligations on grid enterprises to purchase the full amount of on-grid electricity generated by approved renewable energy plants whose power generation projects meet the grid connection technical standards in the areas covered by the grid enterprises power grids.

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The law also sets forth the national policy to encourage the installation and use of solar energy water-heating systems, solar energy heating and cooling systems, solar PV systems and other solar energy utilization systems. It also provides financial incentives, such as national funding, preferential loans and tax preferences for the development of renewable energy projects. In January 2006, NDRC promulgated two implementation directives of the Renewable Energy Law. These directives set forth specific measures in setting prices for electricity generated by solar and other renewal power generation systems and in sharing additional expenses occurred. The directives further allocate the administrative and supervisory authorities among different government agencies at the national and provincial levels and stipulate responsibilities of electricity grid companies and power generation companies with respect to the implementation of the Renewable Energy Law.

China s Ministry of Construction also issued a directive in June 2005 that seeks to expand the use of solar energy in residential and commercial buildings, and encourages the increased application of solar energy in different townships. In addition, China s State Council promulgated a directive in July 2005 that sets forth specific measures to conserve energy resources.

On September 4, 2006, China s Ministry of Finance and Ministry of Construction jointly promulgated the Interim Measures for Administration of Special Funds for Application of Renewable Energy in Building Construction, which provides that the Ministry of Finance will arrange special funds to support the application of renewable energy in building construction in order to enhance building energy efficiency, protect the ecological environment and reduce the consumption of fossil energy. These special funds provide significant support for the application of solar energy in hot water supply, refrigeration and heating, PV technology and lighting integrated into building construction materials.

In August 2007, NDRC issued the Medium and Long-term Development Plan for Renewable Energy which describes the national government s financial incentives for the renewable energy industry for the multi-year period ending 2020, with an estimated required investment amount of approximately $300 billion. The plan also calls for increasing the overall installation capacity for solar energy to 300 MW by 2010 and 1.8 GW by 2020. Recent policy statements have indicated that these targets may rise to 400 MW to 500 MW by 2010 and 2 GW by 2020.

On April 1, 2008, the PRC Energy Conservation Law came into effect. Among other objectives, this law encourages the utilization and installation of solar power facilities in buildings for energy-efficiency purposes.

In March 2009, China s Ministry of Finance promulgated the Interim Measures for Administration of Government Subsidy Funds for Application of Solar Photovoltaic Technology in Building Construction, or the Interim Measures, to support the demonstration and the promotion of solar PV applications in China. Local governments are encouraged to issue and implement supporting policies for the development of solar PV technology. These Interim Measures, set forth subsidy funds set at RMB20 per watt for 2009 to cover solar PV systems integrated into building construction that have a minimum capacity of 50 kilowatt peak.

In April 2009, the Ministry of Finance and the Ministry of Housing and Urban-Rural Development jointly issued the Guidelines for Declaration of Demonstration Project of Solar Photovoltaic Building Applications. These guidelines created a subsidy of up to RMB20 per watt for BIPV projects using solar-integrated building materials and components and up to RMB15 per watt for BIPV projects using solar-integrated materials for rooftops or walls.

In July 2010, the Ministry of Housing and Urban-Rural Development issued the City Illumination Administration Provisions or the Illumination Provision. The Illumination Provisions encourage the installation and use of renewable energy system such as PV systems in the process of

construction and re-construction of city illumination projects.

On July 24, 2011, NDRC released the Notice Regarding the Pricing Policy of the Feed-in Tariffs (NDRC Pricing [2011] No. 1594), or the Notice. According to the Notice, all solar energy projects that were approved before July 1, 2011 and completed construction and commenced manufacturing before December 31, 2011 shall price their feed-in tariff at RMB1.15 per kilowatt-hour, or kwhr, (tax included), if such price had not been set by NDRC before the date of the Notice. All other solar energy projects, except for the solar energy projects in Tibet which shall still price their feed-in tariff at RMB1.15/kwhr (tax included), shall price at RMB1/kwhr (tax included). The solar power projects granted through special auction procedures shall follow the auction price, which shall not exceed the relevant prices set forth in the Notice. In addition, according to the Notice, the solar power projects receiving governmental subsidies shall follow certain local feed-in tariff guidance.

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On March 1, 2013, China s State Council issued the Twelfth Five Year Plan. The plan supports the promotion and development of renewable energy, including the solar energy. The plan also encourages the development of solar PV power stations in the areas with abundant solar power resource.

In July 2013, China s State Council issued the Several Opinions on Promoting the Healthy Development of the PV Industry. The opinions stress the importance of promoting the healthy development of the PV industry and set the goal that the total installed capacity reaches thirty-five million kwhr by 2015. The opinions also indicate the State Council s intention to accelerate the adjustment of the PV industry s structure and the advancement of PV technology.

In August 2013, the National Energy Administration promulgated the Interim Measures for the Administration of Solar Power Projects, which stipulated that solar power projects are subject to filings with the provincial NDRC. Such filing is subject to the national development plan for solar power generation, the regional scale index and implementation plan of the year as promulgated by the competent national energy authority and a pre-condition for connecting to power grid.

On August 26, 2013, the NDRC issued the Circular on Promoting the Healthy Development of PV Industry by Price Leverage, or the NDRC Pricing Circular. Under this Circular, the FIT (tax inclusive) for solar power projects approved or filed after September 1, 2013 or beginning operation after January 1, 2014 would be RMB0.90 per kWh, RMB0.95 per kWh or RMB1.00 per kWh, depending on the locations of the projects (excluding on-grid solar power projects located in Tibet). In addition, the NDRC Pricing Circular sets forth special rules that entitle distributed solar power projects (excluding the projects that have received an investment subsidy from the central budget) to a national subsidy of RMB0.42 per kWh. The difference (in amount) between the FIT for solar power projects and the desulphurized coal benchmark electricity price, or the subsidies paid to distributed solar power projects, are funded by the renewable energy development funds. The above FIT and subsidy policies are valid for 20 years for each power generation project since its formal operation, in principle.

In September 2013, the Ministry of Finance and the SAT jointly issued the Notice on the Value-added Tax Policy for PV Power Generation. This notice announces a new policy regarding value-added tax, effective from October 1, 2013 to December 31, 2015. Under the new policy, 50% of the value-added tax paid by taxpayers in connection with sales of self-produced electrical products generated by solar energy will be immediately refunded to the taxpayers when the value-add tax is collected.

On November 26, 2013, the National Energy Administration promulgated the Interim Measures for the Administration of Distributed PV Power Generation. The interim measures clarify that the distributed solar projects are subject to filings with the provincial or regional NDRC. Such filing is subject to State Council s rules for administration of investment projects and the regional scale index and implementation plan of the year as promulgated by the competent national energy authority. Distributed solar projects in the regional scale index of the year that are not completed or put into operation within two years from their respective filing date must be cancelled and disqualified to receive national subsidies. The interim measures also provide that the filing procedures should be simplified and the electric power business permit and permits in relation to land planning, environmental impact review, energy saving evaluation and other supporting documents may be waived. The interim measures are valid for three years starting from the date of promulgation.

In February 2014, the Certification and Accreditation Administration and the National Energy Administration jointly issued the Implementation Opinions on Strengthening the Testing and Certification of PV Products. The implementation opinions provide that only certified PV products may be connected to the public grid or receive government incentives. The institutions that certify PV products must be approved by the Certification and Accreditation Administration. According to the implementation opinions, PV products that are subject to certification include

PV battery parts, inverters, control devices, confluence devices, energy storage devices and independent PV systems.

In September 2014, the National Energy Administration promulgated the Notice on Further Implementation of Certain Policies in Relation to Distributed Solar Power, which aims to encourage the application of distributed solar power in various fields by improving subsidies, financing and supporting services.

In October 2014, the National Energy Administration released a succession of circulars on regulating the investment and development order of PV power stations and subduing the speculative behaviors. These circulars stipulates that the filings of solar power projects will be automatically invalidated if the construction of solar power projects has not commenced prior to the expiration of such filings and no application for extension has been made. The investor applying for solar power projects shall take the lead on the project investment and development as a controlling party. Prior to the commercial commencement, the investor shall not transfer the project without the consent from the filing authority. Also, in case of any material changes to the investing party or any changes to the location or details of the construction, the investor shall re-apply for the filing with the authority.

In March 2015, the National Energy Administration promulgated the Circular on Implementing Plans of PV Generation Construction for 2015, which announced that the total target for the increase in PV power generation capacity of ground-mounted projects for 2015 will be 17.8 GW and indicated that rooftop distributed solar projects and ground-mounted projects which are completely for self-use would no longer be subject to quota requirement.

On March 20, 2015, the NDRC and the National Energy Administration issued a directive opinion, which emphasizes that the competent provincial authorities must strengthen the implementation of the provisions with regard to the purchase of the full amount of electricity generated by renewable energy and avoid any curtailment of solar power projects. In addition, it also stated that electricity generated by clean energy is encouraged to be sold directly to the consumers in the regions where there is ample supply of clean energy, and the relevant parities must coordinate the trans-provincial supply of electricity and power transmission capability, in order to maximize the utilization of clean energy.

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Electric Power Industry

The regulatory framework of the PRC power industry consists primarily of the Electric Power Law of the PRC, which became effective on April 1, 1996 (subsequently revised effective on August 27, 2009) and the Electric Power Regulatory Ordinance, which became effective on May 1, 2005. One of the stated purposes of the Electric Power Law is to protect the legitimate interests of investors, operators and users and to ensure the safety of power operations. According to the Electric Power Law, the PRC government encourages PRC and foreign investment in the power industry. The Electric Power Regulatory Ordinance sets forth regulatory requirements for many aspects of the power industry, including, among others, the issuance of electric power business permits, the regulatory inspections of power generators and grid companies and the legal liabilities for violations of the regulatory requirements.

On January 5, 2006, the NDRC promulgated the Administrative Provisions on Renewable Energy Power Generation which set forth specific measures for setting the price of electricity generated from renewable energy sources, including solar and for allocating the costs associated with renewable power generation. The Administrative Provisions on Renewable Energy Power Generation also delegate administrative and supervisory authority among government agencies at the national and provincial levels and assign partial responsibility to electricity grid companies and power generation companies for implementing the Renewable Energy Law.

Pursuant to the Provisions on the Administration of the Electric Power Business Permit, which were issued by the State Electricity Regulatory Commission, or the SERC, and became effective on December 1, 2005, unless otherwise provided by the SERC, no company or individual in the PRC may engage in any aspect of electric power business (including power generation, transmission, dispatch and sales) without first obtaining an electric power business permit from the SERC. These provisions also require that if an applicant seeks an electric power business permit to engage in power generation, it must also obtain in advance all relevant government approvals for the project including construction, generation capacity and environmental compliance.

However, there are exceptions where the PV power generation projects may not need to obtain an electric power business permit from the SERC. On July 18, 2013, the NDRC issued the Interim Measures for the Administration of Distributed PV Power Generation, which waived the previous requirement to obtain an Electric Power Business Permit for distributed PV power generation project. On April 9, 2014, the National Energy Administration issued the Circular on Clarifying Issues concerning the Administration of Electric Power Business Permit, which waived requirement to obtain an Electric Power Business Permit for those solar power generation projects with installed capacity less than 6 MW and any distributed PV power generation project approved by or filed with the NDRC or its local branches, and required local National Energy Administration to simplify the Electric Power Business Permit application procedure for the solar power generation companies.

All electric power generated in China is distributed through power grids, except for electric power generated by facilities not connected to a grid. The distribution of power to each grid is administered by dispatch centers, which the administration and dispatch of planned output by power plants connected to the grid. The Regulations on the Administration of Electric Power Dispatch to Networks and Grids, promulgated by the State Council and the former Ministry of Electric Power Industry, effective on November 1, 1993, as amended on January 8, 2011, and its implementation measures, regulate the operation of dispatch centers.

On November 29, 2011, the Ministry of Finance, NDRC and National Energy Administration jointly issued the Interim Measures for the Administration of Levy and Use of Renewable Energy Development Fund, which provides that development funds for renewable energy include designated funds arranged by the public budget of national finance, and renewable energy tariff surcharge collected from electricity consumers. Solar power projects can only receive central government subsidies after completing certain administrative and perfunctory procedures with the

relevant authorities of finance, pricing and energy to be listed in the Subsidy Catalog issued by the Ministry of Finance, NDRC and National Energy Administration. These subsidies represent the difference between the FIT for solar power projects and the desulphurized coal benchmark electricity price. In order to be listed in the Subsidy Catalog, ground-mounted projects must submit applications to the relevant provincial authorities; and in accordance with the Circular on Issues Concerning Implementing Electric Quantity-based Subsidy Policy for Distributed Generation Projects issued by the Ministry of Finance on July 24, 2013, rooftop distributed solar power projects must submit applications to the grid enterprises in the area where the projects are located. After preliminary review of the applications, the provincial authorities will jointly report to the Ministry of Finance, NDRC and National Energy Administration, and the Ministry of Finance, NDRC and NEA will have final review on such applications to decide whether to list in the Subsidy Catalog.

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The following flow chart illustrates the process for a utility-scale project to be listed in the Subsidy Catalog.

The Renewable Energy Law provides financial incentives, including national funding for the development of renewable energy projects. Pursuant to the Interim Measures for the Administration of Designated Funds for the Development of Renewable Energy issued by the Ministry of Finance and effective on May 30, 2006, the Ministry of Finance sets up designated funds to support the development and utilization of renewable energy in accordance with the national fiscal budget. According to the Implementing Measures for the Administration of Price of Renewable Energy and Cost Sharing Program and the Interim Measures for Adjustment to Additional On-grid Tariff for Renewable Energy issued by the NDRC, the gap between the FIT for solar power projects and the desulphurized coal benchmark electricity price is subsidized by collecting tariff surcharge from the electricity consumers within the service coverage of grid enterprises at or above provincial level.

Environmental Regulations

We are subject to a variety of governmental regulations related to environmental protection and the prevention and control of water, air, solid waste and noise pollution. The major environmental regulations applicable to us include the Environmental Protection Law of the PRC, the Law of PRC on the Prevention and Control of Water Pollution, Implementation Rules of the Law of PRC on the Prevention and Control of Water Pollution, the Law of PRC on the Prevention and Control of Air Pollution, the Law of PRC on the Prevention and Control of Solid Waste Pollution, and the Law of PRC on the Prevention and Control of Noise Pollution and the PRC Law on Appraising Environment Impacts.

Labor Laws and Regulations

The Work Safety Law, or the WSL, was adopted at the 28th meeting of the Standing Committee of the Ninth People s Congress on June 29, 2002, and was promulgated for implementation as of November 1, 2002. The WSL is applicable to the work safety for entities engaging in manufacturing and business operation activities within the PRC. Such entities must comply with the WSL and other relevant laws and regulations concerning work safety and strengthen the administration of work safety, establish and perfect the system of responsibility for work safety and ensure safe manufacturing conditions.

The PRC Labor Contract Law was promulgated on June 29, 2007 and became effective on January 1, 2008. On September 3, 2008, the PRC government promulgated the Implementing Rules on the PRC Labor Contract Law. On December 28, 2012, the Standing Committee of the National People s Congress issued the amendments to the PRC Labor Contract Law, which will become effective on July 1, 2013. Pursuant to the PRC Labor Contract Law, employers must enter into written labor contracts with employees. Employers must pay their employees wages equal to or above local minimum wage standards, establish labor safety and workplace sanitation systems, comply with government labor rules and standards and provide employees with appropriate training regarding workplace safety. In addition, the PRC Labor Contract Law imposes more stringent requirements on employers with regard to, among others, severance payment and non-fixed-term employment contracts,

time limits for probation periods, as well as the duration and the times that an employee can be placed on a fixed-term employment contract. Violations of the PRC Labor Contract Law and the PRC Labor Law may result in liabilities to employees and subject employer to administrative sanctions including fines or, in the case of serious violations, criminal liability.

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The PRC regulatory authorities have passed a variety of laws and regulations regarding statutory social welfare benefits, including, among others, the PRC Social Insurance Law, the Regulations of Insurance for Occupational Injury, the Regulations of Insurance for Unemployment, the Provisional Insurance Measures for Maternal Employees, and the Interim Provisions on Registration of Social Insurance. Pursuant to these laws and regulations, companies in China have to make sufficient contributions of statutory social welfare benefits for their employees, including medical care insurance, occupational injury insurance, unemployment insurance, maternity insurance, pension benefits and housing funds. Failure to comply with such laws and regulations may result in supplementary payments, surcharges or fines.

Restriction on Foreign Ownership

The principal regulation governing foreign ownership of solar power businesses in the PRC is the Foreign Investment Industrial Guidance Catalogue (effective as of April 10, 2015), or the Catalogue. The Catalogue classifies industries into four categories: encouraged, permitted, restricted and prohibited. As confirmed by the government authorities, Trina China, our operating subsidiary, is engaged in an encouraged industry. Trina China is permitted under the PRC laws to be wholly owned by a foreign company. Trina China is, accordingly, also entitled to certain preferential treatment granted by the PRC government authorities, such as exemption from tariffs on equipment imported for its own use.

Tax

China s parliament, the National People s Congress, adopted the Enterprise Income Tax Law on March 16, 2007. On December 6, 2007, the PRC State Council issued the Implementation Regulations of the Enterprise Income Tax Law, both of which became effective on January 1, 2008. The EIT Law imposes a uniform tax rate of 25% on all PRC enterprises, including foreign-invested enterprises, and eliminates or modifies most of the tax exemptions, reductions and preferential treatments available under the previous tax laws and regulations. Under the EIT Law, certain enterprises may benefit from a preferential tax rate of 15% if they qualify as high and new technology enterprises strongly supported by the State, subject to certain general factors and conditions described therein. In September 2008, Trina China obtained the High and New Technology Enterprise Certificate with a valid term of three years starting from 2008. In 2011, Trina China renewed its High and New Technology Enterprise Certificate, effective from 2011 to 2013, entitling it to a preferential income tax rate of 15% from 2008 through 2013. Also, in 2011, TST obtained the High and New Technology Enterprise Certificate, effective from 2011 to 2013, and is entitled to a preferential income tax rate of 15% during that period. In 2014, Trina China and TST renewed their High and New Technology Enterprise Certificates, effective from 2014 to 2016, which entitle both of them to a preferential income tax rate of 15% from 2014 through 2016.

Pursuant to the Provisional Regulation of China on Value Added Tax and its implementing rules, all entities and individuals that are engaged in the sale of goods, the provision of processing, repairs and replacement services and the importation of goods in China are generally required to pay value added tax, or VAT, at a rate of 17.0% of the gross sales proceeds received, less any deductible VAT already paid or borne by the taxpayer. Further, when exporting goods, the exporter is entitled to a portion or all of the refund of VAT that it has already paid or borne. Imported raw materials that are used for manufacturing export products and are deposited in bonded warehouses are exempt from import VAT.

Under the EIT Law, enterprises organized under the laws of jurisdictions outside China with de facto management bodies located within China may be considered PRC resident enterprises and therefore subject to a 25% PRC EIT on their worldwide income. The implementing rules define de facto management body as the management body that exercises full and substantial control and overall management over the business, productions, personnel, accounts and properties of an enterprise. In addition, SAT Circular 82 provides that a foreign enterprise controlled by a PRC company or a PRC company group will be classified as a resident enterprise with its de facto management bodies located within China if the following requirements are satisfied: (i) the senior management and core management departments in charge of its daily operations function

mainly in the PRC; (ii) its financial and human resource decisions are subject to determination or approval by persons or bodies in the PRC; (iii) its major assets, accounting books, company seals, and minutes and files of its board and shareholders meetings are located or kept in the PRC; and (iv) more than half of the enterprise s directors or senior management with voting rights reside in the PRC. On July 27, 2011, the SAT issued the Bulletin 45, which became effective on September 1, 2011, to provide further guidance on the implementation of SAT Circular 82. Bulletin 45 further prescribes the rules concerning the recognition, administration and taxation of an enterprise incorporated offshore and controlled by a PRC enterprise or PRC enterprise group. Bulletin 45 provides two ways for determining whether a foreign enterprise controlled by a PRC enterprise or a PRC enterprise group should be treated as a resident enterprise. First, the offshore enterprise may decide on its own whether its de facto management body is located in China based on the criteria set forth in Circular 82, and, if it makes such determination, it must apply to the competent tax bureau to be treated as a resident enterprise. Second, the tax authority may, after investigating, determine that the offshore enterprise is a resident enterprise.

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Although the SAT Circular 82 only applies to offshore enterprises controlled by PRC enterprises and not those controlled by PRC individuals, foreigners or foreign enterprises, the determining criteria set forth in the Identification Circular may reflect the SAT s general position on how the de facto management body test should be applied in determining the tax resident status of offshore enterprises, regardless of whether they are controlled by PRC or foreign enterprises or individuals.

Under the IITL, which was adopted and promulgated at the third meeting of the Standing Committee of the fifth People s Congress on September 10, 1980 and amended on October 31, 1993, August 30, 1999, October 27, 2005, June 29, December 29, 2007 and June 30, 2011, if we are treated as a PRC resident enterprise, it is possible that non-resident individual investors of our shares or ADSs be subject to PRC individual income tax at a rate of 20% on dividends paid to such investors and any capital gains realized from the transfer of our ordinary shares or ADSs if such dividends or capital gains are deemed income derived from sources within the PRC, except in the case of individuals that qualify for a lower rate under a tax treaty. Under the PRC-U.S. tax treaty, a 10% preferential rate of withholding tax will apply to dividends provided that the recipients are U.S. tax residents that are eligible for the benefits of the PRC-U.S. tax treaty. A non-resident individual is an individual who has no domicile in the PRC and does not stay within the PRC or has stayed within the PRC for less than one year. Pursuant to the IITL and its implementation rules, for purposes of the PRC capital gains tax, the taxable income will be based on the total income obtained from the transfer of our ordinary shares or ADSs minus all the costs and expenses that are permitted under PRC tax laws to be deducted from the income.

Pursuant to SAT Circular 7, issued by the SAT on February 3, 2015, if a non-PRC resident enterprise indirectly transfers so-called PRC Taxable Properties, referring to properties of an establishment or a place of business in China, real estate properties in China and equity investments in a PRC tax resident enterprise, by disposition of the equity interests in an overseas non-public holding company without a reasonable commercial purpose and resulting in the avoidance of PRC EIT, the transfer will be re-characterized as a direct transfer of the PRC Taxable Properties and gains derived from the transfer may be subject to a PRC withholding tax of up to 10%. SAT Circular 7 has listed several factors to be taken into consideration by the tax authorities in determining if an indirect transfer has a reasonable commercial purpose. However, despite these factors, an indirect transfer satisfying all the following criteria will be deemed to lack reasonable commercial purpose and be taxable under the PRC laws: (i) 75% or more of the equity value of the intermediary enterprise being transferred is derived directly or indirectly from PRC Taxable Properties; (ii) at any time during the one year period before the indirect transfer, 90% or more of the asset value of the intermediary enterprise (excluding cash) is comprised directly or indirectly of investments in the PRC, or 90% or more of its income is derived directly or indirectly from the PRC; (iii) the functions performed and risks assumed by the intermediary enterprise and any of its subsidiaries that directly or indirectly hold the PRC Taxable Properties are limited and are insufficient to prove their economic substance; and (iv) the foreign tax payable on the gain derived from the indirect transfer of the PRC Taxable Properties is lower than the potential Chinese tax on the direct transfer of those assets. Nevertheless, the indirect transfers falling into the scope of the safe harbor under SAT Circular 7 may not be subject to PRC tax. The safe harbor includes qualified group restructurings, public market trades and exemptions under tax treaties.

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Foreign Currency Exchange

Pursuant to the Foreign Currency Administration Rules promulgated in 1996 and amended in 1997 and 2008 and various regulations issued by SAFE, and other relevant PRC government authorities, the Renminbi is freely convertible only to the extent of current account items, such as trade-related receipts and payments, interests and dividends. An enterprise can choose to either keep or sell its foreign exchange income under the current account to financial institutions authorized to engage in foreign exchange settlement or sales business. Capital account items, such as direct equity investments, loans and repatriation of investment, require the prior approval from SAFE or its local counterpart for conversion of Renminbi into a foreign currency, such as U.S. dollars, and remittance of the foreign currency outside the PRC.

Payments for transactions that take place within the PRC must be made in Renminbi. Absent circumstances specified under Chinese laws and regulations, upon approvals from SAFE, an enterprise can choose to either keep or sell its foreign exchange income under capital account to financial institutions authorized to engage in foreign exchange settlement and sales business. On the other hand, foreign-invested enterprises may retain foreign exchange in accounts with designated foreign exchange banks, subject to a cap set by SAFE or its local counterpart.

On August 29, 2008, SAFE promulgated Circular 142, a notice regulating the conversion by a foreign-invested company of foreign currency into Renminbi by restricting how the converted Renminbi may be used. Pursuant to Circular 142, the RMB fund from the settlement of foreign currency capital of a foreign-invested enterprise must be used within the business scope as approved by the examination and approval department of the government, and cannot be used for domestic equity investment unless it is otherwise provided for. Documents certifying the purposes of the RMB fund from the settlement of foreign currency capital, including a business contract, must also be submitted for the settlement of the foreign currency. In addition, SAFE strengthened its oversight of the flow and use of the RMB capital converted from foreign currency registered capital of a foreign-invested company. The use of such RMB capital may not be altered without SAFE s approval, and such RMB capital may not in any case be used to repay RMB loans if the proceeds of such loans have not been used. Violations of the Circular 142 could result in severe monetary fines or penalties. Furthermore, on November 9, 2010 the SAFE promulgated a notice on relevant issues concerning strengthening the administration of foreign exchange business, which requires the authenticity of settlement of net proceeds from an offshore offering to be closely examined and the net proceeds to be settled in the manner described in the offering documents. In order to further reform the foreign exchange administration system, SAFE issued Circular 19, which will take effect from June 1, 2015 and will replace the SAFE Circular 142. Circular 19 allows foreign invested enterprises to settle their foreign exchange capital on a discretionary basis according to the actual needs of their business operations and provides procedures by which a foreign-invested company may convert and use equity investments made in foreign currencies. Circular 19 also reiterates, however, the principle that Renminbi converted from the foreign currency-denominated capital of a foreign-invested company may not be used, either directly or indirectly, for purposes beyond its business scope. Since Circular 19 was just promulgated, there are uncertainties as to how it will be interpreted and implemented in practice.

Foreign Exchange in Certain Onshore and Offshore Transactions

In October 2005, SAFE promulgated a regulation known as SAFE Circular 75 that states that if PRC residents use assets or equity interests in their PRC entities as capital contributions to establish offshore companies or inject assets or equity interests of their PRC entities into offshore companies to raise capital overseas, they must register with local SAFE branches with respect to their overseas investments in offshore companies.

On July 4, 2014, SAFE promulgated SAFE Circular 37, which replaced the SAFE Circular 75. SAFE Circular 37 requires PRC residents to register with local branches of SAFE in connection with their direct establishment or indirect control of an offshore entity, for the purpose of overseas investment and financing, with such PRC residents legally owned assets or equity interests in domestic enterprises or offshore assets or interests, referred to in SAFE Circular 37 as a special purpose vehicle . The term control under SAFE Circular 37 is broadly defined as the operation rights, beneficiary rights or decision-making rights acquired by the PRC residents in the offshore special purpose vehicles or PRC companies by such means as acquisition, trust, proxy, voting rights, repurchase, convertible bonds or other arrangements. SAFE Circular 37 further requires amendment to the registration in the event of any significant changes with respect to the special purpose vehicle, such as increase or decrease of capital contributed by PRC individuals, share transfer or exchange, merger, division or other material event. In the event that a PRC shareholder holding interests in a special purpose vehicle fails to fulfill the required SAFE registration, the PRC subsidiaries of that special purpose vehicle may be prohibited from distributing profits to the offshore parent and from carrying out subsequent cross-border foreign exchange activities, and the special purpose vehicle may be restricted in its ability to contribute additional capital into its PRC subsidiary. Moreover, failure to comply with the various SAFE registration requirements described above could result in liability under PRC law for evasion of foreign exchange controls.

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While we believe our shareholders who have confirmed to us that they are PRC residents have taken actions available to them to comply with SAFE Circular 75 and they are still in the process of updating their SAFE registration to reflect the recent changes to our group structure, we have urged relevant shareholders and beneficial owners to make the necessary applications, filings and amendments as required under SAFE Circular 37 and other related rules. As SAFE Circular 37 was recently promulgated, there are substantial uncertainties on how this new rule will be implemented and interpreted. We cannot assure you that our current shareholders and/or beneficial owners or their shareholders or beneficial owners can successfully comply with registration requirements under SAFE Circular 37 and subsequent implementation rules in a timely fashion or at all. Any future failure by any of our shareholders who is a PRC resident, or controlled by a PRC resident, to comply with relevant requirements under these regulations could subject our company to fines or sanctions imposed by the PRC government, including restrictions on our PRC subsidiaries ability to pay dividends or make distributions to us and our ability to increase our investment in or to provide loans to such PRC subsidiaries.

On December 25, 2006, the People s Bank of China promulgated the Measures for Administration of Individual Foreign Exchange. On January 5, 2007, the SAFE promulgated the Implementation Rules of Measures for Administration of Individual Foreign Exchange. On February 15, 2012, the SAFE promulgated the Notice on Issues concerning the Foreign Exchange Administration of Domestic Individuals Participation in Equity Incentive Plans of Overseas Listed Companies. According to the Individual Foreign Exchange Rules, PRC citizens who are granted shares or share options by a company listed on an overseas stock market according to its employee share option or share incentive plan are required to register with the SAFE or its local counterparts.

Dividend Distribution

The principal regulations governing distribution of dividends of wholly foreign-owned enterprises include the Wholly Foreign-owned Enterprise Law (1986), as amended by the Decision on Amending the Law of the People s Republic of China on Wholly Foreign-owned Enterprise (2000), and the Implementing Rules of the Wholly Foreign-owned Enterprise Law (1990), as amended by the Decision of the State Council on Amending the Implementing Rules of the Law of the People s Republic of China on Wholly Foreign-owned Enterprise (2001).

Under these regulations, foreign invested enterprises in China may pay dividends only out of their accumulated profits, if any, determined in accordance with Chinese accounting standards and regulations. In addition, wholly foreign-owned enterprises in China are required to set aside at least 10% of their respective after-tax profits based on PRC accounting standards each year, if any, to fund its general reserves fund, until the accumulative amount of such reserves reaches 50% of its registered capital. These reserves are not distributable as cash dividends. Wholly foreign-owned enterprises are also required to allocate a portion of its after-tax profits, as determined by its board of directors, to its staff welfare and bonus funds, which may not be distributed to equity owners. As of December 31, 2014, the restricted portion of our PRC subsidiaries net assets was $927.0 million, which consists of their registered capital and statutory reserves.

Mergers and Acquisitions

On August 8, 2006, six PRC regulatory agencies, including the CSRC, promulgated the M&A Rules which became effective on September 8, 2006 and was amended on June 22, 2009. The M&A Rules, among other things, require offshore special purpose vehicles, formed for overseas listing purposes through acquisitions of PRC domestic companies and controlled by PRC enterprises or individuals, to obtain the approval of the CSRC prior to publicly listing their securities on an overseas stock exchange. On September 21, 2006, the CSRC published a notice specifying the documents and materials that are required to be submitted for obtaining CSRC approval. Based on the advice we received from Fangda Partners, our PRC counsel, we did not seek the CSRC approval in connection with our initial public offering as we believed that this regulation

did not apply to us and that CSRC approval was not required because (1) Trina was not a special purpose vehicle formed for the purpose of acquiring a PRC domestic company because Trina China was a foreign-invested enterprise before it was acquired by Trina, and, accordingly, Trina China did not fall within the definition of a PRC domestic company as set forth in the M&A Rules; and (2) such acquisition was completed before the M&A Rules became effective. Uncertainty still exists as to how the M&A Rules will be interpreted and implemented, and the opinion of our PRC counsel is subject to any new laws, regulations, rules and their detailed implementations in the future in any form relating to the M&A Rules.

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The regulations also established additional procedures and requirements that could make merger and acquisition activities by foreign investors more time-consuming and complex, including requirements in some instances that MOFCOM be notified in advance of any change-of-control transaction in which a foreign investor takes control of a PRC domestic enterprise.

In February 2011, the State Council promulgated Circular No. 6, a notice on the establishment of the security review system for mergers and acquisitions of domestic enterprises by foreign investors, which became effective on March 3, 2011. To implement Circular No. 6, the MOFCOM promulgated the MOFCOM Security Review Rules on August 25, 2011 which became effective on September 1, 2011. According to Circular No. 6 and the MOFCOM Security Review Rules, a national security review is required for certain mergers and acquisitions by foreign investors of enterprises relating to national defense and certain mergers and acquisitions by which foreign investors may acquire de facto control of domestic enterprises raising national security concerns. When deciding whether a specific merger or acquisition of a domestic enterprise by foreign investors is subject to the national security review, the MOFCOM will review the substance and actual impact of the transaction and the foreign investors are prohibited from bypassing the national security review requirement by structuring transactions through proxies, trusts, indirect investments, leases, loans, control through contractual arrangements or offshore transactions. In addition, if a merger or acquisition by foreign investors which was not submitted for national security review, or was determined to have no impact on national security after such review, but thereafter, due to changed elements, including modification of the merger, change of business activities or acquisition transaction or amendment of the relevant agreements or documents and other changes, involves an enterprise relating to national defense or a change of de facto control of a domestic enterprise raising national security concerns such that it becomes subject to national security review, the foreign investor to such merger or acquisition will be required to file an application for national security review with the MOFCOM.

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C. Organizational Structure

The following table sets out the details of our significant subsidiaries as of December 31, 2014.

Name of Entity	Country of Incorporation	Ownership Interest
Changzhou Trina Solar Energy Co., Ltd.	China	100%
Trina Solar (Singapore) Pte. Ltd.	Singapore	100%
Trina Solar (Luxembourg) Holdings S.A.R.L.	Luxembourg	100%
Trina Solar (U.S.) Inc.	United States	100%
Trina Solar (U.S.) Holding Inc.	United States	100%
Trina Solar (Germany) GmbH	Germany	100%
Trina Solar (Schweiz) AG	Switzerland	100%
Trina Solar (Luxembourg) S.A.R.L.	Luxembourg	100%
Trina Solar (Spain) S.L.U.	Spain	100%
Trina Solar (Italy) S.r.l.	Italy	100%
Trina Solar (Japan) Limited	Japan	100%
Trina Solar Energy Development Pte. Ltd.	Singapore	100%
Trina Solar (Changzhou) Science and Technology Co., Ltd.	China	100%
Trina Solar Energy (Shanghai) Co., Ltd.	China	100%
Trina Solar (U.S.) Development LLC	United States	100%
TP-CA-SOUTH LLC	United States	100%
Trina Solar (Australia) Pty Ltd.	Australia	100%
Trina Solar Middle East Limited	United Arab Emirates	100%
LightBeam Power Company Gridley Main, LLC	United States	100%
Lucania S.r.l.	Italy	100%
Yancheng Trina Solar Science & Technology Co., Ltd.	China	100%
Changzhou Trina Solar PV Power System Co., Ltd.	China	100%
Jiangsu Trina Solar Electric Power Development Co., Ltd.	China	100%
Wuwei Trina Solar Electricity Generation Co., Ltd.	China	100%
LightBeam Power Company Gridley Main Two LLC	United States	100%
Trina Solar (United Kingdom) Limited	United Kingdom	100%
Trina Solar (Canada) Inc.	Canada	100%
Wuwei Yineng Solar Electricity Generation Co., Ltd.	China	100%
Hunan Trina Solar Electric Power Development Co., Ltd.	China	95%
Trina Solar (Luxembourg) Overseas Systems S.à r.l.	Luxembourg	100%
Tanagra Solar Energy S.A	Greece	100%
S. Aether Energy S.A.	Greece	100%
Lightleasing PTY LTD	Australia	98.23%
Trina Solar (Luxembourg) EU Systems S.à r.l.	Luxembourg	100%
Witherington Solar Farm Limited	United Kingdom	100%
Wilbees Solar Farm Ltd	United Kingdom	100%
Turpan Trina Solar Energy Co., Ltd.	China	100%
Yunnan Matallurgical New Energy Co., Ltd.	China	90%
Hubei Trina Solar Energy Co., Ltd.	China	51%
Xiangshui Hengneng Electricity Generation Co., Ltd.	China	100%
Yongneng Trina Solar Electricity Generation Co., Ltd.	China	100%
Tuokexun Trina Solar Co., Ltd.	China	100%
Changzhou Trina Solar Yabang Energy Co., Ltd.	China	51%

D. Property, Plants and Equipment

Manufacturing Segment

As of December 31, 2014, substantially all of our research, development and manufacturing of ingots, wafers, cells and PV modules are conducted at our facilities in Changzhou, Yancheng and Xiantao, China. Our main campus is located in Changzhou, where we occupy an area of 545,248 square meters and further own the rights to develop and use an additional 297,696 square meters. In Yancheng, we occupy an area of 53,333 square meters which we use for module production. In Xiantao, we occupy an area of 174,920 square meters which we use for cell production. We plan to build or acquire new facilities to increase our annual manufacturing capacity of ingots, wafers, cells, and modules from 2,000 MW, 1,700 MW, 3,100 MW and 4,000 MW, respectively, as of December 31, 2014 to 2,900 MW, 2,300 MW, 4,100 MW and 4,400 MW, respectively, as of December 31, 2015. We plan to incur capital expenditures of up to $370 million to accomplish our 2015 expansion plans in our manufacturing segment. See B. Business Overview Manufacturing for more details. We believe our current and planned facilities will meet our current and foreseeable requirements.

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We selectively use automation to enhance the quality and consistency of our finished products and improve efficiency in our manufacturing processes. We use manufacturing equipment purchased primarily from solar equipment suppliers in Europe, North America and Asia, including China and Japan. Other critical equipment is also sourced worldwide. Key equipment used in our manufacturing facilities includes DSS furnaces, high-precision wafer sawing machines, diffusion furnaces (sets), screen print machine sets and automatic laminators. Set forth below is a list of our major equipment as of December 31, 2014:

Manufacturing Facility	Major Equipment	No. of Units in Operation as of December 31, 2014	Source (Country)
Silicon ingots	DSS furnaces	179	China, United States
Silicon wafers	Wafer sawing machines	179	Japan, Switzerland
Solar cells	Diffusion furnaces (sets)	71	China, Germany, the Netherlands
	Screen print machine sets	72	Italy
PV modules	Automatic laminators	138	China

With respect to encumbrances, as of December 31, 2014, we pledged our equipment of a total carrying value of $563.5 million and our land use rights of a total carrying value of $15.9 million to secure our borrowings of $478.7 million.

Solar Power Projects Segment

As of December 31, 2014, our project assets consistent of $60.1 million of build-to-sell project assets, and $385.5 million of build-to-own project assets. In addition, our build-to-own project assets consisted of $318.8 million of completed build-to-own solar power projects and $66.7 million of build-to-own solar power projects under construction.

With respect to encumbrances, as of December 31, 2014, we did not pledge any of our project assets to secure the borrowings.

For a discussion of our capital expenditures targeted for our capacity expansion, see Item 5. Operating and Financial Review and Prospects B. Liquidity and Capital Resources Capital Expenditures.

Item 4A. UNRESOLVED STAFF COMMENTS

None.

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Item 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

The following discussion of our financial condition and results of operations is based upon and should be read in conjunction with our consolidated financial statements and their related notes included in this annual report. This report contains forward-looking statements. See G. Safe Harbor. In evaluating our business, you should carefully consider the information provided under the caption Item 3. Key Information D. Risk Factors in this annual report. We caution you that our businesses and financial performance are subject to substantial risks and uncertainties.

A. Operating Results

Overview

We are a large-scale integrated solar-power products manufacturer and solar system developer based in China with a global distribution network covering Europe, Asia, North America, Australia and Africa. Since we began our solar-power products business in 2004, we have integrated the manufacturing of ingots, wafers and solar cells for use in our PV module production. Our PV modules provide reliable and environmentally-friendly electric power for residential, commercial, industrial and other applications worldwide. We also develop, design, construct, operate and sell solar power projects that primarily use the solar modules we manufacture. Beginning in 2014, we have two reportable operating segments consisting of the manufacturing segment and the solar power projects segment.

We produce standard monocrystalline PV modules ranging from between 210 W and 215 W to between 270 W and 275 W in power output and multicrystalline PV modules ranging from between 250 W and 265 W to between 300 W and 315 W in power output. We build our PV modules to general specifications as well as to our customers and end-users specifications. We sell and market our products worldwide, including China and the United States where government incentives have accelerated the adoption of solar power. In recent years, we have also increased our sales in newer and emerging solar power markets, which include the United Kingdom, India and Japan, as well as other markets in Asia, Africa, the Middle East, Latin America, and the Caribbean Islands. We have established regional headquarters and offices located in Europe, North America and Asia to target sales and distribution in those markets. We primarily sell our products to wholesalers, power plant developers and operators and PV system integrators, including Solar City, Vivint, Essco, AMEC, SunEdison Products Singapore, Pte. Ltd., Lightsource Renewable Energy Limited, Anesco Limited, Enerparc AG, Sanshin Electronics Co., Ltd., TBEA Co., Ltd., Shanghai Electric Power Design Institute Co., Ltd. and China Huadian Engineering Co., Ltd.

We have expanded into the downstream solar power projects market. In 2014, we completed and connected 211.1 MW of build-to-own projects, completed 40.0 MW of build-to-own projects that had not yet been connected, and completed and sold 73.8 MW of build-to-sell projects in China and Europe. We anticipate completing between 700 MW and 750 MW of projects during 2015, including significant projects in the PRC, as well as Europe, Japan and India. Our integrated manufacturing model and experience as a provider of high quality solar solutions have allowed us to successfully grow our solar power projects business and develop a strong solar project pipeline to support future expansion.

In 2014, our net sales were $2,286.1 million, compared to $1,775.0 million in 2013 and $1,296.7 million in 2012. We recorded a net income of $61.3 million in 2014, compared to a net loss of $72.2 million in 2013 and a net loss of $266.6 million in 2012.

Factors Affecting Our Results of Operations

Beginning in 2014, we have two reportable operating segments consisting of the manufacturing segment and the solar power projects segment. Significant factors affecting the financial performance and results of operations of these two operating segments are as follows:

Manufacturing Segment

The most significant factors that affect the financial performance and results of operations of our manufacturing segment are:

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- industry demand;
- government economic incentives and trade sanctions;
- product pricing;
- flexible vertically integrated manufacturing capabilities; and
- availability and prices of polysilicon.

Industry Demand

Solar energy generation systems use interconnected solar cells to generate electricity from sunlight through a process known as the photovoltaic effect. Although solar power technology has been used for several decades, the global solar power market has grown significantly only in the past several years. The global solar power market continues to develop, in part aided by declining industry average selling prices, making solar power more affordable to users. According to Solarbuzz, global PV end-market demand was estimated to be 48.7 GW in 2014, with annual growth of 25% compared to 2013. According to Solarbuzz, the global PV market is expected to reach approximately 100 GW of annual demand in 2018, which we believe will be driven largely by declining per watt average selling prices, falling PV system installation costs and government initiatives, especially in new and emerging solar markets. For example, in China, the National Energy Administration has announced a number of policies in the second half of 2014 to promote the adoption of solar energy. In early August 2014, the National Energy Administration raised the 2014 target for on-grid solar installation by over 30% from 10 GW to 13 GW. In September 2014, the National Energy Administration also promulgated the Notice on Further Implementation of Certain Policies in Relation to Distributed Solar Power, which aims to encourage the application of distributed solar power in various fields by improving subsidies, financing and supporting services. We believe that these government policies will significantly boost the solar demand in China in the near future, particularly in the distributed generation market.

In 2011, weakened global economic conditions affected the availability of financing for downstream buyers in the European markets, which slowed demand for solar power projects. In 2012, the overall reduction in government support for traditional European FITs caused a marked decline in the growth rate of global solar demand. These market conditions were exacerbated by an over-supply of solar power products, which adversely affected the prices of solar power products. Consistent with market trend, the average selling price of our PV modules decreased from $1.33 per watt in 2011 to $0.78 per watt in 2012 and further decreased to $0.64 per watt in 2013. The decrease in prices, coupled with continued government support and an increase in demand for solar projects in non-European markets, caused global demand growth to rebound during 2013 and 2014. During 2014, our average selling price was $0.63 per watt, indicating a stabilized market demand compared to previous year and a sign that global supply and demand are approaching equilibrium. We believe that although the expiration of incentive policies in several European countries and the imposition of tariffs on Chinese imports into the European Union will result in a decrease in demand for solar products regionally, global demand will have a positive upward trend.

The demand for solar power is also influenced by macroeconomic factors such as global economic conditions, the supply and prices of other energy products, such as oil, coal and natural gas, as well as government regulations and policies concerning the electric utility industry. A decrease in oil prices, for example, may reduce demand for investment in alternative energy. Please see Item 3. Key Information D. Risk Factors for discussions of the risks related to declining industry demand for solar power products.

Government Economic Incentives and Trade Sanctions

We believe that the near-term growth of the market for on-grid applications depends in large part on the availability and size of government economic incentives. Today, when upfront system costs are factored in, the per kilowatt cost of solar power substantially exceeds that of power provided by the electric utility grid in many locations. As a result, federal, state and local governmental bodies in many of our primary-targeted markets, notably, China, the United Kingdom, the United States, Japan, Germany, Italy, and other countries in Europe, Australia, India, and several Middle Eastern and African countries, have provided economic incentives in the form of capital cost rebates, feed-in tariffs, tax credits and other incentives to end users, distributors, system integrators and manufacturers of solar power products. Accordingly, demand for PV modules in our targeted or potential markets is affected significantly by government economic incentives. According to Solarbuzz, the three largest PV markets in 2014 were China, Japan, and North America (comprised of the United States and Canada) and these top three markets together accounted for over 60% of global end-market demand.

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In 2014, Germany, Spain and Italy accounted for 1.0%, 0.1% and 0.3% of our net sales, respectively, compared to 10.4%, 2.3% and 1.6% of our net sales, respectively, in 2013. With the expiring or declining incentives in several European countries, including Germany, Italy and Spain, and anti-dumping and anti-subsidy actions initiated by the European Union, our net sales generated from Europe accounted for 9.6% of our total net sales in 2014, compared to 30.9% 2013. We seek to counteract the impact of the expiring incentives and anti-dumping and anti-subsidy actions taken by existing major solar markets through enhancing our brand recognition and shifting some of our sales focus to newer and emerging solar power markets, which include the United Kingdom, India and Japan, as well as other markets in Asia, Africa, the Middle East, Latin America and the Caribbean Islands. To enhance our global sales capabilities, we established regional headquarters in San Jose, Zurich, and Singapore, as well as sales and business development offices in Beijing, Shanghai, Tokyo, Abu Dhabi, Sydney, Chengdu, Urumqi and Santiago.

On December 5, 2013, the Council of the European Union announced its final decision imposing antidumping and anti-subsidy duties on imports of CSPV cells and modules originating in or consigned from China. An average duty of 47.7%, consisting of both antidumping and anti-subsidy duties, are applicable for a period of two years beginning on December 6, 2013 to imports from Chinese solar panel exporters who, like us, cooperated with the European Commission s investigations. However, on the same day, the European Commission accepted a price undertaking by Chinese export producers in connection with the antidumping and anti-subsidy proceedings. As a result, imports from Chinese solar panel exporters that are made pursuant to the price undertaking are exempt from the final antidumping and anti-subsidy duties imposed by the European Union. We have agreed to comply with the minimum price and other conditions set forth in the undertaking so that our exported products will be exempt from the antidumping and anti-subsidy duties imposed by the European Commission. Although the undertaking will likely increase the average selling price of our PV solar products in the European markets, it will also make our solar products, as well as the products of the other Chinese solar panel exporters that entered into it, less competitive in those markets. The European Commission monitors compliance on an ongoing basis, and there have been allegations of non-compliance to the price undertaking by certain companies. If the agreement to accept such price undertaking is withdrawn because parties of the undertaking parties are found by competent authorities not to be in compliance with the price undertaking, the above-described duties would be applied on our exports to the European markets.

On December 17, 2014, the Commerce, issued final rulings that imports of certain CSPV products were dumped in the United States from China and Taiwan and that imports of certain CSPV products from China received subsidies. Under these rulings, we received an anti-dumping duty of 26.71% and a countervailing duty of 49.79%. On January 21, 2015, the Commission affirmed that imports of certain CSPV cells and modules from mainland China and Taiwan materially injure the domestic industry. The Commission completed and filed its determinations in these investigations on February 5, 2015. The actual duty rates at which entries of covered merchandise will be finally assessed may differ from the announced deposit rates, because they will be subject to completion of administrative reviews of these antidumping and countervailing duty orders. We expect the first administrative reviews to be completed by early 2017. For additional information, see Item 3. Key Information D. Risk Factors Risks Related to Our Company and Our Industry The determination by U.S. and European Union authorities that our export sales are in violation of international fair trade rules could impede our access to important export markets and our overall competitiveness.

According to Solarbuzz, pricing through the upstream PV supply chain is forecasted to continue declining in every segment, although at a slower pace than in the previous few years. We believe reduced FITs will force customers to concentrate more on quality and price, which will be to our advantage given our favorable rankings by third party sources, such as TÜV Reinland, a global independent safety and quality testing agency for PV modules, and Photon International, an international solar power magazine.

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Product Pricing

We began selling our PV module products in November 2004. Our PV modules are priced based on the number of watts of electricity they generate as well as the market price per watt for PV modules. We price our standard PV modules based on the prevailing market prices at the time we enter into sales contracts with our customers or when our customers place their purchase orders with us, taking into account the size of the contract or the purchase order, the strength and history of our relationship with each customer, and our silicon-based raw materials costs. In the last several years, the average selling price of our PV modules declined as a result of market trends and conditions. See Industry Demand for more information. The average selling price of our PV modules decreased from $0.78 per watt in 2012 to $0.64 per watt in 2013, and further to $0.63 per watt in 2014. We believe industry module average selling prices have begun to show signs of stabilization in several markets after a long period of significant decline across multiple markets. However, we continue to face intense competition from manufacturers of PV modules and other types of solar modules. We plan to mitigate the effects of decreased average selling prices by continuing to lower our silicon and non-silicon processing and supply chain costs, improve our inventory management control and increase sales of high-efficiency and other premium products for which we are able to charge higher prices. Further, in European Union markets we are currently restricted from selling our products at prices below those agreed to in the price undertaking, making our products less competitive than those not subject to price restrictions.

We conduct our PV module sales typically through short-term contracts with terms of one year or less or, to a lesser extent, long-term sales or framework agreements with terms of generally one to two years. Our short-term contracts provide for an agreed sales volume at a fixed price. Our long-term sales or framework agreements provide for a fixed sales volume or a fixed range of sales volume to be determined generally two to three quarters before the scheduled shipment date. Prices for long-term sales or framework agreements are generally determined one month prior to the start of the quarter of the scheduled shipment date. Compared to short-term contracts, we believe our long-term sales or framework agreements not only provide us with better visibility into future revenues, but also help us enhance our relationships with our customers. Our contracts with customers stipulate different post-delivery payment schedules based on the credit worthiness of the customer. Our accounts receivable turnover days were approximately 99 days in 2014, compared to 90 days in 2013, because we sold more modules to certain Chinese customers with relatively longer credit terms. We have reviewed the credit limits applicable to our customers to reduce our credit exposure. Some of our overseas credit sales are insured against non-payment by our customers. The amount of insurance coverage for each transaction is based on a rating assigned by the insurer to the customer, based on that customer s credit history.

Flexible Vertically Integrated Manufacturing Capabilities

We believe that our flexible vertical integration strategy has allowed us, and will continue to allow us, to capture value throughout the solar power product value chain. Our flexible vertically integrated business model enables us to:

- achieve better quality control of our products;
- shorten production cycle and improve value chain coordination;
- discontinue excess reliance on toll manufacturing;

- capture upstream or downstream profit margins; and

- adjust our capacity expansion plan by outsourcing certain products from third parties when we can obtain good prices.

In addition, we have developed relationships with various domestic and international suppliers of wafers and cells. Starting in 2010, we fulfilled some of our ingot and wafer requirements by sourcing and obtaining toll services from our strategic partners. In 2014, we sourced wafers from our suppliers and strategic partners in order to fill the gap between our PV cell and ingot and wafer manufacturing capacity and to achieve import cost advantages to certain markets.

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Availability and Prices of Polysilicon

Polysilicon is an essential raw material for our business. We purchase polysilicon from our network of over ten suppliers. We have entered into long-term contracts with our principal suppliers of polysilicon, including several leading domestic and international producers, to secure favorable pricing for the majority of our raw material costs through long-term supply agreements.

In the past, increases in the price of polysilicon have increased our cost of sales and impacted our margins. In addition, polysilicon production capacity has expanded rapidly in recent years, which led to an oversupply of high-purity silicon in 2009 and, together with the global economic downturn, a decrease in polysilicon prices. These factors contributed to an oversupply of solar wafers, cells and modules, resulting in substantial downward pressure on prices throughout the value chain in 2011, which continued until the second half of 2013. According to Solarbuzz, as demand increased during 2013, polysilicon spot prices began to stabilize and during the second half of 2013 through the first half of 2014 spot prices increased. Polysilicon production increased in 2014 due to higher prices, which weakened the upward pressures on spot prices. One of the main determining factors of polysilicon prices is upstream supply, which has been increasing since the beginning of 2014. According to Solarbuzz, annual polysilicon supply is forecasted to grow to 66.4 GW in 2015, compared with 54.5 GW in 2014, an increase of 21.8%, and prices are expected to rise in the first quarter of 2015 and then decrease during the rest of 2015. Further, the gap between average spot prices and contract prices for polysilicon used in PV applications has narrowed considerably in 2014 as previously entered into long-term contracts expired, were renegotiated to be priced by referencing to the prevailing market price, or were cancelled.

We purchase polysilicon primarily from silicon manufacturers by contract. For procurement of polysilicon, we enter into short-term, medium-term and long-term contracts. Our short-term contracts have terms of no more than one year each and provide for a variable price and fixed quantity and generally require prepayment prior to shipment. Most of the contracts give us the right to reject any shipment by our suppliers that does not meet our quality standards based on grade levels, such as semiconductor grade or solar grade, of the polysilicon. The contracts also specify a time period during which we can inspect the goods to ensure their quality. Our medium-term contracts have terms ranging from one to four years, and our long-term contracts have terms ranging from five to ten years. Our medium-term and long-term suppliers include Wacker Chemie AG, OCI Company Ltd., Jiangsu Zhongneng and GCL (Changzhou), among others. These medium-term and long-term contracts have delivery terms from 2008 up to 2020 and variable prices. Generally we negotiate purchase quantities annually. These contracts also require us to make an advance payment of a certain negotiated amount. In 2012, 2013 and 2014, we successfully renegotiated several medium-term and long-term supply contracts that required us to purchase polysilicon and wafer at a predetermined quantity at prevailing prices during the month of delivery, which more closely link our purchase costs with market prices.

Suppliers of polysilicon typically require customers to make payments in advance of shipment. Some of our long-term suppliers require us to make a prepayment at a certain percentage of the order value prior to shipping. Due to the availability of polysilicon, prepayment as a percentage of the entire contract has been reducing. Except for those medium and long-term contracts, we normally use letter of credit or notes payment as settlement term for polysilicon procurement.

Solar Power Projects Segment

The solar power projects segment has grown rapidly, representing 0.3%, 1.0% and 6.1% of our net sales in 2012, 2013 and 2014, respectively. We consider the solar power segment to be strategically important to us and expect it to continue to grow significantly in the next few years. We categorize our solar power projects into build-to-sell projects and build-to-operate projects. The most significant factors that affect the financial performance and results of operations of our solar power projects segment are:

- FIT regime and other government subsidies or incentives for solar power projects;
- mix of our project portfolio;
- access to project financing;
- growth of our project portfolio through project acquisition or development;

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- sale of build-to-sell projects and operation and maintenance of build-to-own projects; and

- engineering, procurement and construction costs.

FIT regime and other government subsidies or incentives for solar power projects

Government incentives, including FIT regimes, government subsidies and other incentives for solar power projects, or government mandates requiring electric utility companies to use renewable energy to produce a certain percentage of their power, are a significant factor in determining whether our solar power projects will be profitable. These government incentives and mandates vary from country to country and change over time. For example, the Japanese government has introduced an attractive FIT price support regime to encourage developing solar power projects while Greece s government has reduced its support for the solar power industry. With respect to our build-to-sell projects, FIT regimes, which determine the price that utilities will pay for power generated from our projects, as well as other government incentives, directly impact the price at which we are able to sell our completed projects. We develop and sell solar power projects in a number of countries and regions, including our strategic markets in Europe, China, United States and Japan. With respect to our build-to-own projects, most of which are located in China, the FIT regime provided by the PRC government determines the price that the national grid companies must pay us for the power our projects generate, which directly affects our revenue and profitability. In light of growing environmental concerns and the increasing demand for energy, the PRC government has set aggressive targets for solar power generation and has adopted favorable policies to support these targets.

Mix of our project portfolio

Our build-to-sell projects and build-to-own projects have different revenue models and different risk and return profiles. Build-to-sell projects generate revenue from the sale of projects while the build-to-own projects generate revenue by selling electricity to the grid companies. We entered the solar power projects market in 2009, and in 2012, 2013 and 2014, we derived 36.0%, 70.7% and 96.3% of total net sales of the solar power projects segment from selling build-to-sell projects. However, we are developing a number of build-to-own projects, especially in China, and as we complete construction on new build-to-own projects the amount of net sales that they generate will increase. As of December 31, 2014, we had 263.4 MW build-to-sell projects and 836.5 MW build-to-own projects, including those under construction and in pipelines. Our results of operations and profitability may also be affected by the geographical mix of our project portfolio, because the financial incentives provided by national and local governments vary significantly depending on the location of the solar power projects.

Access to project financing

Currently, we target to finance about 70% to 75% of our solar power projects externally. For our build-to-sell projects, we would typically borrow short-term bridge loans or use the project purchaser s financing during the project construction phase. For our build-to-own projects, in addition to short-term bridge loans during the project construction phase, we may also enter into long-term project loans to refinance the bridge loans after the completion of project construction.

Growth of our project portfolio through project acquisition or development

We expect our solar power projects segment to grow significantly. This growth will depend on our ability to grow our current project portfolio quickly and successfully, either through project acquisition or in-house development. Developing projects entirely in-house is generally more cost-effective while acquiring existing projects at various stages of development is generally quicker. The asset quality of any newly acquired or developed projects will directly affect the financial performance of our entire project portfolio as a whole.

Sale of build-to-sell projects and operation and maintenance of build-to-own projects

We recognize revenue and profits from our build-to-sell projects when they are successfully sold as we do not have any form of continuing involvement of the project asset after it is sold. Therefore, our ability to identify and engage credible purchasers timely and to negotiate a favorable purchase price and payment terms directly affects our profitability. Our build-to-own projects generate revenue by generating and selling electricity to the grid companies. In order to maximize financial returns, in China, we operate and maintain these projects by our own operation and maintenance team to ensure the uninterrupted generation of electricity and to prolong the usable life of solar modules and other equipment. For overseas build-to-own projects, we engage third party suppliers to provide operation and maintenance service.

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Engineering, procurement and construction costs

The EPC costs of build-to-sell projects are capitalized as project assets and constitute a primary portion of the cost of sales at the time of sale. The EPC costs of build-to-own projects are capitalized as property, plant and equipment, and depreciated over 20 to 25 years after the project begins operating, representing a primary portion of cost of sales when the generated electricity is sold to the grid companies. EPC costs include the costs of design, procurement, construction and connection costs of solar power projects. The most significant cost is the procurement cost, which primarily consists of costs of solar modules, inverters and mounting systems. We use solar modules that we produce in our solar power projects, which give us a competitive advantage in controlling EPC costs. Our industry experience and connections have enabled us to purchase high quality inverters and other equipment at relatively competitive prices and payment terms. Our engineering team is responsible for designing our solar power projects. However, we engage third-party contractors to construct our projects. We control the construction costs of our projects through contractual terms with and diligent monitoring of contractors.

Overview of Financial Results

We evaluate our business using a variety of key financial measures.

Net Sales

Our net sales are net of business tax, VAT and returns and exchanges, as applicable.

The following table sets forth our total net sales by operating segments:

	Year Ended December 31,					
	2012		2013		2014	
Segment	Total Net Sales	Percent	Total Net Sales	Percent	Total Net Sales	Percent
	(in thousands, except for percentages)					
Manufacturing	$ 1,302,540	100.4%	$ 1,796,331	101.2%	$ 2,402,964	105.1%
Intersegment elimination(1)	(9,529)	(0.7)	(38,235)	(2.2)	(255,820)	(11.2)
Manufacturing after intersegment elimination	1,293,011	99.7	1,758,096	99.0	2,147,144	93.9
Solar power projects	3,644	0.3	16,875	1.0	138,975	6.1
Consolidated net sales	$ 1,296,655	100.0%	$ 1,774,971	100.0%	$ 2,286,119	100.0%

(1) Represents revenues generated from the sales of modules from our manufacturing segment to our solar power projects segment, which are eliminated to prevent double-recording such revenue.

The following table sets forth our total net sales by geographical region for the periods indicated:

	Year Ended December 31,					
	2012		2013		2014	
Region	Total Net Sales	Percent	Total Net Sales	Percent	Total Net Sales	Percent
	(in thousands, except for percentages)					
China	$ 167,953	13.0%	$ 591,071	33.3%	$ 747,811	32.7%
Europe	622,908	48.0	548,557	30.9	219,291	9.6
United States	331,213	25.5	302,270	17.0	634,446	27.8
Japan	38,565	3.0	147,403	8.3	457,901	20.0
Others(1)	136,016	10.5	185,670	10.5	226,670	9.9
Total	$ 1,296,655	100.0%	$ 1,774,971	100.0%	$ 2,286,119	100.0%

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(1) Includes India, which in 2014 accounted for $67.3 million, or 2.9%, in total net sales, and Australia, which in 2014 accounted for $40.6 million, or 1.8%, in total net sales.

Manufacturing Segment

We began to generate net sales primarily from the sales of PV modules in November 2004. The manufacturing segment, after eliminating intersegment sales to our solar power projects segment, accounted for 99.7%, 99.0% and 93.9% of our net sales for 2012, 2013 and 2014, respectively. Factors affecting our net sales include average selling price per watt, market demand for our PV modules, unit volume shipped and our production capacity expansion.

In 2012, 2013 and 2014, sales to our top five customers accounted for approximately 25.1%, 18.7% and 34.7% of our net sales, respectively, and sales to our largest customer accounted for 9.1%, 4.9% and 13.2% of our net sales, respectively.

To enhance our global sales capabilities, we established regional headquarters in San Jose, Zurich, and Singapore, as well as sales and business development offices in Beijing, Shanghai, Tokyo, Abu Dhabi, Sydney, Chengdu, Urumqi and Santiago.

We have historically sold most of our PV modules to customers located in Europe, in particular Germany, Italy and Spain. With the expiring or declining incentives in several European countries, including Germany, Italy and Spain, and anti-dumping and anti-subsidy actions initiated by the European Union, our net sales generated from Europe accounted for just 9.6% of our total net sales in 2014, compared to 30.9% 2013. In 2014, sales to the United States accounted for 27.8% of our net sales, a significant increase from 17.0% in 2013. We seek to mitigate the impact of the expiring incentives by enhancing our brand recognition and refocusing on newer and emerging solar power markets, which include the United Kingdom, India, and Japan, as well as other markets in Asia, Africa, the Middle East, Latin America and the Caribbean Islands. Some of these markets have experienced rapid growth due to government incentives and mandates that require electric utility companies to use renewable energy to produce a certain percentage of their power by a future date, and because the decreased costs of grid-scale solar projects make such projects more competitive with conventional energy forms. Our largest markets during 2014 were China, the United States and Japan, which accounted for 32.7%, 27.8% and 20.0%, respectively, of our net sales. We expect to continue to expand our customer base geographically in 2015.

Solar Power Projects Segment

Our solar power projects business accounted for 0.3%, 1.0% and 6.1% of our net sales for 2012, 2013 and 2014, respectively. Factors affecting our net sales for build-to-sell projects include contract price and construction schedule, and for build-to-own projects include electricity price, grid capacity, market demand for clean energy and government subsidies and other financial incentives.

In 2012, 2013 and 2014, net sales contributed by our build-to-sell projects accounted for 36.0%, 70.7% and 96.3% of total net sales of the solar power projects segment, with our build-to-own projects accounting for the remaining portion.

We develop and sell or operate our solar power projects in China, Europe, Japan and India, with more than 70% of our projects located in China, in terms of installed capacity. Most of our build-to-sell projects are located overseas while most of our build-to-own projects are located in China.

Cost of Sales

Manufacturing Segment

Our cost of sales consists primarily of:

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- *Polysilicon raw materials*. We purchase polysilicon from various suppliers, including silicon distributors, silicon manufacturers, semiconductor manufacturers and silicon processing companies.

- *Other direct materials*. Other direct materials include direct materials for the production of PV modules such as plastic, metallic pastes, tempered glass, laminate material, connecting systems and aluminum frames.

- *Sourcing costs*. We fulfill some of our wafer requirements by sourcing from strategic partners. We will continue to source wafers through medium-term and long-term supply agreements in order to fill the gap between our PV cell and module manufacturing capacity and our wafer manufacturing capacity.

- *Toll manufacturing*. Prior to 2008, we entered into toll manufacturing arrangements by providing wafers to toll manufacturers for processing and receiving solar cells from them in return. The toll manufacturing cost is capitalized as inventory, and recorded as a part of our cost of sales when our finished PV modules are sold. Starting from 2010, we were able to meet nearly all of our solar cell needs with our in-house production capabilities and we discontinued our reliance on toll manufacturers for processing solar cells. In 2012, 2013 and 2014, we fulfilled some of our ingot and wafer requirements by obtaining toll services from our strategic partners.

- *Overhead*. Overhead costs include equipment maintenance and utilities such as electricity and water used in manufacturing.

- *Direct labor*. Direct labor costs include salaries and benefits for our manufacturing personnel.

- *Depreciation of facilities and equipment*. Depreciation of manufacturing facilities and related improvements is provided on a straight-line basis over the estimated useful life of 10 to 25 years and commences from the date the facility is ready for its intended use. Depreciation of manufacturing equipment is provided on a straight-line basis over the estimated useful life of five to ten years, commencing from the date that the equipment is placed into productive use.

Our cost of sales is affected by our ability to control raw material costs, to achieve economies of scale in our operations, to ramp up our production capacity as planned, and to efficiently manage our supply chain, including our successful execution of our vertical integration strategy and our judicious use of toll manufacturers or third-party wafer suppliers to fill potential shortfalls in production capability along the supply chain.

Solar Power Projects Segment

For our build-to-sell projects, cost of sales consists primarily of (i) equipment costs, primarily consisting of costs for solar modules and balance-of-system components, such as inverters and mounting systems, land costs or land use right; (ii) development costs, such as fees paid for permits, site control, grid connection and transmission upgrade, and development staff and due diligence costs; (iii) engineering and construction related costs, including fees paid to third-party contractors, and project management costs; and (iv) overhead costs.

For our build-to-own projects that have completed construction, cost of sales consists primary of: (i) depreciation of fixed assets, including solar modules and other equipment, and amortization of the land use rights; (ii) operation and maintenance costs; (iii) tax and insurance; and (iv) management and other overhead costs. For our build-to-own projects that are under development, we capitalize as property, plant and equipment the costs of developing solar power projects, including equipment and land costs, development costs, engineering and construction related costs and interests incurred.

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Gross Margin

Our gross margin is affected by changes in our net sales and cost of sales. Our gross margins increased from 4.4% in 2012 to 12.3% in 2013, and then further increased to 16.9% in 2014. The increase from 2013 to 2014 was primarily due to increases in gross profits from both our manufacturing segment and solar power projects segment. The increase in our manufacturing segment was primarily due to decreases in fixed manufacturing costs per watt resulting from the increase in shipping volume of our PV modules by approximately 0.7 GW from 2013 to 2014, as well as that average selling price decreased at a slower rate compared to the decrease in our manufacturing costs per watt in 2014 primarily due to the decrease of material costs and our improved operating efficiency. The increase in gross profits for our solar power projects segment was due to that we successfully sold a few solar power projects in China and overseas during 2014. The margin increase from 2012 to 2013 was primarily due to decreases in fixed manufacturing costs per watt resulting from the increase in shipping volume of our PV modules by approximately 1 GW from 2012 to 2013. In addition, average selling price decreased at a slower rate compared to the decrease in our manufacturing costs per watt in 2013 primarily due to the decrease of material costs and our improved operating efficiency. We believe the solar industry will continue to experience periods of structural imbalance between supply and demand that will cause pressure on pricing. We may continue to face margin compression in the sales of PV modules if the average selling price of our PV modules continues to decline and we are unable to lower our cost of sales due to the extent of maintaining reasonable margin. As our PV module business expands, we believe additional economies of scale will help to improve our margins to offset negative market trends.

Operating Expenses

Our operating expenses include selling expenses, general and administrative expenses and research and development expenses.

Selling Expenses

Selling expenses consist primarily of provisions for outbound freight, employee costs, product warranties, promotion expenses, travel and other sales and marketing expenses. Our PV modules have typically been sold with a two to five-year warranty for defects in material and workmanship and a minimum power output warranty of up to 25 years following the date of purchase or installation. In 2011, we extended the product workmanship warranty to ten years and began to guarantee that module power output will not decrease by more than approximately 0.7% per year after the initial year of service. Our selling expenses as a percentage of net sales decreased from 9.2% in 2012 to 7.5% in 2013 due to the increase of net sales in 2013 as the shipping volume in new and emerging markets increased. Our selling expenses as a percentage of net sales decreased from 7.5% in 2013 to 5.9% in 2014 due to the increase of net sales in 2014 as the shipping volume in new and emerging markets increased.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and benefits for our administrative personnel, share-based compensation expenses, compliance related consulting and professional fees, depreciation, and travel expenses. Our general and administrative expenses as a percentage of net sales decreased from 13.6% in 2012 to 5.8% in 2013, primarily due to the increase of net sales in 2013, and a decrease in bad debt allowance for accounts receivables as general business improvement in the solar market lowered the likelihood of customer default. Our general and administrative expenses as a percentage of net sales decreased from 5.8% in 2013 to 4.7% in 2014, mainly due to the increase of net

sales in 2014, and a decrease in bad debt allowance for accounts receivables as improvements in the solar market lowered the likelihood of customer default.

Research and Development Expenses

Research and development expenses consist primarily of salaries and benefits for research and development personnel, share-based compensation expenses and benefits, costs of raw materials used in our research and development activities, depreciation, outsourced research contracts and prototype and equipment costs relating to the design, development, testing and enhancement of our products and manufacturing process. In 2014, we maintained a number of development programs and activities aimed at improving our technology and processes in order to enhance performance and reduce the cost of our solar modules.

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In 2013, our research and development efforts focused on developing high-efficiency interdigitated back contact cells, or IBC cells, and silicon-based heterojunction cells, or HJ cells, both of which will be part of our future product portfolio. Building on our highly successful Honey product, we use innovative technologies to develop high performance products and high-efficiency multi and mono-crystalline silicon PV modules.

In 2014, we continued to work on the development of new PV modules adapted for particular climates, as well as smarter PV products for better safety and better energy production, with a goal of achieving grid parity. In October 2014, we announced that our high-efficiency Honey solar module had set a new world record for peak power output for P-type monocrystalline silicon PV modules, as independently certified by TUV Rheinland. The module was developed in our PV Park Lab and was composed of 60 156mmx156mm high-efficiency Honey monocrystalline silicon cells. It generated a peak power output of 335.2 W, breaking the previous world record of 326.3 W, set by our original Honey module in April 2014. In November 2014, our PV Park Lab set new world records for high efficiency *p*-type and *n*-type silicon solar cells. To our knowledge, these total-area efficiency results, independently verified by external laboratories, affirm these cells to be in their categories the most efficient silicon solar cells made by industrially feasible production processes on 156mm x 156mm substrates for both *p*-type (mono & multi) and *n*-type (mono) substrates that have been tested anywhere in the world to date.

In 2015, we will continue to remain committed to advancing the scientific development and technological progress of the PV industry. In 2015, one of the key focus areas for our PV Park Lab is the development of high-efficiency IBC cells and HJ cells, where we have seen early success and we believe these innovations will advance solar product technology throughout the industry. We will continue to work on the development of new PV modules including mono- and multi-crystalline silicon Honey Plus cells and modules, the 60-cell as well as 72-cell frameless dual glass modules, and high-tech Trinasmart modules for better energy production and energy management, with the goal of achieving grid parity.

Share-based Compensation Expenses

We adopted our share incentive plan in July 2006 and a total of 33,507,224 restricted shares and 129,010,112 share options were outstanding as of December 31, 2014. For a description of the restricted shares and share options granted, including the exercise prices and vesting periods thereof, see Item 6. Directors, Senior Management and Employees B. Compensation of Directors and Executive Officers Share Incentive Plan. We are required to recognize share-based compensation as compensation expense in our statement of operations based on the fair value of equity awards on the date of the grant, with the compensation expense recognized on a straight-line basis over the period in which the recipient is required to provide services to us in exchange for the equity award. For restricted shares granted to our employees, we record share-based compensation expense for the excess of the fair value of the restricted shares at the date of the grant over the purchase price that a grantee must pay to acquire the shares during the period in which the shares may be purchased. We have categorized these share-based compensation expenses in our (i) cost of sales; (ii) selling expenses; (iii) general and administrative expenses; and (iv) research and development expenses, depending on the job functions of the grantees of our restricted shares and share options.

The following table sets forth the allocation of our share-based compensation expenses both in absolute amount and as a percentage of total share-based compensation expenses.

	Year Ended December 31,					
	2012		2013		2014	
	(in thousands, except for percentages)					
Cost of sales	$ 49	0.8%	$	%	$	%
Selling expenses	628	10.5	706	12.5	580	13.2

General and administrative expenses		5,029	83.8		4,631	81.7		3,503	79.6
Research and development expenses		293	4.9		331	5.8		317	7.2
Total share-based compensation expenses	$	5,999	100.0%	$	5,668	100.0%	$	4,400	100.0%

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Taxation

Under the current laws of the Cayman Islands, our company is not subject to tax on profit, income or capital gain.

We operate mainly in the PRC, Hong Kong, Singapore, United States, Japan and Germany.

The EIT Law, which became effective on January 1, 2008, imposes a uniform tax rate of 25% on all PRC enterprises, including foreign-invested enterprises, and eliminates or modifies most of the tax exemptions, reductions and preferential treatments available under the previous tax laws and regulations.

In addition, certain enterprises may benefit from a preferential tax rate of 15% under the EIT Law if they qualify as high and new technology enterprises strongly supported by the State, subject to certain general factors described therein. In September 2008, Trina China obtained the High and New Technology Enterprise Certificate with a valid term of three years starting from 2008. In 2011, Trina China renewed its High and New Technology Enterprise Certificate, effective from 2011 to 2013, entitling it to a preferential income tax rate of 15% from 2008 through 2013. Also, in 2011, TST obtained the High and New Technology Enterprise certificate, effective from 2011 to 2013, and is entitled to a preferential income tax rate of 15% during that period. In 2014, Trina China and TST renewed and received their respective High and New Technology Enterprise Certificate, effective from 2014 to 2016, entitling each of them to a preferential income tax rate of 15% from 2014 through 2016.

Our wholly-owned subsidiary, Trina Solar (Hong Kong) Enterprise Limited was subject to Hong Kong profit tax at a rate of 16.5% in 2012, 2013 and 2014, respectively. No Hong Kong profit tax has been provided as our subsidiary has not had assessable profit that was earned in or derived from Hong Kong during the years presented.

In 2012, 2013 and 2014, our wholly-owned subsidiaries, Trina Solar (Singapore) Pte. Ltd. was subject to Singapore profit tax at a rate of 17% and Trina Solar Energy Development Pte. Ltd. was subject to a preferential Singapore profit tax at an effective rate of 5%. No Singapore profit tax has been provided as our subsidiaries did not have assessable profit that was earned in or derived from Singapore during the year presented.

Our subsidiaries incorporated in the United States were subject to United States income tax at a combined federal and state tax rate of 40% in 2012, 2013 and 2014, respectively.

Our wholly-owned subsidiary, Trina Solar (Japan) Limited was subject to Japan profit tax at a rate of 40% in 2012 and 2013 and a rate of 25.5% in 2014.

Our wholly-owned subsidiary, Trina Solar (Germany) GmbH was subject to Germany profit tax at a rate of 32.9% in 2012 and 2013 and a rate of 27.38% in 2014.

We make an assessment of the level of authority for each of our uncertain tax positions (including the potential application of interests and penalties) based on their technical merits, and have measured the unrecognized benefits associated with such tax positions. As of December 31, 2013 and 2014, we had no unrecognized tax benefits relating to uncertain tax positions.

Critical Accounting Policies

We prepare our consolidated financial statements in accordance with U.S. GAAP which requires us to make judgments, estimates and assumptions that affect (i) the reported amounts of our assets and liabilities, (ii) the disclosure of our contingent assets and liabilities at the end of each reporting period and (iii) the reported amounts of revenues and expenses during each reporting period. We continually evaluate these estimates based on our own historical experience, knowledge and assessment of current business and other conditions, our expectations regarding the future based on available information and reasonable assumptions, which together form our basis for making judgments about matters that are not readily apparent from other sources. Since the use of estimates is an integral component of the financial reporting process, our actual results could differ from those estimates. Some of our accounting policies require a higher degree of judgment than others in their application.

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When reading our consolidated financial statements, you should consider (i) our selection of critical accounting policies, (ii) the judgment and other uncertainties affecting the application of such policies and (iii) the sensitivity of reported results to changes in conditions and assumptions. We believe the following accounting policies involve the most significant judgments and estimates used in the preparation of our consolidated financial statements.

Revenue Recognition

We recognize revenues for product sales when persuasive evidence of an arrangement exists, delivery of the product has occurred and title and risk of loss has passed to the customer, the sales price is fixed or determinable, and the collectability of the resulting receivable is reasonably assured. Our sales agreements typically contain our customary product warranties but usually do not contain post-shipment obligations nor any return or credit provisions. We recognize sales of our PV modules based on the terms of the specific sales contracts. Generally, we recognize sales when we have delivered our products to our customers designated point of shipment, which may include commercial docks or commercial shipping vessels.

In 2009, in response to the financing constraints, our customers requested longer credit terms. As a result, we began granting extended credit terms to customers with whom we had positive historical collection experience and overall creditworthiness. In addition, some of our customers pay us through drawn upon acceptance, open account and letter of credit terms, which typically take 90 to 120 days to process in order for us to be paid. To assess the creditworthiness of our customers, we generally obtain credit information from reputable third-party sources, including Dunn & Bradstreet and insurance companies that ultimately insure us against customer credit default. Our senior management also performs on-site customer visits, monitors customer payments and adjusts customer credit limits as appropriate. Using the information collected, we further evaluate the potential effect of a delay in financing on the customers liquidity and financial position, their ability to draw down financing as well as their ability and intention to pay should it not obtain the related financing. Based on this analysis, we determine what credit terms, if any, to offer to each customer individually. If our assessment indicates a likelihood of collection risk, we do not sell the products or sell on a cash or prepayment basis. Therefore, based on our strict credit assessment, we attempt to conduct business with those customers we believe have the ability and intent to pay.

We recognize the sale of project assets with the concurrent sale or lease of the underlying land use rights, whether explicit or implicit in the transaction, in accordance with ASC 360-20, Real Estate Sales. For these transactions, we have determined that the project asset sale represents the sale of real estate and is therefore subject to the revenue recognition guidance applicable to real estate. A project asset comprises of properties, physical fixtures, solar modules and other related integral equipment attached to the land that cannot be removed and used separately without incurring significant costs. Equipment is determined to be integral when the cost to remove the equipment from its existing location, ship and reinstall at a new site, including any diminution in fair value, exceeds 10% of the fair value of the equipment at the time of original installation. Under real estate accounting, we recognize revenue and profit using the full accrual method once the sale is consummated, the buyer s initial and continuing investments are adequate to demonstrate its commitment to pay, the buyer s receivable is not subject to any future subordination, and we have transferred the usual risk and rewards of ownership to the buyer. For the years ended December 31, 2012, 2013, and 2014, revenues from the sale of project assets were $1.3 million, $11.9 million, and $133.9 million, respectively. During the years of 2012, 2013, and 2014, we did not have sales that qualified for use of the installment method nor entered into any sale transactions during the construction period of the project assets.

If we retain continuing involvement in the project asset and do not transfer substantially all of the risks and rewards of ownership to the buyer, we recognize gross profit under a method determined by the nature and extent of our continuing involvement, provided the other criteria for the full accrual method are met. Other forms of continuing involvement that do not transfer substantially all of the risks and rewards of ownership,

such as an option or obligation to repurchase the project assets, preclude revenue recognition under real estate accounting. For project assets sold during the periods presented, we did not have any continuing involvement with the assets after the assets were sold.

We also derive service revenues from project assets held for operation through the sale of electricity to the grid operators pursuant to terms set forth in the PPAs. We have determined that none of the PPAs contains a lease since (i) the purchaser does not have the rights to operate the project assets, (ii) the purchaser does not have the rights to control physical access to the project assets, and (iii) the price that the purchaser pays is at a fixed price per unit of output. The period of the PPAs are generally between 3 to 20 years. Service revenues for the years ended December 31, 2012, 2013, and 2014 were $2.3 million, $4.9 million, and $5.1 million, respectively.

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Warranty Cost

It is customary in our business and industry to warrant or guarantee the performance of our solar module products at certain levels of power output for extended periods. Our PV modules have typically been sold with a two to five year warranty for defects in material and workmanship and a minimum power output warranty of up to 25 years following the date of delivery or installation. In 2011, we extended the product workmanship warranty to ten years and began to guarantee that module power output will not decrease by more than approximately 0.7% per year after the initial year of service. If a solar module is defective, we will either repair or replace the module at our discretion. Warranty costs primarily consist of replacement costs for parts and materials and labor costs for maintenance personnel.

We maintain warranty reserves (recorded as accrued warranty costs) to cover potential liabilities that could arise from our warranties. Due to our limited solar module manufacturing history, we do not have a significant history of warranty claims. Our accrued warranty cost reflects our best estimate of the probability of incurring warranty claims and costs associated with those warranty claims. These significant estimates are determined based on a number of factors, primarily including (1) an ongoing analysis of our actual historical costs incurred in connection with our warranty claims, (2) an assessment of our competitors accrual and claim history and (3) analysis of academic research results, available from industry research publications and papers, and other assumptions that we believe to be reasonable under the circumstances. Based on the results of analysis and technical testing, the revision to our warranty policy in June 2011 did not have a material effect on our warranty accrual rate. We acknowledge that such estimates are subjective and we will continue to analyze our claim history and the performance of our products compared to our competitors and future academic research results to determine whether the accrual is appropriate. To the extent that actual warranty costs differ from the estimates, or our expectations of future costs change, we will prospectively revise our accrual rate and/or the accrual balance. Such adjustments could have a material effect on our consolidated results of operations. For example, an increase or decrease of 0.1% accrual rate (i.e., to 1.1% or 0.9%) would have resulted in an in corresponding increase or decrease in warranty expense of $2.1 million for the year ended December 31, 2014.

Impairment of Long-lived Assets

Our long-lived assets include property, plant and equipment, build-to-own project assets and other intangible assets with finite lives. We evaluate our long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. These events include but are not limited to significant current period operation or cash flow losses associated with the use of a long-lived asset or group of assets combined with a history of such losses, significant changes in the manner of use of assets and significant negative industry or economic trends. If circumstances require a long-lived asset or asset group be tested for possible impairment, we first compare undiscounted cash flows expected to be generated by that asset or asset group to its carrying amount. If the carrying amount of the long-lived asset or asset group is not recoverable on an undiscounted cash flow basis, an impairment is recognized to the extent that the carrying amount exceeds its fair value. The determination of fair value of the intangible and long lived assets acquired involves certain judgments and estimates. These judgments can include, but are not limited to, the cash flows that an asset is expected to generate in the future. Future cash flows can be affected by factors such as changes in global economies, business plans and forecast, regulatory developments, technological improvements, and operating results. Any impairment write-downs would be treated as permanent reductions in the carrying amounts of the assets and a charge to operations would be recognized. No impairments were recorded for long-lived assets during the years ended December 31, 2012, 2013 and 2014.

Our total module shipments, excluding modules shipped to solar power projects segment, during 2014 were 3,336.2 MW, compared to 2,584.3 MW in 2013 and compared to 4,000 MW annual manufacturing capacity as of December 31, 2014. Generally, our actual shipments for a given year are lower than the year-ending annual manufacturing capacity for that year. We view under-utilization of our capacity as a potential indicator of impairment, and we will continue to evaluate our capacity utilization in determining whether our assets are recoverable. We effectively utilized most, if not all, of our capacity in 2014.

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Allowance for Doubtful Accounts and Provision for Losses of Advances to Suppliers

Before conducting business with customers, we assess and evaluate customer creditworthiness which was primarily based on information provided by third party credit rating agencies, validation of the project specifications with the customers and their financing banks, and customer onsite visits by senior management. We review the collectability of accounts receivable on a quarterly basis and provide allowances when there is doubt as to collectability. In addition to the specific allowance applied on the balance of individual customers, we group the remaining receivables without specific allowance based on overdue aging. An estimated loss percentage is then applied to each overdue aging group based on historical collection experiences, previous loss history and current credit conditions. During 2011 and 2012, when the solar industry was experiencing continuous declines in selling price and stagnated operating and financing cash flows, we focused our assessment and evaluation on certain specific customers with significant doubt as to the collectability of their past due balances based on a number of factors, including the long-overdue aging of the receivables, the customer s current ability to pay, past payment patterns and their failure to adhere to previously negotiated repayment schedules, as well as the market conditions in Europe and United States, and how those conditions may affect the relevant customers. Although the solar market began to improve in the second half of 2013, we continue to perform due diligence work on all customers with outstanding accounts receivables. Based on such assessment, we made provision for doubtful accounts receivable totaling $61.4 million and $0.3 million during the years ended December 31, 2012 and 2013, respectively, against the accounts receivable. In 2014, we reversed provision for doubtful accounts receivable totaling $7.4 million, due to the collection of certain long-aged receivables for which we provided provision in prior years.

With respect to advances to suppliers, who are primarily suppliers of silicon and wafer raw materials, we perform ongoing credit evaluations of our suppliers financial conditions. Some of our suppliers require prepayments and our prepayments are recorded either as current portion of advances to suppliers, if they are expected to be utilized within 12 months of each balance sheet date, or as advances to suppliers, net of current portion, if they represent the portion expected to be utilized after 12 months. Based on such assessment, we made provision for potential losses of advances to suppliers totaling $2.8 million and nil during the years ended December 31, 2012 and 2013, respectively, against the advances to suppliers for balances paid to vendors who did not conduct delivery as scheduled so that we consider the recoverability is remote. In 2014, we reversed provision for potential losses of advances to suppliers totaling $1.1 million, due to the collection of certain long-aged prepayments. We generally do not require collateral or security against advances to suppliers.

Share-based Compensation

We have granted restricted shares and share options to our directors, officers and employees. Share-based payment compensation is based on grant-date fair value and is recognized in our consolidated financial statements over the requisite service period, which is generally the vesting period. We grant our restricted shares at their fair value which generally represents the fair value of an unrestricted share. For share options, determining the value of our share-based compensation expense in future periods requires the input of highly subjective assumptions, including the expected terms of the options, the price volatility of our underlying shares, the risk free interest rate, the expected dividend rate, as well as estimated forfeitures of the options. We estimate our forfeitures based on past employee retention rates, our expectations of future retention rates, and we will prospectively revise our forfeiture rates based on actual history. Our compensation charges may change based on changes to our actual forfeitures.

Inventories

We report inventories at the lower of cost or market. We determine cost on a weighted-average basis. These costs include direct material, direct labor, tolling manufacturing costs, and fixed and variable indirect manufacturing costs, including depreciation and amortization.

We regularly review the cost of inventory against our estimated market value and record a lower of cost or market write-down if any inventories have a cost in excess of market value. Market value does not exceed the net realizable value of the inventory, which is the estimated selling price of our inventory in the ordinary course of business, less reasonably predicable costs of completion and disposal. The evaluation of net realizable value takes into consideration a number of factors including actual consumption of our finished goods compared to forecasted market demand, actual selling prices as agreed in our sales contracts and orders on hand for finished goods, the anticipated changes in the market selling price of our finished goods, seasonality fluctuations, and conversion costs in our production.

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In addition, we regularly evaluate the quantity and value of our inventory in light of current market conditions and market trends and record write-downs for any quantities in excess of demand and for any product obsolescence. This evaluation considers historic usage, expected demand, market price, 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. If, based on assumptions about expected demand and market conditions, we determine that the cost of inventories exceeds its estimated market value or inventory is excess or obsolete, we would record a write-down equal to the difference between the cost of inventories and the estimated market value. We also write off silicon materials that may not meet our required specifications for inclusion in our manufacturing process. These materials are periodically sold for scrap.

Based on such estimates, we had inventory write-downs totaling $39.6 million, $40.6 million and $37.8 million in the years ended December 31, 2012, 2013 and 2014, respectively.

To date, the majority of the inventory write-downs were due to the change of market s preference for power output of multicrystalline PV modules. Our main product is multicrystalline PV modules. Prevailing power output of multicrystalline PV modules increased from above 240 W in 2013 to above 255 W in 2014. We must sell those multicrystalline PV modules with power output below prevailing power output for a discount and we write down those multicrystalline PV modules to their estimated market value. Additionally, market conditions are subject to change and actual consumption of our inventory could differ from forecasted demand. Historically, our estimates of future demand have been materially accurate and, as a result, we were not required to make significant revision to such estimates. Although our inventories have a long life cycle, due to the change of market s preference for power output, obsolescence and slow-movers accounts for the majority inventory write-down as of December 31, 2014.

Project Assets

We construct solar energy project systems, or project assets, that are (i) developed for sale, which we reported as build-to-sell project assets, or (ii) developed for our own use, which we reported as build-to-own project assets. Project assets are classified as either build-to-sell or as build-to-own once the project assets have been constructed and ready for use. We determine the intended use of the project assets at the time construction commences. Classification of the project assets affects the accounting and presentation in the consolidated financial statements, including the consolidated statement of operations and consolidated statement of cash flows. Transactions related to the construction and sale of build-to-sell project assets are presented as operating activities in the consolidated statements of cash flows and reported as sales and costs of sales in the consolidated statement of operations when the project assets are sold. Build-to-own project assets relate to solar energy project systems that we use in our operations to generate income or a return from the use of the assets. The costs to construct build-to-own project assets are presented as investing activities in the consolidated statement of cash flows. The proceeds received for the sale of build-to-own project assets are presented as cash flows from investing activities within the consolidated statement of cash flows.

Project assets costs consist primarily of capitalizable costs for items such as permits and licenses, land costs or land use rights, and work-in-process. Work-in-process includes materials and modules, construction, installation and labor and other capitalizable costs incurred to construct the solar energy project systems.

Upon completion of the construction of build-to-sell project assets, we initiate a plan to actively market the asset for immediate sale in its present condition to potential buyers at a price that is reasonable in relation to its current fair value and it is probable that the sale of the asset will be sold within year. No depreciation expense is recognized while the project assets are under construction or classified as build-to-sell. Build-to-sell project assets are measured at the lower of its carrying amount or fair value less costs to sell. At each reporting date, the

appropriateness of the classification of build-to-sell project assets is reassessed. If facts and circumstances change such that it is no longer probable that the project asset will be sold within one year, the project asset will be reclassified to property, plant and equipment.

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For build-to-sell project assets, we consider a project commercially viable if it is anticipated to be sold for a profit once it is either fully developed or fully constructed. We also consider a partially developed or partially constructed project commercially viable if the anticipated selling price is higher than the carrying value of the related project assets plus the estimated cost to completion. We consider a number of factors, including changes in environmental, ecological, permitting, market pricing or regulatory conditions that affect the project. Such changes may cause the cost of the project to increase or the selling price of the project to decrease. We record an impairment loss of the project asset to the extent the carrying value exceed its estimated recoverable amount. The recoverable amount is estimated based on the anticipated sales proceeds plus any refundable project investment deposits reduced by estimated cost to complete such sales.

Income Taxes

Deferred income taxes are recognized for temporary differences between the tax basis of assets and liabilities and their reported amounts in the financial statements, net operating loss carry forwards by applying enacted statutory tax rates applicable to future years. Deferred tax assets are reduced by a valuation allowance when, in our opinion, it is more likely than not that some portion or all of the deferred tax assets will not be realized. All available evidence, both positive and negative, shall be considered to determine whether a valuation allowance for deferred tax assets is needed. In 2012, 2013 and 2014, our deferred tax assets were reduced by a valuation allowance amounting to $55.7 million, $52.5 million and $19.3 million. The determination of a need for a valuation allowance is based on our evaluation of both positive and negative evidence available to us, including the net losses in recent years for our major operating subsidiaries, and our projection of future taxable income of those subsidiaries. Current income taxes are provided for in accordance with the laws of the relevant taxing authorities. The components of the deferred tax assets and liabilities are individually classified as current and non-current based on the characteristics of the underlying assets and liabilities.

We recognize a tax benefit associated with an uncertain tax position when, in our judgment, it is more likely than not that the position will be sustained upon examination by a taxing authority. For a tax position that meets the more-likely-than-not recognition threshold, we initially and subsequently measure the tax benefit as the largest amount that we judge to have a greater than 50% likelihood of being realized upon ultimate settlement with a taxing authority. Our liability associated with unrecognized tax benefits is adjusted periodically due to changing circumstances, such as the progress of the tax audits, case law developments and new or emerging legislation. Such adjustments are recognized entirely in the period in which they are identified. Our effective tax rate includes the net impact of changes in the liability for unrecognized tax benefits and subsequent adjustments as considered appropriate by management. We classify interest and penalties recognized on the liability for unrecognized tax benefits as income tax expense.

Derivative Financial Instruments

Our primary objective for holding derivative financial instruments is to manage currency risk. We record derivative instruments as assets or liabilities, measured at fair value. The recognition of gains or losses resulting from changes in fair values of those derivative instruments is based on the use of each derivative instrument and whether it qualifies for hedge accounting.

We have entered into a series of forward foreign currency exchange contracts with several commercial banks to protect against volatility of future cash flows caused by the changes in foreign exchange rates associated with the outstanding accounts receivable. The forward foreign currency exchange contracts do not qualify for hedge accounting and, as a result, the changes in fair value of the derivatives are recognized in the statement of operations. In 2012, 2013 and 2014, we recorded a gain of $8.5 million, $2.2 million and $3.4 million, respectively. These gains are included in the line item Derivatives gain in the consolidated statements of operations.

When available, we measure the fair value of financial instruments based on quoted market prices in active markets, valuation techniques that use observable market-based inputs or unobservable inputs that are corroborated by market data. When observable market prices are not readily available, we generally estimate the fair value using valuation techniques that rely on alternate market data or inputs that are generally less readily observable from objective sources and are estimated based on pertinent information available at the time of the applicable reporting periods.

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Results of Operations

Beginning in 2014, we have two reportable operating segments: the manufacturing segment that manufactures and sells PV modules world-wide, and the solar power projects segment that designs, constructs, sells and/or operates solar power projects in China and overseas.

The following table sets forth a summary, for the periods indicated, of our consolidated results of operations and each item expressed as a percentage of our total net sales. Our historical results presented below are not necessarily indicative of the results that may be expected for any future period.

	Year Ended December 31,					
	2012		2013		2014	
	(in thousands, except for percentages)					
Net sales:						
Manufacturing	$ 1,302,540	100.4%	$ 1,796,331	101.2%	$ 2,402,964	105.1%
Solar power projects	3,644	0.3	16,875	1.0	138,975	6.1
Intersegment elimination	(9,529)	(0.7)	(38,235)	(2.2)	(255,820)	(11.2)
Consolidated net sales	1,296,655	100.0	1,774,971	100.0	2,286,119	100.0
Cost of sales	1,239,412	95.6	1,556,777	87.7	1,900,547	83.1
Gross profit:						
Manufacturing	55,357	4.3	228,507	12.9	372,204	16.3
Solar power projects	1,886	0.1	(10,313)	(0.6)	29,928	1.3
Intersegment elimination					(16,560)	(0.7)
Consolidated gross profit	57,243	4.4	218,194	12.3	385,572	16.9
Operating expenses:						
Selling expenses	118,885	9.2	132,824	7.5	135,061	5.9
General and administrative expenses	176,719	13.6	103,523	5.8	108,150	4.7
Research and development expenses	26,511	2.0	19,926	1.1	22,258	1.0
Total operating expenses	322,115	24.8	256,273	14.4	265,469	11.6
(Loss) income from operations	(264,872)	(20.4)	(38,079)	(2.1)	120,103	5.3
Foreign exchange (loss) gain	908	0.1	(13,576)	(0.8)	(21,934)	(1.0)
Interest expense	(51,887)	(4.0)	(48,445)	(2.7)	(34,886)	(1.5)
Interest income	8,552	0.6	3,958	0.2	2,793	0.1
Derivatives gain	8,542	0.6	2,180	0.1	3,422	0.2
Other income, net	6,797	0.5	8,696	0.5	7,250	0.3
(Loss) income before income taxes:						
Manufacturing	(291,693)	(22.5)	(67,179)	(3.8)	86,172	3.7
Solar power projects	(268)	(*)	(18,087)	(1.0)	7,136	0.3
Intersegment elimination					(16,560)	(0.6)
Consolidated (loss) income before income taxes	(291,961)	(22.5)	(85,266)	(4.8)	76,748	3.4
Income tax (expense) benefit	25,405	2.0	13,030	0.7	(15,488)	(0.7)

Net loss (income)	$	(266,555)	(20.6)%	$	(72,236)	(4.1)%	$	61,260	2.7%

* less than 0.1%

Year Ended December 31, 2014 Compared to Year Ended December 31, 2013

Net Sales. Our total net sales increased by $511.1 million, or 28.8%, from $1,775.0 million in 2013 to $2,286.1 million in 2014, due to increased net sales from both our manufacturing segment and our solar power projects segment.

- *Manufacturing segment.* Net sales in our manufacturing segment increased by $606.7 million, or 33.8%, from $1,796.3 million in 2013 to $2,403.0 million in 2014. Net sales in our manufacturing segment less intersegment elimination, which excludes net sales generated from the sales of models from our manufacturing segment to our solar power projects segment, increased by $389.0 million, or 22.2%, from $1,758.1 million in 2013 to $2,147.1 million in 2014. This increase was primarily due to increased shipments from 2,584.3 MW in 2013 to 3,659.1 MW in 2014, or an increase of 41.6%, offset by a slight decrease in average selling price of our PV modules, which decreased from $0.64 per watt in 2013 to $0.63 per watt in 2014. The increase in the shipments was primarily due to growing demand from key geographical regions, particularly China, the United States and Japan. The slight decrease in the average selling price was primarily due to increased sales to countries with lower average selling price.

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- *Solar power projects segment.* Net sales in our solar power projects segment increased by $122.1 million, or 722.5%, from $16.9 million in 2013 to $139.0 million in 2014, primarily due to the sales of our 50 MW solar power plant in Wuwei, Gansu Province and of two solar power plants with total capacity of 23.8 MW in the United Kingdom in 2014, totaling $133.9 million.

Cost of sales. Our cost of sales increased by $343.7 million, or 22.1%, from $1,556.8 million in 2013 to $1,900.5 million in 2014, due to increased cost of sales from both manufacturing segment and solar power projects segment. Cost of sales in our manufacturing segment increased primarily due to increased shipments, offset by improvements in operating efficiency made possible by our proprietary technology and business scale. Cost of sales in our solar power projects segment increased primarily due to the sales of solar power projects in China and the United Kingdom as well as increased depreciation and amortization for our build-to-own projects. As a percentage of our total net sales, our cost of sales decreased from 87.7% to 83.1% during the same period.

Gross Profit. As a result of the foregoing, our gross profit increased by $167.4 million, or 76.7%, from $218.2 million in 2013 to $385.6 million in 2014, primary due to increased profits from our manufacturing segment, and our solar power projects segment having profits in 2014 as compared to losses in 2013. Our gross margin increased from 12.3% to 16.9% during the same period.

- *Manufacturing segment*. Gross profit from our manufacturing segment increased by $143.7 million, or 62.9%, from $228.5 million in 2013 to $372.2 million in 2014, primarily due to slower decreases in average selling price and reduced manufacturing cost per watt as we improved our operating efficiency and decreased costs of raw material.

- *Solar power projects segment.* Gross profit from our solar power projects segment increased by $40.2 million, from loses of $10.3 million in 2013 to profits of $29.9 million in 2014, primarily due to the sales of solar power projects in China and the United Kingdom.

Operating Expenses. Our operating expenses increased by $9.2 million, or 3.6%, from $256.3 million in 2013 to $265.5 million in 2014. The increase in operating expenses was due to increased selling expenses, general and administrative expenses, and research and development expenses. As a percentage of total net sales, operating expenses decreased from 14.4% in 2013 to 11.6% in 2014. Share-based compensation expenses allocated to our selling expenses, general and administrative expenses, and research and development expenses in 2014 were $0.6 million, $3.5 million and $0.3 million, respectively, based on the respective departments in which employees worked at the time of the grant.

Selling Expenses. Our selling expenses increased by $2.3 million, or 1.7%, from $132.8 million in 2013 to $135.1 million in 2014, primarily due to increases in overall shipping costs and warranty expenses given the 28.8% increase in our net sales. Selling expenses as a percentage of net sales decreased from 7.5% in 2013 to 5.9% in 2014, primarily due to the increase in net sales.

General and Administrative Expenses. Our general and administrative expenses increased by $4.7 million, or 4.5%, from $103.5 million in 2013 to $108.2 million in 2014, as a result of increased wages and benefits paid to our administrative personnel, partially offset by a reversal of allowance for doubtful accounts due to the collection of cash from customers for whom we originally provided a full provision for their accounts receivable. General and administrative expenses as a percentage of net sales decreased from 5.8% in 2013 to 4.7% in 2014 due to the increase in net sales.

Research and Development Expenses. Our research and development expenses increased by $2.4 million, or 11.7%, from $19.9 million in 2013 to $22.3 million in 2014, as a result of increased wages and benefits paid to our research and development personnel. Research and development expenses as a percentage of net sales decreased from 1.1% in 2013 to 1.0% in 2014 due to the increase in net sales.

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Foreign Exchange Loss. We had a foreign exchange loss of $21.9 million in 2014, compared to a foreign exchange loss of $13.6 million in 2013. The foreign exchange loss in 2014 resulted from depreciation of the Japanese Yen against the U.S. dollar.

Interest Expenses, Net. Our interest expenses, net, was $44.5 million and $32.1 million in 2013 and 2014, respectively. Our interest expenses decreased from $48.5 million in 2013 to $34.9 million in 2014, primary due to the decreased average loan balance and capitalization of interest expenses. Interest income decreased from $4.0 million in 2013 to $2.8 million in 2014 as a result of the reduction in cash and restricted cash balance following the repayment of certain loans. In 2014, we capitalized $7.2 million of interest expenses, which is primarily for solar power projects under construction when the capitalization criteria for such projects are met.

Derivatives Gain. In 2014, we had a derivatives gain of $3.4 million, compared to a derivatives gain of $2.2 million in 2013, primarily due to changes in the value of the foreign currency forward contracts between the Euro and the U.S. dollar, and the Renminbi and the U.S. dollar, respectively, which are used to mitigate the effects of exchange rate volatility. See Critical Accounting Policies Derivative Financial Instruments for more details.

Income Tax (Expense) Benefit. We had an income tax expense of $15.5 million in 2014, compared to an income tax benefit of $13.0 million in 2013, primarily due to income of $76.7 million before income tax in 2014, as compared with loss of $85.3 million before income tax in 2013. Our effective income tax rate was 15.3% and 20.2% in 2013 and 2014, respectively. Our effective income tax rate in 2014 was lower than the PRC statutory EIT rate of 25%, primarily due to the reversal of valuation allowance as result of the realization or expected realization of net operating loss carry forward, offset by the change of preferential income tax rate received by certain PRC entities.

Net Income. As a result of the foregoing, we had a net income of $61.3 million in 2014, compared to a net loss of $72.2 million in 2013, representing an increase of $133.5 million. Our net margin was 2.7% in 2014, compared to negative 4.1% in 2013.

Year Ended December 31, 2013 Compared to Year Ended December 31, 2012

Net Sales. Our total net sales increased by $478.3 million, or 36.9%, from $1,296.7 million in 2012 to $1,775.0 million in 2013, due to increased net sales from both our manufacturing segment and our solar power projects segment.

- *Manufacturing segment.* Net sales in our manufacturing segment increased by $493.8 million, or 37.9%, from $1,302.5 million in 2012 to $1,796.3 million in 2013. Net sales in our manufacturing segment less intersegment elimination, which excludes net sales generated from the sales of models from our manufacturing segment to our solar power projects segment, increased by $465.1 million, or 36.0%, from $1,293.0 million in 2012 to $1,758.1 million in 2013. This increase was primarily due to increased shipments from 1,594.0 MW in 2012 to 2,584.3 MW in 2013, or an increase of 62.1%, offset by a decrease in average selling price of our PV modules, which decreased from $0.78 per watt in 2012 to $0.64 per watt in 2013. The decrease in the average selling price of our PV modules in 2013 was primarily due to changes in government economic incentives in many markets, including Germany, Italy and Spain and an over-supply of solar power products due to increased manufacturing capacity that exceeded the increase in global demand.

- *Solar power projects segment.* Net sales in our solar power projects segment increased by $13.3 million, or 369.4%, from $3.6 million in 2012 to $16.9 million in 2013, primarily due to the sales of two solar power projects located in Italy of 3.3 MW.

Cost of sales. Our cost of sales increased by $317.4 million, or 25.6%, from $1,239.4 million in 2012 to $1,556.8 million in 2013, primarily due to increased cost of sales in both manufacturing segment and solar power projects segment. Cost of sales in our manufacturing segment increased primarily because of increased shipments, offset by improvements in operating efficiency made possible by our proprietary technology and business scale. Cost of sales in our solar power projects segment increased primarily due to the impairment for our build-to-sell projects of $10.7 million recognized in 2013 as well as increased depreciation and amortization for our build-to-own projects. As a percentage of our total net sales, our cost of sales decreased from 95.6% to 87.7% during the same period.

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Gross Profit. As a result of the foregoing, our gross profit increased by $161.0 million, or 281.2%, from $57.2 million in 2012 to $218.2 million in 2013, primarily due to increased profits from manufacturing segment and partially offset by solar power projects having losses of $10.3 million in 2013 as compared to profits of $1.9 million in 2012. Our gross margin increased from 4.4% to 12.3% during the same period.

- *Manufacturing segment*. Gross profits from our manufacturing segment increased by $173.1 million, or 312.8%, from $55.4 million in 2012 to $228.5 million in 2013, primarily due to slower decreases in average selling price compared with a reduction in manufacturing cost per watt as we improved our operating efficiency coupled with the decrease of material costs.

- *Solar power projects segment.* Gross profits from our solar power projects segment decreased by $12.2 million, from profits of $1.9 million in 2012 to losses of $10.3 million in 2013, primarily due to the impairment for our build-to-sell projects of $10.7 million recognized in 2013.

Operating Expenses. Our operating expenses decreased by $65.8 million, or 20.4%, from $322.1 million in 2012 to $256.3 million in 2013. The decrease in operating expenses was due to decreases in general and administrative expenses and research and development expenses. As a percentage of total net sales, operating expenses decreased from 24.8% in 2012 to 14.4% in 2013. Share-based compensation expenses allocated to our selling expenses, general and administrative expenses and research and development expenses in 2013 were $0.7 million, $4.6 million and $0.3 million, respectively, based on the respective departments in which employees worked at the time of the grant.

Selling Expenses. Our selling expenses increased by $13.9 million, or 11.7%, from $118.9 million in 2012 to $132.8 million in 2013, primarily due to increases in overall shipping costs and warranty expenses given the 36.9% increase in our net sales. Salary and benefit to sales management also grew in line with the increase in our net sales. Selling expenses as a percentage of net sales decreased from 9.2% in 2012 to 7.5% in 2013, primarily due to the increase in net sales.

General and Administrative Expenses. Our general and administrative expenses decreased by $73.2 million, or 41.4%, from $176.7 million in 2012 to $103.5 million in 2013. General and administrative expenses as a percentage of net sales decreased from 13.6% in 2012 to 5.8% in 2013. The decrease in our general and administrative expenses was mainly a result of greater collection efforts for outstanding accounts receivables relating to certain customers and consequently a decrease in bad debt allowance for accounts receivable in 2013.

Research and Development Expenses. Our research and development expenses decreased by $6.6 million, or 24.8%, from $26.5 million in 2012 to $19.9 million in 2013. Research and development expenses as a percentage of net sales decreased from 2.0% in 2012 to 1.1% in 2013. The decrease in our research and development expenses was primarily due to decreases in depreciation and the costs of raw materials used in our research and development activities.

Foreign Exchange Gain (Loss). We had a foreign exchange loss of $13.6 million in 2013, compared to a foreign exchange gain of $0.9 million in 2012. The foreign exchange loss in 2013 resulted from the depreciation of the Euro and Japanese Yen against the U.S. dollar.

Interest Expenses, Net. Our interest expenses, net, was $43.3 million and $44.5 million in 2012 and 2013, respectively. Our interest expenses decreased from $51.9 million in 2012 to $48.5 million in 2013, primary due to the decreased average loan balance. Interest income decreased from $8.6 million to $4.0 million as a result of the reduction in cash and restricted cash balance with the repayment of loans and convertible senior notes.

Derivatives Gain. In 2013, we had a derivatives gain of $2.2 million, compared to a derivatives gain of $8.5 million in 2012, primarily due to changes in the value of the foreign currency forward contracts between the Euro and the U.S. dollar used to mitigate the effects of exchange rate volatility. See Critical Accounting Policies Derivative Financial Instruments for more details.

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Income Tax Benefit. Our income tax benefit decreased by $12.4 million, or 48.8%, from $25.4 million in 2012 to $13.0 million in 2013, primarily due to loss before income tax reduced from $292.0 million in 2012 to $85.3 million in 2013. Our effective income tax rate was 8.7% and 15.3% in 2012 and 2013, respectively. Our effective income tax rate in 2013 was lower than the PRC statutory EIT rate of 25%, primarily due to tax rate differential for entities in non-PRC jurisdictions and the preferential tax rate enjoyed by some of our PRC subsidiaries.

Net Loss. As a result of the foregoing, we had a net loss of $72.2 million in 2013, compared to a net loss of $266.6 million in 2012, representing a decrease in net loss of $194.4 million, or a change of 72.9%. Our net margin was negative 4.1% in 2013, compared to a negative 20.6% in 2012.

B. Liquidity and Capital Resources

We finance our operations primarily through short-term and long-term borrowings, proceeds from public offerings, including our convertible senior notes offerings in July 2008, June 2014 and October 2014, our follow-on offerings of ADSs in July 2009, March 2010, June 2014 and October 2014, and also the cash generated from operations. We believe that our current cash and cash equivalents, short-term and long-term borrowings and anticipated cash flows from operations and the renewal of short-term bank borrowings will be sufficient to meet our anticipated cash needs, including our cash needs for working capital and capital expenditures, for at least the next 12 months. If we are unable to obtain sufficient funding for any reason, including the inability to renew our short-term bank borrowings, we may need curtail our operations or postpone portions of our planned capital expenditures. We may, however, require additional cash due to changing business conditions or other future developments, including any investments or acquisitions we may decide to pursue. If our existing cash is insufficient to meet our requirements, we may seek to sell additional equity or debt securities or borrow additional loans from banks. However, we cannot assure you that financing will be available in the amounts we need or on terms acceptable to us, if at all. The sale of additional equity securities, including convertible debt securities, would dilute our earnings per share. The incurrence of debt would divert cash for working capital and capital expenditures to service debt obligations and could result in operating and financial covenants that restrict our operations and our ability to pay dividends to our shareholders.

As of December 31, 2014, we had $392.9 million in cash and cash equivalents, $146.9 million in restricted cash and $842.7 million in outstanding borrowings. Our cash and cash equivalents primarily consist of cash on hand and demand deposits with original maturities of three months or less. Our treasury policy requires cash and cash equivalents, restricted cash and investments to be placed with banks and other financial institutions. We plan to use the cash available as of December 31, 2014, for potential future capital expenditures, including the maintenance and enhancement of existing facilities, to further increase production capacity, potential downstream investments, and for working capital and other day-to-day operating purposes.

Our bank borrowing facilities include both short-term and long-term bank borrowings. We had total bank borrowing facilities of $906.9 million with various banks, of which $64.2 million was unused as of December 31, 2014. We historically successfully renewed or rolled over our short-term bank borrowings upon the maturity date. In addition to bank borrowing facilities, as of December 31, 2014, we also had facilities for trade financing in the amount of $404.4 million, of which $218.6 million was unused. On July 15, 2013, we redeemed all outstanding convertible senior notes due 2013, together with all accrued but unpaid interest. As of December 31, 2014, we had $172.5 million 3.5% convertible senior notes due 2019 and $115.0 million 4.0% convertible senior notes due 2019. For details on our borrowings, please see Borrowings.

In the past, we have had significant working capital commitments for purchases of polysilicon and wafers. Our prepayments to suppliers were recorded either as current portion advances to suppliers, if they were expected to be utilized within 12 months of each balance sheet date, or as advances to suppliers, net of current portion, if they represented the portion expected to be utilized after 12 months. As of December 31, 2014, we had advances to suppliers, net of current portion, of $18.8 million, compared to $41.9 million as of December 31, 2013, due to that we have been reducing our dependence on the procurement of polysilicon through long-term supply contracts that require prepayments to meet our needs for silicon-based raw materials. We also had the current portion of advances to suppliers of $46.1 million as of December 31, 2014, a decrease from $68.3 million as of December 31, 2013 due to the delivery of goods under the supply contracts. We generally make prepayments without receiving collateral. As a result, our claims for such prepayments would rank only as an unsecured claim, which exposes us to the credit risks of these suppliers in the event of their insolvency or bankruptcy. Going forward, we expect our advances to suppliers to decline further with the continuing improvement of polysilicon market, offset by greater volume purchases of other raw materials as we expand our manufacturing capacity.

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We plan to build or acquire new facilities to increase our annualized manufacturing capacity of ingots, wafers, cells, and modules from 2,000 MW, 1,700 MW, 3,100 MW and 4,000 MW, respectively, as of December 31, 2014 to 2,900 MW, 2,300 MW, 4,100 MW and 4,400 MW as of December 31, 2015. We plan to incur capital expenditures of up to $370 million to accomplish our expansion plans in 2015 in our manufacturing segment. We also plan to incur capital expenditures of up to $1.1 billion for projects under construction and to be constructed in 2015. See Capital Expenditures. With the increase of revenue, we expect that our accounts receivable and inventories, two of the principal components of our current assets, will continue to be maintained at an appropriate level facilitating our working capital management. We require prepayments from certain customers, depending on the customer s credit status, market demand and the term of the contracts, but have been required to accept reduced prepayments from customers and may continue to see reductions in the amounts of prepayment we are able to obtain. We also allow some of our customers to pay all or a major portion of the purchase price by letters of credit. Until the letters of credit are drawn in accordance with their terms, the amount earned is recorded as accounts receivable.

Cash Flows and Working Capital

The following table sets forth a summary of our cash flows for the periods indicated:

	Year Ended December 31,		
	2012	2013	2014
		(in thousands)	
Net cash (used in) provided by operating activities	$ (178,199)	$ 46,531	$ 183,959
Net cash used in investing activities	(170,586)	(36,205)	(487,786)
Net cash provided by (used in) financing activities	342,266	(337,113)	207,656
Effect of exchange rate changes	(2,985)	6,197	2,377
Net change in cash and cash equivalents	(9,504)	(320,590)	(93,794)
Cash and cash equivalents at the beginning of the year	816,780	807,276	486,686
Cash and cash equivalents at the end of the year	$ 807,276	$ 486,686	$ 392,892

Operating Activities

Net cash provided by operating activities amounted to $184.0 million in 2014. The net cash provided by operating activities in 2014 was primarily due to (i) an increase in accounts payable of $207.3 million due to increase in purchases of raw materials as a result of our increased sales, (ii) depreciation and amortization of $108.3 million, and (iii) net income of $61.3 million. Net cash provided by operating activities was partially offset by (a) an increase in accounts receivable of $165.7 million due to increased proportion of sales to customers based in China and (b) an increase in inventories of $105.3 million as a result of the expected increase in product demand for year 2015.

Net cash provided by operating activities amounted to $46.5 million in 2013. The net cash provided by operating activities in 2013 was primarily due to (i) a decrease in inventories of $93.6 million as a result of increased sales and efforts to control average inventory in-stock levels and (ii) a decrease in accounts receivable turnover days as a result of efforts to improve debtor collection. Net cash provided by operating activities was partially offset by (a) a net loss of $72.2 million and (b) an increase in project assets held for sale of $69.0 million.

Net cash used in operating activities amounted to $178.2 million in 2012. The net cash used in operating activities in 2012 was primarily due to (i) a net loss of $266.6 million, (ii) an increase in inventory of $64.5 million, due to our capacity expansion and slower turnover of finished goods and (iii) a decrease in accrued expenses and other current liabilities of $44.7 million, due to the timing of payments. Net cash used was partially offset by (a) depreciation and amortization of $111.1 million, (b) an increase in the allowance for accounts receivable of $61.4 million and (c) an inventory write-down of $39.6 million.

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Investing Activities

Net cash used in investing activities amounted to $487.8 million in 2014. The net cash used in investing activities in 2014 was primarily as a result of (i) capital expenditures of $404.7 million in 2014 for property, plant and equipment which was primarily used to grow our build-to-own solar projects portfolio; (ii) an increase in restricted cash of $72.2 million mainly due to bank deposits held as collateral for letter of credit, commercial paper, bank drafts, bank borrowings; and (iii) investments in affiliates of $14.0 million.

Net cash used in investing activities amounted to $36.2 million in 2013. The net cash used in investing activities in 2013 was primarily as a result of capital expenditures of $70.0 million for property, plant and equipment incurred in the second half of 2013 to increase our manufacturing capacity, offset in part by a decrease in restricted cash of $36.2 million.

Net cash used in investing activities amounted to $170.6 million in 2012. The net cash used in investing activities in 2012 was primarily a result of capital expenditures of $141.1 million for property, plant and equipment for capacity expansion in first half of 2012, and an increase in restricted cash of $31.3 million.

Financing Activities

Net cash provided by financing activities amounted to $207.7 million in 2014, which included proceeds of $1,142.5 million from bank borrowings (short-term and long-term), proceeds of $287.5 million from issuance of convertible notes, and proceeds of $132.4 million from the issuance of ordinary shares, net of issuance costs, offset in part by repayment of $1,303.3 million in bank borrowings (short-term and long-term) and $52.3 million used to pay for call options in connection with issuance of convertible senior notes.

Net cash used in financing activities amounted to $337.1 million in 2013, which was primarily used to repay $1,256.7 million in bank borrowings (short-term and long-term) and to repurchase or redeem convertible senior notes of $83.3 million, offset in part by proceeds of $1,001.8 million from bank borrowings (short-term and long-term).

Net cash provided by financing activities amounted to $342.3 million in 2012, which is primarily generated from proceeds of $1,126.3 million from bank borrowings (short-term and long-term), offset by repayment of $745.0 million in bank borrowings (short-term and long-term) and $39.1 million cash payment for repurchasing convertible senior notes.

Restrictions on Cash Dividends

For a discussion on the ability of our subsidiaries to transfer funds to our company, and the impact this has on our ability to meet our cash obligations, see Item 3. Key Information D. Risk Factors Risks Related to Doing Business in China Our ability to make distributions and other payments to our shareholders depends to a significant extent upon the distribution of earnings and other payments made by Trina China and TST, and Item 3. Key Information D. Risk Factors Risks Related to Doing Business in China The dividends we receive from our PRC subsidiaries and our global income may be subject to PRC tax under the EIT Law, which would have a material adverse effect on our results of operations; our foreign ADS holders may be subject to a PRC withholding tax upon the dividends payable by us and upon gains realized on the sale of our ADSs, if we are classified as a PRC resident enterprise.

Borrowings

We had short-term borrowings, excluding the current portion of long-term borrowings, of $613.4 million and $737.9 million as of December 31, 2013 and 2014. The average interest rate on short term borrowings was 3.70% and 4.41% per annum in 2013 and 2014, respectively. The funds borrowed under short-term arrangements are repayable within one year. As of December 31, 2014, certain short-term loans were secured by the plant and machinery of Trina China and TST with a carrying value of $563.6 million and land use rights of Trina China with a carrying value of $15.9 million, and/or guaranteed by Trina. Loan agreements relating to such short-term borrowings contain general covenants that require us to obtain written consent from the lenders prior to entering into loan arrangement with other banks or financial institutions. Furthermore, we also need to maintain certain financial ratios to comply with the financial covenants in the loan agreements, such as debt to total assets ratio, net profit ratio, income to interest ratio, net tangible worth, the ratio of net borrowings, and the ratio of earnings before interest, taxes, depreciation and amortization, or EBITDA, to net interest expenses. As of December 31, 2014, we were in compliance with these covenants.

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We had current portion of long term borrowings of $322.2 million and $82.4 million, and we had long-term borrowings, excluding current portion, of $100.5 million and $22.4 million as of December 31, 2013 and 2014, respectively. Certain of our long term borrowings contain restrictive covenants, and as of December 31, 2014, we were in compliance with these covenants.

On September 8, 2009, Trina China entered into a five-year credit facility with a syndicate of banks, or the Facility, including both a Renminbi facility and US dollar facility of RMB1,524.6 million and $80.0 million, respectively, of which RMB1,292.0 million and $80.0 million are designated solely for the expansion of our production capacity, with the remaining amount to be used to supplement working capital requirements once the capacity expansion is completed. The Facility can be drawn down either in Renminbi or US dollar. Trina China had fully drawn down the capacity expansion portion under the Facility in 2010. The weighted-average interest rate for borrowings under the facility is 6.62% and 6.29% in 2013 and 2014, respectively. Interest is payable quarterly or biannually in arrears for loans denominated in RMB and US dollars, respectively. The interest rate on RMB-denominated borrowings is 110% of the prevailing base lending rate pronounced by People s Bank of China for loans of similar duration. The interest rate on US dollar-denominated borrowings is the prevailing six-month US London Interbank Offered Rate plus 300 basis points. The Facility contains financial covenants which require that specified debt to total assets ratio, net profit ratio and income to interest ratio be maintained. As of December 31, 2011, Trina China violated the net profit ratio and income to interest ratio covenants. Trina China obtained a waiver letter from the Agriculture Bank of China, the leading bank in the syndicated loan, on February 8, 2012 to waive the past violation of the financial covenants and to further remove all of the financial covenants for the duration of the Facility. We fully repaid these loans in October 2014.

On May 17, 2011, Trina China entered into a three year credit facility with the Export-Import Bank of China, or the Ex-Imp Facility, amounting to $40.0 million. We fully repaid this loan in May 2014.

On June 29, 2011, Trina China entered into a three-year credit facility with China Development Bank, or the TCZ CDB Facility, of $180.0 million. We fully repaid this loan in June 2014.

On December 7, 2011, TST entered into a three-year structured term loan facility with Standard Chartered Bank (Hong Kong) Limited, or the SC Facility, of $100.0 million. We fully repaid this loan in September 2014.

On December 23, 2011, Trina China entered into a three-year credit facility with Agriculture Bank of China, or the ABC Facility, of RMB30.0 million at an interest rate of 6.65% per year. We fully repaid this loan in December 2014.

On December 31, 2012, Trina Solar (Luxembourg) Holdings S.A.R.L., or TLH, entered into a three-year credit facility with China Development Bank of $80.0 million which is designated for working capital. We had fully drawn down the facility in 2012. TLH had a loan balance outstanding of $80.0 million as of December 31, 2013 and 2014. The interest rate is the prevailing six-month US LIBOR plus 370 basis points which was 4.21% and 4.04% in 2013 and 2014, respectively. The facility is guaranteed by Trina. The facility contains financial covenants. In June 2014, TLH was not in compliance with the gearing ratio for loans from China Development Bank and obtained a waiver letter from China Development Bank stating that it waived Trina China s covenant breach by revising those financial covenants. As of December 31, 2014, TLH was in compliance with the revised covenants.

We also finance certain solar energy project through bank borrowings secured by the project assets. On November 15, 2013, one of our subsidiaries, Wuwei Trina Solar Electricity Generation Pte Ltd., or Trina Wuwei, entered into a loan agreement with China Development Bank, or the Wuwei Facility, for the construction of a PV project located in China s Gansu Province. The total credit facility under the agreement is RMB370.0 million, with a maturity of 180 months. Interest is due quarterly in arrears and the interest rate is the prevailing base lending rate pronounced by People s Bank of China for loans of similar duration. The Wuwei Facility is guaranteed by Trina China in addition to collateral provided by Trina Wuwei s project assets and it contains an asset liability ratio covenantIn February 2014, we sold the project to a third party buyer and the outstanding borrowing of RMB200.0 million ($32.6 million) was assumed by the third party buyer.

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On March 6, 2014, Trina Solar (Luxembourg) Overseas Systems S.A.R.L and Jiangsu Trina Solar Electric Power Development Co., Ltd. entered into a 15-year credit facility with China Development Bank, or the TLO CDB Facility, in the amount of 20.85 million ($28.7 million) to fund 16 MW of utility-scale solar power projects in Greece. As of December 31, 2014, we had drawn down and had an outstanding balance of 17.0 million ($20.6 million). The interest rate is the prevailing six-month EURIBOR plus 350 basis points, which was 3.68% in 2014. The TLO CDB Facility is guaranteed by us and contains a coverage ratio financial covenant. Trina Solar (Luxembourg) Overseas Systems S.A.R.L was in compliance with the covenant as of December 31, 2014.

In June 2014, we issued $172.5 million in aggregate principal amount of 3.5% convertible senior notes due 2019. The notes can be converted into our ADSs at the option of the holders, based on an initial conversion rate of 69.9301 of our ADSs per $1,000 principal amount of notes (equivalent to an initial conversion price of $14.30 per ADS). Holders of the notes will have the right to require us to repurchase for cash all or part of their notes on June 15, 2017 or upon the occurrence of certain fundamental changes at a repurchase price equal to 100% of the principal amount of the notes to be repurchased, plus accrued and unpaid interest. The notes will bear interest at a rate of 3.5% per year, payable semiannually in arrears on June 15 and December 15 of each year, beginning on December 15, 2014. The notes will mature on June 15, 2019, unless previously repurchased or converted in accordance with their terms.

In October 2014, we issued $115.0 million in aggregate principal amount of 4.0% convertible senior notes due 2019. The notes can be converted into our ADSs at the option of the holders, based on an initial conversion rate of 68.0851 of our ADSs per $1,000 principal amount of notes (equivalent to an initial conversion price of $14.69 per ADS). Holders of the notes will have the right to require us to repurchase for cash all or part of their notes on October 15, 2017 or upon the occurrence of certain fundamental changes at a repurchase price equal to 100% of the principal amount of the notes to be repurchased, plus accrued and unpaid interest. The notes will bear interest at a rate of 4.0% per year, payable semiannually in arrears on October 15 and April 15 of each year, beginning on April 15, 2014. The notes will mature on October 15, 2019, unless previously repurchased or converted in accordance with their terms.

On March 10, 2015, Xiangshui Hengneng Electricity Generation Co., Ltd., or Trina Xiangshui, entered into a loan agreement with Bank of Beijing for the construction of solar power projects in Yancheng City, Jiangsu Province, China. The total credit available under the agreement is RMB658.0 million ($106.9 million, as of the exchange rate applicable on the date of the agreement), which can be drawn down within 364 days from the date that the loan agreement was entered into and will mature on March 10, 2027. Interest is due quarterly in arrears and the interest rate is 1.08 times the prevailing base lending rate pronounced by People s Bank of China for loans of similar duration. The loan contains a financial covenant which requires Trina Xiangshui to maintain a specified debt to asset ratio. The loan is guaranteed by Trina China, and secured by the electricity income of Trina Xiangshui and its 100% equity interest in Trina Xiangshui held by Jiangsu Trina Solar Electric Power Development Co., Ltd.

We have historically been able to repay our total borrowings as they became due mostly from cash from operations, sales of our solar power projects, proceeds from additional short-term and long-term borrowings or renewing the loans upon maturity. We may also seek additional debt or equity financing to repay the remaining portion of our borrowings. As we continue to ramp up our current and planned operations in order to complete our vertical integration and expansion strategies, we also expect to generate cash from our expanded operations to repay a portion of our borrowings.

Capital Expenditures

We had capital expenditures of $141.1 million, $72.1 million and $404.7 million in 2012, 2013 and 2014, respectively.

Manufacturing Segment. Our capital expenditures in this segment were used primarily for purchases of equipment and facilities for the production of ingots, wafers, cells and modules. We plan to build or acquire new facilities to increase our annual manufacturing capacity of ingots, wafers, cells, and modules from 2,000 MW, 1,700 MW, 3,100 MW and 4,000 MW, respectively, as of December 31, 2014 to 2,900 MW, 2,300 MW, 4,100 MW and 4,400 MW, respectively, as of December 31, 2015. We plan to incur capital expenditures of up to $370 million to accomplish our 2015 expansion plans in our manufacturing segment.

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Solar Power Projects Segment. We capitalize project assets costs consisting primarily of costs for developing and obtaining permits and licenses, land costs or land use rights, equipment, including modules, construction and installation. No depreciation expense is recognized while the project assets are under construction or classified as build-to-sell. For our build-to-own solar power projects that have started operating, we recognize depreciation as cost of sales. As of December 31, 2014, we had 380.0 MW projects under construction and 446.6 MW projects in pipeline. We plan to incur capital expenditures of up to $1.1 billion for projects under construction and to be constructed in 2015.

Contingencies

In 2011, solar panel manufacturing companies in the United States filed antidumping and countervailing duty petitions with the U.S. government, which resulted in the institution of antidumping and countervailing duty investigations relating to imports into the United States of CSPV cells, whether or not assembled into modules, from China. In December 2012, following completion of those investigations by the Commission and Commerce, antidumping and countervailing duty orders were imposed on imports into the United States covered by the investigation, including imports of our products originating from China. The orders require an effective net cash deposit rate on all imports of these covered products, which currently is set at 23.75% and may increase or decrease in the future. The current rate will be in effect until the final determination in the first administrative review, which is expected around May 2015. The actual duty rates at which entries of covered merchandise will be finally assessed may differ from the deposit rates because they are subject to completion of ongoing administrative reviews of the antidumping and countervailing duty orders. The first administrative review process is still underway, and preliminary results were published on January 8, 2015 and final results are expected to be published in the second quarter of 2015. According to the preliminary results, the anti-dumping rate proposed for approximately 20 Chinese exporters, including us, was 1.82%, significantly lower than the average net cash deposit rate initially projected. The proposed countervailing duty rate for us was 15.68%. A second administrative review is also currently underway. In February 2013, we, along with other parties, including the U.S. companies that petitioned for the investigations, filed appeals with the CIT challenging various aspects of Commerce s findings.

Also, on December 31, 2013, SolarWorld, a U.S. producer of solar cells and panels, filed a separate petition with the U.S. government resulting in the institution of new antidumping and countervailing duty investigations against imports from China. The petitions accuse Chinese producers of certain CSPV cells and modules of dumping their products in the United States and receiving countervailable subsidies from the Chinese government. This action excludes from its scope certain products, including any products that are covered by the antidumping and countervailing duty orders imposed in 2012. This trade action also accuses Taiwanese producers of certain CSPV cells and modules of dumping their products in the United States. These petitions seek to subject modules assembled in China using solar cells produce outside of China to antidumping and countervailing duties. On December 17, 2014, Commerce issued final rulings that imports of certain CSPV cells and modules were dumped in the United States from China and Taiwan and that imports of certain CSPV cells and modules from China received subsidies. On these imports we received an anti-dumping duty rate of 26.71% and a countervailing duty rate of 49.79%, which will be in effect until the final determination of the first administrative review. On January 21, 2015, the Commission affirmed that imports of certain CSPV cells and modules from mainland China and Taiwan materially injure the domestic industry. The actual duty rates at which entries of covered merchandise will be finally assessed may differ from the announced deposit rates, because they will be subject to completion of administrative reviews of these antidumping and countervailing duty orders. We expect the first administrative reviews to be completed by the first half of 2017.

On September 6, 2012 and November 8, 2012, the European Commission announced the initiation of antidumping and anti-subsidy investigations, respectively, concerning imports into the European Union of CSPV modules and key components (i.e., cells and wafers) originating in China. On December 5, 2013, the Council of the European Union announced its final decision imposing antidumping and anti-subsidy duties on imports of CSPV cells and modules originating in or consigned from China. An average duty of 47.7%, consisting of both antidumping and anti-subsidy duties, are applicable for a period of two years beginning on December 6, 2013 to imports from Chinese solar panel exporters who, like us, cooperated with the European Commission s investigations. However, on the same day, the European Commission accepted a price undertaking by Chinese export producers in connection with the antidumping and anti-subsidy proceedings. As a result, imports

from Chinese solar panel exporters that are made pursuant to the price undertaking are exempt from the final antidumping and anti-subsidy duties imposed by the European Union. We have agreed to comply with the minimum price and other conditions set forth in the undertaking so that our exported products will be exempt from the antidumping and anti-subsidy duties imposed by the European Commission. The European Commission monitors compliance on an ongoing basis, and there have been allegations of non-compliance to the price undertaking by certain Chinese export producers. If the price undertaking is withdrawn because the European Commission determined that these Chinese export producers are not complying with the price undertaking, the above-described duties would be applied on our exports to the European markets.

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On October 11, 2012, the trustee of Solyndra LLC, a manufacturer of solar panels based in California, filed a lawsuit against us, including our subsidiary Trina Solar (U.S.), Inc., and other Chinese manufacturers of photovoltaic solar panels in the U.S. District Court in California. The plaintiff has asserted antitrust and related state-law claims against the defendants in this lawsuit. The plaintiff s complaint alleges that defendants have violated Section 1 of the Sherman Antitrust Act by conspiring among each other and with additional co-conspirators to fix prices of solar panels by dumping products in the United States and to destroy fair competition in the U.S. market. The plaintiff similarly alleges conspiracy to fix prices and predatory pricing under California s Cartwright Act and Unfair Practices Act. In addition, the plaintiff has brought state-law claims of tortious interference with existing agreements and tortious interference with prospective economic advantage, alleging that the defendants interfered with Solyndra s existing agreements with its customers by selling their products to Solyndra s customers at below-cost prices. The defendants filed a motion to dismiss the complaint in its entirety on March 8, 2013. The motion to dismiss the Solyndra LLC trustee s lawsuit was denied by the district court and discovery is proceeding in the case. The trustee s amended complaint seeks a judgment against all defendants in an amount not less than $1.5 billion. At this stage, it is difficult to fully evaluate the claims and determine the likelihood of an unfavorable outcome or provide an estimate of the amount of any potential loss.

On October 4, 2013, the liquidating trustee for Energy Conversion Devices filed an antitrust and unfair trade practice lawsuit against Trina Solar and other China-based solar manufacturers in the U.S. District Court for the Eastern District of Michigan. The complaint is substantially similar to the complaint filed by Solyndra s liquidating trustee against the same defendants a year earlier in the Northern District of California. The plaintiff s complaint alleges that defendants have violated Section 1 of the Sherman Antitrust Act by conspiring among each other and with additional co-conspirators to fix prices of solar panels by dumping products in the United States and to destroy fair competition in the U.S. market. The plaintiff similarly alleges conspiracy to fix prices and predatory pricing under Michigan s Antitrust Reform Act. The defendants filed a motion to dismiss the complaint in its entirety on April 18, 2014. The district court granted defendants motion to dismiss on October 31, 2014. The plaintiff moved for reconsideration of the district court s order and the court has not yet issued a decision on the motion for reconsideration. At this early stage, it is difficult to fully evaluate the claims and determine the likelihood of an unfavorable outcome or provide an estimate of the amount of any potential loss.

Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board, or FASB, issued Accounting Standards Update, or ASU, No. 2014-09, Revenue from Contracts with Customers, which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. ASU No. 2014-09 will replace most existing revenue recognition guidance in U.S. GAAP when it becomes effective. ASU No. 2014-09 is effective for us on January 1, 2017. Early application is not permitted. The standard permits the use of either a retrospective or cumulative effect transition method. We have not determined which transition method it will adopt, and are currently evaluating the impact that ASU No. 2014-09 will have on our consolidated financial statements and related disclosures upon adoption.

In August 2014, the FASB issued ASU No. 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, which requires management to evaluate, at each annual and interim reporting period, whether there are conditions or events that raise substantial doubt about the entity s ability to continue as a going concern within one year after the date the financial statements are issued and to provide related disclosures. ASU No. 2014-15 is effective for us for the fiscal year ending December 31, 2016 and for interim periods thereafter. We are currently evaluating the impact of this standard on our consolidated financial statements.

In January 2015, the FASB issued ASU No. 2015-01, Income Statement Extraordinary and Unusual Items (Subtopic 225-20), which eliminates the concept of reporting for extraordinary items. ASU No. 2015-01 is effective for us for fiscal year ending December 31, 2016 and for interim periods thereafter. We are currently evaluating the impact of this standard on our consolidated financial statements.

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On February 18, 2015, the FASB issued ASU No. 2015-02, Consolidation, which reduces the number of consolidation models and simplifies the current standard. Entities may no longer need to consolidate a legal entity in certain circumstances based solely on its fee arrangements when certain criteria are met. ASU No. 2015-02 reduces the frequency of the application of related-party guidance when determining a controlling financial interest in a variable interest entity. ASU No. 2015-02 is effective for our fiscal year ending December 31, 2015. We are currently evaluating the impact of this standard on our consolidated financial statements.

C. Research and Development, Patents and Licenses, Etc.

We focus our research and development efforts on improving our ingot, wafer, solar cell and solar module manufacturing capabilities. We seek to reduce manufacturing costs and improve the performance of our products. As of December 31, 2014, we had a total of 1,954 employees involved in our research and development activities. Among them, 1,272 employees are under our technology development department and are dedicated to research and development. We also have a team of 112 employees under our engineering department that are responsible for manufacturing technology development and further fine-tuning our production processes.

Our research and development department is divided into teams responsible for research in each stage of the solar power product value chain, such as ingot, wafer, solar cell and module production and system integration. We also have a technology committee, which meets regularly to review current development progress and identify new research and development areas. Our technology committee is led by our senior management and comprised of both our employees and external solar energy experts.

Our research and development efforts have been further enhanced by our research and development laboratory in the PV Park Lab, a research and development center that focuses on developing PV technologies, including the use of alternative materials, increasing cell conversion efficiencies and conducting assembly and system research. The location of the PV Park Lab allows us to more easily conduct technology exchanges with PV experts from world-leading companies, research institutes and emerging technology companies also located within the PV Park. We completed construction and began using the PV Park Lab during the second quarter of 2012. We have also formed a world-class academic committee dedicated to creating a technology platform for the development of PV technologies. We are one of the two solar companies in China commissioned by the PRC government to establish and operate research and development centers. On November 3, 2013, the PV Park Lab received accreditation from China s Ministry of Science and Technology.

Our research efforts are currently focused on four main product areas, namely ingots, wafers, solar cells and PV modules. We focus on improving cell efficiency and reducing our production costs by enhancing manufacturing yields, which enable us to deliver higher-efficiency products at a lower cost. To enhance the quality and performance of our solar products, our research and development efforts also include leveraging on existing and newer technologies to optimize our silicon and non-silicon feedstock and processing costs. In the fourth quarter of 2014, our average silicon usage was approximately 5.3 grams per watt, compared to approximately 5.3 and 5.4 grams per watt in the fourth quarters of 2013 and 2012, respectively.

In 2014, we started to slice monocrystalline and multicrystalline wafers from approximately 185 micron thickness to 182 micron, while maintaining a low breakage rate. Currently, these two types of wafers with thickness of 185 or 182 micron accounted for 50% and 50% of our total output, respectively. We are in the process of slimming down thickness of all produced wafer to 182 micron to achieve higher cost efficiency.

For the assembly of modules, our research and development team works closely with our manufacturing team and customers to improve our solar module and system designs. We have designed products with specific applications. We have developed a variety of PV solar power product applications based on our existing monocrystalline and multicrystalline technologies. These products include architecturally-friendly modules.

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In July 2012, we launched Trinasmart, which provides maximizing and monitoring technologies to maximize roof space and overall power output. Trinasmart s proprietary intelligent technology is integrated into the module junction box, which allows monitoring and control of the PV array at the module level. We have also entered into collaborative relationships with developers and manufacturers of various system technologies, with the goal of lowering the overall unit cost of solar energy produced when combined with our module products. In July 2013, we announced the commercial availability of an enhanced version of our industry-leading Trinasmart modules, embedded with Smart Curve technology. Smart Curve technology ensures maximum voltage is constant regardless of temperature and enables the installation of longer strings than traditional modules. With Smart Curve, each module in a string performs independently at its maximum level, delivering optimal energy output.

In 2013, our research and development efforts focused on developing of high-efficiency IBC cells and silicon-based HJ cells. We expect both of these cell technologies to be part of our future product portfolio. We worked together with the Solar Energy Research Institute of Singapore to develop a commercial-sized IBC cell with an efficiency rate of 21.4% using low cost processes, allowing the power of a 1.2m2 IBC cell module to reach 238 W. We also aligned with the Shanghai Institute of Microsystem and Information Technology under the Chinese Academy of Sciences to develop an HJ cell with a 21.3% efficiency rate. We aim to further build on the success of our Honey product by using innovative technologies to develop high performance products, including high-efficiency multi and mono-crystalline silicon PV modules. Our Honey pilot production line has reached an average module power of 283.5 W, and a maximum module power of 285.5 W, while the upgraded Honey cells now reach an average efficiency of approximately 20% and a maximum efficiency of 20.54%. In October 2014, we announced that our high-efficiency Honey solar module had set a new world record for peak power output for P-type monocrystalline silicon PV modules, as independently certified by TUV Rheinland. The module was developed in our PV Park Lab and was composed of 60 156mmx156mm high-efficiency Honey monocrystalline silicon cells. It generated a peak power output of 335.2W, breaking the previous world record of 326.3W, set by our original Honey module in April 2014.

In November 2014, we announced that our State Key Laboratory of PV Science and Technology of China has set new world records for high efficiency *p*-type and *n*-type silicon solar cells. The *p*-type mono-crystalline silicon solar cell on an industrial Cz wafer reached an efficiency of 21.40% (156×156 mm2). The same advanced cell technologies on a high quality multicrystalline Si wafer resulted in a new *p*-type multicrystalline silicon solar cell with an efficiency of 20.53% Both results are independently verified by external laboratories and established new world records for mono and multi p-type silicon solar cells with passivated rear surface and local contact, on 6 substrates and fabricated with an industrial process.

In 2012, 2013 and 2014, our research and development expenditures were $26.5 million, $19.9 million and $22.3 million, respectively, representing 2.0%, 1.1% and 1.0% of our total revenues for those periods. We expect our research and development expenses to remain significant as we advance our research and development projects.

D. Trend Information

Other than as disclosed elsewhere in this annual report, we are not aware of any trends, uncertainties, demands, commitments or events for the period from January 1, 2014 to December 31, 2014 that are reasonably likely to have a material adverse effect on our net sales, income, profitability, liquidity or capital resources, or that would cause the disclosed financial information not necessarily to be indicative of future operating results or financial conditions.

E. Off-Balance Sheet Arrangements

Other than our purchase obligations for raw materials and equipment, we have not entered into any financial guarantees or other commitments to guarantee the payment obligations of third parties. We have not entered into any derivative contracts that have not been reflected in our consolidated financial statements. Furthermore, we do not have any retained or contingent interest in assets transferred to an unconsolidated entity that serves as credit, liquidity or market risk support to such entity. We do not have any variable interest in any unconsolidated entity that provides financing, liquidity, market risk or credit support to us or that engages in leasing, hedging or research and development services with us. There are no off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on our financial condition, net sales or expenses, results of operations, liquidity, capital expenditures or capital resources that are material to you and other investors.

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F. Contractual Obligations and Commercial Commitments

The following table sets forth our contractual obligations and commercial commitments as of December 31, 2014:

	Payment Due by Period				
	Total	Less than 1 Year	1-3 Years	3-5 Years	More than 5 Years
			(in thousands)		
Long-term borrowings(1)	$ 113,439	$ 86,534	$ 7,201	$ 4,726	$ 14,978
Short-term borrowings (2)	770,354	770,354			
Convertible Senior Notes(3)	337,797	10,766	21,275	305,756	
Operating lease commitments	12,677	2,901	2,813	1,079	5,884
Purchase obligations(4)	279,372	121,783	71,993	37,030	48,566
Total	$ 1,513,639	$ 992,338	$ 103,282	$ 348,591	$ 69,428

(1) Includes interests that are derived using the interest rates under the loan agreements. If the borrowing is with a floating rate, the most recent rate as of December 31, 2014 is applied.

(2) Includes interests that are derived using an average rate of 4.41% per annum for short-term borrowings.

(3) Includes interests that are derived using the coupon rate of 3.5% per annum for $172.5 million convertible senior notes due 2019 (the 3.5% Notes) and 4% per annum for $115 million convertible senior notes due 2019 (the 4% Notes). The 3.5% Notes will mature on June 15, 2019 and the holders may require us to early redeem such notes on June 15, 2017. The 4% Notes will mature on October 15, 2019 and the holders may require us to early redeem such notes on October 15, 2017.

(4) Consists of raw material, property, plant and and equipment, and prepaid land use right purchase commitments. The raw material purchase commitment includes only the fixed and determinable portion under take-or-pay agreements, and does not include purchase commitments for which we are committed to purchase a specific volume amount but the purchase price is not fixed or determinable since the price is based upon the prevailing market price near the time of purchase.

G. Safe Harbor

This annual report on Form 20-F contains forward-looking statements that relate to future events, including our future operating results and conditions, our prospects and our future financial performance and condition, all of which are largely based on our current expectations and projections. The forward-looking statements are contained principally in the sections entitled Item 3. Key Information D. Risk Factors, Item 4. Information on the Company and Item 5. Operating and Financial Review and Prospects. These statements are made under the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995.

You can identify these forward-looking statements by terminology such as may, will, expect, anticipate, future, intend, plan, believe, is/are likely to or other and similar expressions. Forward-looking statements involve inherent risks and uncertainties. A number of factors could cause actual results to differ materially from those contained in any forward-looking statement, including but not limited to the following: expectations regarding the worldwide demand for electricity and the market for solar energy; our beliefs regarding the effects of environmental regulation, the lack of infrastructure reliability and long-term fossil fuel supply constraints; the importance of environmentally friendly power generation; expectations regarding governmental support for the deployment of solar energy; expectations regarding the scaling of our manufacturing capacity; expectations with respect to our ability to secure raw materials in the future; future business development, results of operations and financial condition; and competition from other manufacturers of PV products and conventional energy suppliers.

This annual report on Form 20-F also contains data related to the PV market worldwide and in China taken from third party reports. The PV market may not grow at the rates projected by the market data, or at all. The failure of the market to grow at the projected rates may have a material adverse effect on our business and the market price of our ADSs. In addition, the rapidly changing nature of the PV market subjects any projections or estimates relating to the growth prospects or future condition of our market to significant uncertainties. If any one or more of the assumptions underlying the market data turns out to be incorrect, actual results may differ from the projections based on these assumptions. You should not place undue reliance on these forward-looking statements.

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The forward-looking statements made in this annual report on Form 20-F relate only to events or information as of the date on which the statements are made in this annual report on Form 20-F. Except as required by law, we undertake no obligation to update or revise publicly any forward-looking statements, whether as a result of new information, future events or otherwise, after the date on which the statements are made or to reflect the occurrence of unanticipated events. You should read this annual report on Form 20-F completely and with the understanding that our actual future results may be materially different from what we expect.

Item 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

A. Directors and Senior Management

The following table sets forth information regarding our directors and executive officers as of the date of this annual report.

Directors and Executive Officers	Age	Position/Title
Jifan Gao	50	Chairman and Chief Executive Officer
Zhiguo Zhu	52	Director, Chief Operating Officer, Senior Vice President and President of Module Business Unit
Liping Qiu	50	Independent Director
Jerome Corcoran	65	Independent Director
Qian Zhao	46	Independent Director
Yeung Kwok On	54	Independent Director
Henry Wai Kwan Chow	69	Independent Director
Sean Shao	58	Independent Director
Teresa Tan	50	Chief Financial Officer
Yang Shao	49	Chief Human Resources Officer
Qi Lin	52	Vice President and President of PV Systems Business Unit
Longxing Huang	50	President of Distributed PV Generation Business Unit
Jiqing Gao	47	Vice President of PV Systems Business Unit
Benjamin Hill	45	Vice President and President of Europe Region
Jeff Dorety	57	President of Americas Region

Directors

Mr. Jifan Gao founded our company in 1998. He has been our chairman and chief executive officer since January 1998. From August 2001 to October 2006, Mr. Gao served as the chairman of Changzhou Tianhe Investment Co., Ltd., a Chinese company that invests in new energy technologies, and he served as the chairman of Changzhou Tianhe New Energy Institute Co., Ltd., a Chinese company that is engaged in research and development and consulting services for new energy technologies, from May 2003 to October 2006. Mr. Gao also served as the vice chairman of Changzhou Minsheng Financing Guarantee Co., Ltd, a Chinese company that provides guarantee, investment and consulting services, from June 2004 to October 2006. Prior to founding our company, Mr. Gao was the founder and the head of Wujin Xiehe Fine Chemical Factory, a Chinese company that manufactures detergents for metal surfaces, from 1992 through 1997. From 1989 to 1992, Mr. Gao was one of the co-founders and the head of Guangdong Shunde Fuyou Detergent Factory. Mr. Gao currently serves as the executive member of the China Renewable Energy Society and as the standing vice chairman of the China New Energy Chamber of Commerce of the All-China Federation of Industry and Commerce. Mr. Gao is also an executive member of China Photovoltaic Society and the chairman of the executive committee of Asian Photovoltaic Industry Association. Mr. Gao also serves as the first president of China Photovoltaic Industry Association, which is the first

accredited national level solar industry association established in China and is dedicated to the healthy and sustainable development of the solar industry, for a term of five years from 2014. Mr. Gao has published and presented several articles and papers in solar power related magazines and conferences. Mr. Gao received his master s degree in physical chemistry from Jilin University in 1988 and his bachelor s degree in chemistry from Nanjing University in 1985.

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Mr. Zhiguo Zhu has been a director of our company and our chief operating officer since January 2015, and our senior vice president of Module Business Unit since January 2012. Mr. Zhu served as our vice president of finance from February 2011 to December 2011. He has over 20 years of professional experience in finance and general management with leading global and Chinese companies. Prior to joining us, Mr. Zhu served as the global finance operation controller, internal controller, audit director and chief financial officer of the Air-Conditioner Group at Haier Group from June 2009 to January 2011. From May 2004 to June 2009, he worked at Lucent Technologies, including serving as a regional chief financial officer and vice president of Lucent Technologies (China) and a chief financial officer of Lucent Technologies (Qingdao) from 2008 to 2009. He also worked at China Track Group from 2002 to 2004 as finance controller and deputy general manager. From 1996 to 2002, Mr. Zhu worked for Howden Power and Howden Hua Engineering Company as financial controller and acting general manager. Mr. Zhu received a bachelor s degree in engineering from Tsinghua University in 1984, a master s degree from University of Shanghai Science and Technology in 1987 and an MBA from Imperial College London in 1995.

Independent Directors

Mr. Liping Qiu has been a director of our company since May 2006. He is a co-founder of Milestone Capital, a China-focused private equity investment company, and the general partner of Milestone China Opportunities Fund I and Fund II, L.P, a partnership that invests primarily in high-growth Chinese companies, since 2002. He is an independent non-executive director of Spring Asset Management Limited, as manager of Spring Real Estate Investment Trust, an entity listed on the Stock Exchange of Hong Kong Limited, since November 2013; and also a director of Qinhuangdao Boostsolar Photovoltaic Equipment Co., Ltd., a company quoted on the National Equities Exchange and Quotations in China. Mr. Qiu also serves as directors of a number of private companies. Mr. Qiu received his bachelor s degree and master s degree in engineering from the National University of Defense Technology of China in 1984 and 1986, respectively.

Mr. Jerome Corcoran has been an independent director of our company since December 2006. From 1995 to 1998, Mr. Corcoran was a managing director at Merrill Lynch s China Private Equity Group in Beijing, China. From 1989 to 1994, Mr. Corcoran served as a managing director and the head of international investment banking of Merrill Lynch in New York and London. Mr. Corcoran retired from his investment banking career in 1998 and has been managing his personal wealth since his retirement. Mr. Corcoran received his bachelor s degree in political philosophy from Loyola University in 1971 and his MBA degree from St John s University in 1974.

Mr. Qian Zhao has been an independent director of our company since May 2007. Mr. Zhao has served a senior executive of BGI, a leading genomics life science company based in China, from June 2014. Mr. Zhao is also a founding partner of CXC China Sustainable Growth Fund, a private equity fund that makes investments in China-based companies. Mr. Zhao co-founded Haiwen & Partners, a preeminent China corpo