Canadian Solar Inc.
Form 20-F
April 26, 2013

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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

ý **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2012.

OR

o **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

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

For the transition period from to
Commission file number: 001-33107

CANADIAN SOLAR INC.

(Exact name of Registrant as specified in its charter)

N/A

(Translation of Registrant's name into English)

Canada

(Jurisdiction of incorporation or organization)

545 Speedvale Avenue West
Guelph, Ontario, Canada N1K 1E6

(Address of principal executive offices)

Michael G. Potter, Chief Financial Officer
545 Speedvale Avenue West
Guelph, Ontario, Canada N1K 1E6
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(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**
Common shares with no par value	The NASDAQ Stock Market LLC (The NASDAQ Global Market)

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

None

(Title of Class)

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.

43,242,426 common shares issued and outstanding which were not subject to restrictions on voting, dividend rights and transferability, as of December 31, 2012.

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

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. Yes o No ý

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ý No o

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ý No o

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 o	Accelerated filer ý	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 ý 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. Item 17 o Item 18 o

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). Yes o No ý

(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. Yes o No o

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INTRODUCTION

Unless otherwise indicated, references in this annual report on Form 20-F to:

"CSI," "we," "us," "our company" and "our" are to Canadian Solar Inc., its predecessor entities and its consolidated subsidiaries;

"$," "US$" and "U.S. dollars" are to the legal currency of the United States;

"RMB" and "Renminbi" are to the legal currency of China;

"C$," "CAD" and "Canadian dollars" are to the legal currency of Canada;

"€" and "Euro" are to the legal currency of the European Economic and Monetary Union;

"MW" and "GW" are to megawatts and gigawatts, respectively;

"AC" and "DC" are to alternating current and direct current, respectively;

"PV" is to photovoltaic. The photovoltaic effect is a process by which sunlight is converted into electricity; and

"China" and the "PRC" are to the People's Republic of China, excluding, for the purposes of this annual report on Form 20-F, Taiwan and the special administrative regions of Hong Kong and Macau.

This annual report on Form 20-F includes our audited consolidated financial statements for the years ended December 31, 2010, 2011 and 2012 and as of December 31, 2011 and 2012.

We use the noon buying rate in The City of New York for cable transfers in Renminbi, Euros and Canadian dollars per U.S. dollar as certified for customs purposes by the Federal Reserve Bank of New York to translate Renminbi, Euros and Canadian dollars to U.S. dollars not otherwise recorded in our consolidated financial statements and included elsewhere in this annual report. Unless otherwise stated, the translation of Renminbi, Euros and Canadian dollars into U.S. dollars was made by the noon buying rate in effect on December 31, 2012, which was RMB6.2301 to $1.00, €0.7583 to $1.00, and C$0.9958 to $1.00. We make no representation that the Renminbi, Euro, Canadian dollar or U.S. dollar amounts referred to in this annual report on Form 20-F could have been or could be converted into U.S. dollars, Euros, Canadian 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, including our financial condition and results of operations."

FORWARD-LOOKING INFORMATION

This annual report on Form 20-F contains forward-looking statements that relate to future events, including our future operating results, our prospects and our future financial performance and condition, results of operations, business strategy and financial needs, all of which are largely based on our current expectations and projections. These forward-looking statements are made under the "safe harbor" provisions of the U.S. Private Securities Litigation Reform Act of 1995. You can identify these statements by terminology such as "may," "will," "expect," "anticipate," "future," "intend," "plan," "believe," "estimate," "is/are likely to" or similar expressions. Forward-looking statements involve inherent risks and uncertainties. These forward-looking statements include, among other things, statements relating to:

our expectations regarding the worldwide demand for electricity and the market for solar power;

our beliefs regarding the importance of environmentally friendly power generation;

our expectations regarding governmental support for solar power;

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our beliefs regarding the future shortage or availability of high-purity silicon;

our beliefs regarding our ability to resolve our disputes with suppliers with respect to our long-term supply agreements;

our beliefs regarding the rate at which solar power technologies will be adopted and the continued growth of the solar power industry;

our beliefs regarding the competitiveness of our solar module products;

our expectations with respect to increased revenue growth and improved profitability;

our expectations regarding the benefits to be derived from our supply chain management and vertical integration manufacturing strategy;

our ability to continue developing our in-house solar components production capabilities and our expectations regarding the timing and production capacity of our internal manufacturing programs;

our ability to secure adequate volume of silicon, solar wafers and cells at competitive cost to support our solar module production;

our beliefs regarding the effects of environmental regulation;

our beliefs regarding the changing competitive environment in the solar power industry;

our future business development, results of operations and financial condition;

competition from other manufacturers of solar power products and conventional energy suppliers;

our ability to expand our products and business lines, including the total solution business; and

our ability to develop, build and sell utility-scale solar power plants in Canada, the U.S., Japan, China and elsewhere.

Known and unknown risks, uncertainties and other factors may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by forward-looking statements. See "Item 3. Key Information D. Risk Factors" for a discussion of some risk factors that may affect our business and results of operations. These risks are not exhaustive. Other sections of this annual report may include additional factors that could adversely influence our business and financial performance. Moreover, because we operate in an emerging and evolving industry, new risk factors may emerge from time to time. We cannot predict all risk factors, nor can we assess the impact of these factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those expressed or implied in any forward-looking statement. We do not undertake any obligation to update or revise the forward-looking statements except as required under applicable law.

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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 Data

Selected Consolidated Financial and Operating Data

The following selected statement of operations data for the years ended December 31, 2010, 2011 and 2012 and balance sheet data as of December 31, 2011 and 2012 have been derived from our consolidated financial statements, which are included elsewhere in this annual report on Form 20-F. You should read the selected consolidated financial and operating data in conjunction with those financial statements and the related notes and "Item 5. Operating and Financial Review and Prospects" included elsewhere in this annual report on Form 20-F.

Our selected consolidated statement of operations data for the years ended December 31, 2008 and 2009 and our consolidated balance sheet data as of December 31, 2008, 2009 and 2010 were derived from our consolidated financial statements that are not included in this annual report.

All of our financial statements are prepared and presented in accordance with U.S. generally accepted accounting principles, or U.S. GAAP. Our historical results are not necessarily indicative of results for any future periods.

	As of December 31,				
	2008	2009	2010	2011	2012
	(In thousands of $, except share and per share data, and operating data and percentages)				
Statement of operations data:					
Net revenues	705,006	630,961	1,495,509	1,898,922	1,294,829
Income (loss) from Operations	24,065	6,512	120,299	6,833	(142,516)
Net income (loss)	(7,534)	22,778	50,828	(90,903)	(195,155)
Net income (loss) attributable to Canadian Solar Inc.	(7,534)	22,646	50,569	(90,804)	(195,469)
Earnings (loss) per share, basic	(0.24)	0.61	1.18	(2.11)	(4.53)
Shares used in computation, basic	31,566,503	37,137,004	42,839,356	43,076,489	43,190,778
Earnings (loss) per share, diluted	(0.24)	0.60	1.16	(2.11)	(4.53)
Shares used in computation, diluted	31,566,503	37,727,138	43,678,208	43,076,489	43,190,778
Other financial data:					
Gross margin	10.1%	12.4%	15.3%	9.6%	7.0%
Operating margin	3.4%	1.0%	8.0%	0.4%	(11.0)%
Net margin	(1.1)%	3.6%	3.4%	(4.8)%	(15.1)%
Selected operating data:					
Products sold (in MW)					
Solar module business	166.5	296.6	779.1	1,265.6	1,490.1
Total solution business[1]		0.6	24.4	56.9	53.0
Total	166.5	297.2	803.5	1,322.5	1,543.1

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	As of December 31,				
	2008	2009	2010	2011	2012
	(In thousands of $, except share and per share data, and operating data and percentages)				
Average selling price (in $ per watt)					
Solar module business	4.23	2.13	1.80	1.34	0.77
Total solution business		3.36	3.21	3.49	2.80
Balance Sheet Data:					
Net current assets (liabilities)	166,361	239,047	259,332	59,131	(98,046)
Total assets	570,654	1,038,703	1,423,367	1,879,809	2,259,313
Net assets	332,254	466,001	534,984	466,978	301,583
Long-term borrowings	45,357	29,290	69,458	88,249	214,563
Convertible notes	830	866	906	950	
Common shares	395,154	500,322	501,146	502,403	502,562
Number of shares outstanding	35,686,313(2)	42,745,360(2)	42,893,044	43,155,767	43,242,426

(1) Total solution business includes solar power project development and sales, engineering, procurement and construction, or EPC, services, operating and maintenance, or O&M, services and sales of solar system kits.

(2) Excludes 58,250 and 29,125 restricted shares, which were subject to restrictions on voting and dividend rights and transferability as of December 31, 2008 and 2009, respectively.

B. Capitalization and Indebtedness

Not applicable.

C. Reasons for the Offer and Use of Proceeds

Not applicable.

D. Risk Factors

Risks Related to Our Company and Our Industry

We may be adversely affected by volatile solar power market and industry conditions; in particular, the demand for our solar power products may decline, which may reduce our revenues and earnings.

We are influenced by conditions in the solar power market and industry. In 2010, demand for solar power products increased and many manufacturers increased their production capacity accordingly as the effects of the global financial crisis subsided. In 2011, a decrease in payments to solar power producers in the form of feed-in tariffs and other reimbursements, a reduction in available financing and an excess supply of solar PV modules worldwide put severe downward pressure on solar PV module prices in European and other markets. As a result, many solar power plant developers, solar system installers and solar PV products distributors that purchase solar power products, including solar PV modules from manufacturers like us, were adversely affected and their financial condition weakened. Although our shipments increased year-over-year in 2011 and 2012, average selling prices for our solar PV modules declined significantly. In 2012, oversupply conditions across the value chain, difficult economic conditions in Europe as well as escalating foreign trade disputes in the U.S., Europe, India and China affected industry-wide demand and put continued pressure on average selling prices, resulting in lower revenue for many industry participants. If the supply of solar PV modules grows faster than demand, and if governments continue to reduce financial support for the solar industry and impose trade barriers, demand for our products as well as our average selling price could be materially and adversely affected.

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The demand for solar power products is influenced by macroeconomic factors, such as global economic conditions, demand for electricity, 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, the solar and other alternative energy industries and the environment. For example, a reduction in oil and coal prices may reduce the demand for alternative energy. Also, during 2011 and 2012, a decrease in solar power tariffs and a difficult financing environment caused a decrease in the demand for solar PV systems. Solar power prices decreased as governments, forced by the global economic crisis to implement austerity measures, reduced subsidies, such as feed-in tariffs. Further, many downstream purchasers of solar power products were unable to secure sufficient financing for their PV projects. As a result, many purchasers of solar power products were unable or unwilling to expand their operations. In light of the uncertainty in the global credit and lending environment, we cannot make assurances that financial institutions will continue to offer funding to solar PV project developers at reasonable costs. An increase in interest rates or a decrease in funding of capital projects within the global financial market could make it difficult to fund PV systems and potentially reduce the demand for PV modules and/or reduce the average selling prices for PV modules, which may materially and adversely affect our business, results of operations, financial condition and prospects.

If the supply of solar wafers and cells increases in line with increases in the supply of polysilicon, then the corresponding oversupply of solar cells and modules may cause substantial downward pressure on the prices of our products and reduce our revenues and earnings.

Silicon production capacity has expanded rapidly in recent years. As a result of this expansion, coupled with the global economic downturn, the solar industry experienced an oversupply of high-purity silicon in 2009, which contributed to an oversupply of solar wafers, cells and modules and resulted in substantial downward pressure on prices throughout the value chain in 2009. Strong demand in 2010 stabilized and strengthened prices across the value chain, particularly in the second half of 2010, and, according to Solarbuzz, an independent solar energy research and consulting firm, from the end of 2009 to the end of 2010, module pricing increased from approximately $1.65 to approximately $1.90 per watt, cell pricing increased from approximately $1.25 to approximately $1.40 per watt and wafer pricing increased from approximately $0.80 to approximately $1.00 per watt. Polysilicon prices also increased in 2010 compared to 2009, from approximately $50 to $55 per kilogram to approximately $80 to $90 per kilogram. In 2011, the solar industry again experienced oversupply across the value chain, and by the end of the year, module pricing was approximately $1.00 per watt, cell pricing was approximately $0.55 per watt and wafer pricing was approximately $0.41 per watt. According to Solarbuzz, demand for solar products remained soft in 2012 and at the end of 2012, module pricing was approximately $0.78 per watt, cell pricing was approximately $0.43 per watt, wafer pricing was approximately $0.25 per watt and polysilicon pricing was approximately $24.66 per kilogram. Our average module selling price has decreased from $1.80 per watt in 2010 to $1.34 per watt in 2011 and to $0.77 per watt in 2012, in large part because the increase in the supply of solar cells and modules was greater than the increase in the demand therefor. As a result of the decline in our module selling prices, our revenue declined in 2012, even though our module shipment volume for the year increased. In addition, because module prices declined at a rapid rate, we suffered losses in the form of inventory write-downs, as the market price of modules consistently fell below the carrying cost of our inventory. Lower price realizations and inventory write-downs in 2012 put downward pressure on our gross profit and operating margins. Continued increases in solar module production in excess of market demand may result in further downward pressure on the price of solar cells and modules, including our products. Increasing competition could also result in us losing sales or market share. If we are unable, on an ongoing basis, to procure silicon, solar wafers and solar cells at reasonable prices or mark up the price of our solar modules to cover our manufacturing and operating costs, our revenues and margins will continue to be adversely impacted, either due to higher costs compared to our competitors or due to further write-

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downs of inventory, or both. In addition, our market share could decline if our competitors are able to price their products more competitively.

The execution of our growth strategy depends upon the continued availability of third-party financing arrangements for our customers, which is affected by general economic conditions. Tight credit markets could depress demand or prices for solar products, hamper our expansion and materially affect our results of operations.

General economic conditions, liquidity and the availability and cost of capital could materially and adversely affect our business and results of operations. Most solar power projects, including our own, require financing for development and construction with a mixture of equity and third party funding. The cost of capital affects both the demand and price of solar power systems. A high cost of capital may materially reduce the internal rate of return for solar power projects and therefore put downward pressure on the prices of both solar systems and solar modules, which typically comprise approximately 40% to 50% of the cost of solar power projects.

Furthermore, solar power projects compete for capital with other forms of investment such as bonds. Some classes of investors compare the returns of solar power projects with bond yields and expect a similar or higher internal rate of return, adjusted for risk and liquidity. Higher interest rates could render existing funding more expensive and present an obstacle for potential funding that would otherwise spur the growth of the solar power industry. In addition, higher bond yields could result in increased yield expectations for solar power projects, which would result in lower system prices. In the event that suitable funding is unavailable, our customers may be unable to pay for products they have agreed to purchase. It may also be difficult to collect payments from customers facing liquidity challenges due to either customer defaults or financial institution defaults on project loans. Constricted credit markets may impede our expansion and materially and adversely affect our results of operations. Concerns about government deficits and debt in the European Union, or EU, our major market, have increased bond spreads in certain solar markets, such as Greece, Spain, Italy and Portugal. The cash flow of a solar power project is often derived from government-funded or government-backed feed-in tariffs. Consequently, the availability and cost of funding solar power projects is determined in part based on the perceived sovereign credit risk of the country where a particular project is located. Therefore, credit agency downgrades of nations in the EU could decrease the credit available for solar power projects, increase the expected rate of return compared to bond yields, and increase the cost of debt for solar power projects in countries with a higher perceived sovereign credit risk.

Governments may revise, reduce or eliminate subsidies and economic incentives for solar power, which could cause demand for our products to decline.

The market for on-grid applications, where solar power supplements the electricity a customer purchases from the utility network or sells to a utility under a feed-in tariff, depends largely on the availability and size of government subsidy programs and economic incentives. At present, the cost of solar power exceeds retail electricity rates in many locations. Government incentives vary by geographic market. Government bodies in many countries, most notably Germany, Italy, the Czech Republic, the United States, Japan, Canada (Ontario), South Korea, Greece, France, Australia and Spain, have provided incentives in the form of feed-in tariffs, rebates, tax credits, renewable portfolio standards and other incentives. These governments have implemented mandates to end-users, distributors, system integrators and manufacturers of solar power products to promote the use of solar energy in on-grid applications and to reduce dependency on other forms of energy. Some of these government mandates and economic incentives, such as the German Renewable Energy Law, are scheduled to be reduced and could be altered or eliminated altogether through new legislation. For example, in January, July and October of 2010, Germany introduced reductions in solar feed-in tariffs of approximately 24-26% for rooftop systems and 20-25% for ground-based systems. Germany further reduced its feed-in tariffs in

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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 June of 2012 the German government approved further changes to the Renewable Energy Law. Under the new rules solar systems smaller than 10 kW will receive subsidies of 19.5 Euro cents per kWh, solar systems between 10kW and 40 kW will receive subsidies of 18.5 Euro cents per kWh, systems over 40 kW to 1 MW will receive subsidies of 16.5 Euro cents per kWh and systems between 1MW and 10 MW will receive subsidies of 13.5 Euro cents per kWh. Systems larger than 10MW will no longer receive subsidies. In addition, for systems that still qualify for subsidies, the tariff will be adjusted downward on a monthly basis to limit growth in solar systems installations to a range of 2.5-3.0 GW per year. Under the new plan, photovoltaic subsidies will be stopped when a cumulative capacity of 52 GW is reached; cumulative capacity in the first quarter of 2013 was approximately 32 GW. In Italy, another important market for solar products in the past several years, total cumulative capacity reached 15.9 GW in October of 2012 and just €241 million is left in the country's solar subsidy program. Once this amount is used up and the funding limit of €6.7 billion is reached, Italy will no longer pay out subsidies on photovoltaic solar systems. Many other countries in Europe have reduced or eliminated their subsidies in the past few years and it is likely that this trend will continue, possibly until subsidies are phased out completely for solar energy.

While solar power projects may continue to offer attractive internal rates of return, it is unlikely internal rates of return will be as high as they were in the past. If internal rates of return fall below an acceptable rate for project investors, and governments continue to reduce or eliminate subsidies, this may cause a decrease in demand and considerable downward pressure on solar system and therefore solar module prices. The reduction, modification or elimination of government mandates and economic incentives in one or more of our markets could therefore materially and adversely affect the growth of such markets or result in increased price competition, either of which could cause our revenues to decline and harm our financial results.

We have, from time to time, entered into long-term supply agreements with polysilicon and wafer suppliers. Long-term supply agreements may make it difficult for us to adjust our raw material costs should prices decrease. Also, if we chose to prematurely terminate any of these agreements, we may not be able to recover all or any part of the advance payments we have made to these suppliers and we may be subject to litigation.

In 2007 and 2008, due to shortages of polysilicon and silicon wafers, we entered into a number of long-term supply agreements with several silicon and wafer suppliers in an effort to secure raw materials to meet our production requirements. These suppliers included GCL-Poly Energy Holdings Limited, or GCL, Neo Solar Power Corp., or Neo Solar, Deutsche Solar AG, or Deutsche Solar, Jiangxi LDK Solar Hi-Tech Co., Ltd., or LDK, and a UMG-Si supplier.

In response to the decline in the price of polysilicon, beginning in 2009, we began discussing adjustments in the unit price and volume terms under our supply agreements with these suppliers.

In 2009 and thereafter, we agreed to amend our agreements with certain of them, including GCL, Neo Solar, LDK and the UMG-Si supplier, to adjust the purchase price to prevailing market prices at the time we place a purchase order and to reduce the quantity of products that we are required to purchase. Under our supply agreements with certain silicon wafer suppliers, and consistent with historical industry practice, we made advance payments prior to scheduled delivery dates. The advance payments were made without collateral and were to be credited against the purchase prices payable by us. As of December 31, 2012, the balance of advance payments that we have made to GCL, Deutsche Solar, LDK and the UMG-Si supplier totaled $45.4 million.

We purchased the contracted volume for 2009 under our 12-year supply agreement with Deutsche Solar, but we did not purchase the contracted volumes for 2010 and 2011. The agreement contains a provision stating that, if we do not order the contracted volume in a given year, Deutsche Solar can

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invoice us for the difference at the full contract price. We believe that it is more likely than not that the take-or-pay provisions of the agreement are void under German law. In December 2011, Deutsche Solar gave notice to us to terminate the 12-year wafer supply agreement with immediate effect. Deutsche Solar stated that the reason for the termination was an alleged breach of the agreement by us. In the notice, Deutsche Solar reserved its right to claim damages of €148.6 million ($196.0 million) in court. As a result of the termination, we reclassified the accrued loss on firm purchase commitments reserve of $27.9 million as of December 31, 2011 to loss contingency accruals. In addition, we made a full bad debt allowance of $17.4 million against the balance of advance payments to Deutsche Solar. The accrued amount of $27.9 million represents our best estimate for our loss contingency. Deutsche Solar did not specify the basis for its claimed damages of €148.6 million ($196.0 million) on the notice.

In 2007, we entered into a three-year agreement with LDK under which we purchased specified quantities of silicon wafers and LDK converted our reclaimed silicon feedstock into wafers under a toll manufacturing arrangement. In 2008, we entered into two ten-year wafer supply agreements with LDK, under which we agreed to purchase specified volumes of wafers at pre-determined prices each year, commencing January 1, 2009. In April 2010, we gave LDK termination notice regarding our two ten-year supply agreements with them. We also initiated arbitration proceedings against LDK seeking a refund of certain advance payments that we made to them. In December of 2012, the Shanghai Branch of China International Economic and Trade Arbitration Commission, or CIETAC Shanghai Branch, awarded RMB248.9 million ($40.0 million) plus RMB2.2 million ($0.4 million) in arbitration expenses in favor of LDK. The total amount of the award includes an RMB60.0 million ($9.6 million) initial deposit. See "Item 8. Financial Information A. Consolidated Statements and Other Financial Information Legal and Administrative Proceedings." We recorded a full bad debt allowance against this initial deposit in 2009. We made a loss provision totaling RMB188.9 million ($30.3 million) in 2012 following the arbitration award in favor of LDK. We dispute the merits of the arbitration award and will pursue all legal means to overturn or resist the implementation of the award. If we do not succeed, payment of the award to LDK could have an adverse effect on our financial condition.

Due to the default of the UMG-Si supplier in delivering its contracted volumes for 2010 and concerns regarding its financial position, we concluded that we were not likely to purchase any significant quantity of UMG-Si from this supplier in the future and made a full bad debt allowance against the advance payments of RMB64 million ($10.3 million) to the UMG-Si supplier in 2010.

If our suppliers file lawsuits against us for early termination of these contracts, such events could be costly, may divert management's attention and other resources away from our business, and could have a material and adverse effect on our reputation, business, financial condition, results of operations and prospects.

While we currently do not have any such agreements, in the future, we may enter into new medium or long-term supply agreements for silicon wafers or solar cells with fixed price and quantity terms. If, during the term of these agreements, the price of materials decreases significantly and we are unable to renegotiate favorable terms with our suppliers, we may be placed at a competitive disadvantage compared to our competitors, and our earnings could decline. In addition, if demand for our PV products decreases, yet our supply agreements require us to purchase more polysilicon than required to meet customer demand, we may incur costs associated with carrying excess inventory. To the extent that 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.

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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 and services.

The market for electricity generation products in the countries where we sell our products is heavily influenced by federal, state and local government regulations and policies concerning the electric utility industry, as well as policies disseminated by electric utilities. These regulations and policies often relate to electricity pricing and technical interconnection of customer-owned electricity generation, and could deter further investment in the research and development of alternative energy sources as well as customer purchases of solar power technology, which could result in a significant reduction in the potential demand for our solar power products. We expect that our solar power products and installation will continue to be subject to federal, state and local regulations and policies relating to safety, utility interconnection and metering, construction, environmental protection, and other related matters. Any new regulations or policies pertaining to our solar power products may result in significant additional expenses to us, our resellers and customers, which could cause a significant reduction in demand for our solar power products.

Our significant international operations expose us to a number of risks, including unfavorable political, regulatory, labor and tax conditions in the countries where we operate.

We intend to continue to extend our global reach and capture market share through the establishment of manufacturing sites and logistic centers in key global markets. Throughout the process of establishing operating facilities in these markets, we could be exposed to risks, including political, regulatory, labor and tax risks. Furthermore, we may need to make substantial investments in these overseas operations, both initially and on an ongoing basis, in order to attain longer-term sustainable returns. These investments could influence our financial performance before sustainable profitability is recognized.

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

We have a large number of competitors, including non-China-based competitors such as First Solar, Inc., or First Solar, and Sharp Solar Corporation, or Sharp Solar, and China-based competitors such as Yingli Green Energy Holding Company Limited, or Yingli, Trina Solar Limited, or Trina, and Suntech Power Holdings Co. Ltd., or Suntech. Some of our competitors are developing or are currently producing products based on new solar power technologies that may ultimately have costs similar to or lower than our projected costs. These include products based on thin film PV technology, which requires either no silicon or significantly less silicon to produce than crystalline silicon solar modules, such as the ones that we produce, and is less susceptible to increases in silicon costs. Some of our competitors have longer operating histories, greater name and brand recognition, access to larger customer bases, greater resources and significantly greater economies of scale than we do. In addition, some of our competitors may have stronger relationships or may enter into exclusive relationships with some of the key distributors or system integrators to whom we sell our products. As a result, they may be able to respond more quickly to changing customer demands or devote greater resources to the development, promotion and sales of their products. Some of our competitors have more diversified product offerings, which may better position them to withstand a decline in demand for solar power products. Some of our competitors are more vertically integrated than we are, from upstream silicon wafer manufacturing to solar power system integration. This may allow them to capture higher margins or have lower costs. In addition, new competitors or alliances among existing competitors could emerge and rapidly acquire significant market share. If we fail to compete successfully, our business will suffer and we may not be able to maintain or increase our market share.

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

The solar power market is still at a relatively early stage of development and future demand for solar power products is uncertain. Market data for the solar power industry is not as readily available as for more established industries, where trends are more reliably assessed from data gathered over a longer period. In addition, demand for solar power products in our targeted markets, including Germany, the U.S., Japan, China, Canada, Spain, Korea, the United Kingdom, Italy, India and France may not develop or may develop to a lesser extent than we anticipate. Many factors may affect the viability of solar power technology and the demand for solar power products, including:

- the cost-effectiveness, performance and reliability of solar power products, including our utility-scale solar power plants, compared to conventional and other renewable energy sources and products;
- the availability of government subsidies and incentives to support the development of the solar power industry;
- the cost and availability of capital, including long-term debt and tax equity, for solar projects;
- the success of other alternative energy technologies, such as wind power, hydroelectric power, geothermal power and biomass fuel;
- 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, gas and other fossil fuels;
- capital expenditures by end users of solar power products, which tend to decrease when the economy slows; and
- the lack of favorable regulation for solar power within the electric power industry and broader energy industry.

If solar power technology is not suitable for widespread adoption or if 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.

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.

The international marketing, distribution and sale of our products expose us to a number of risks, including:

- difficulties staffing and managing overseas operations;
- fluctuations in foreign currency exchange rates;
- the increased cost of understanding local markets and trends and developing and maintaining an effective marketing and distribution presence in various countries;
- the difficulty of providing customer service and support in various countries;

the difficulty of managing our sales channels effectively as we expand beyond distributors to include direct sales to systems integrators, end users and installers;

the difficulty of managing the development, construction and sale of our utility-scale solar power projects on a timely and profitable basis as a result of technical difficulties, commercial disputes with our customers, changes in regulations among other factors;

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- the difficulties and costs of complying with the different commercial, legal and regulatory requirements in the overseas markets in which we offer our products;
- our failure to develop appropriate risk management and internal control structures tailored to overseas operations;
- our inability to obtain, maintain or enforce intellectual property rights;
- unanticipated changes in prevailing economic conditions and regulatory requirements; and
- 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.

If we are unable to effectively manage these risks, our ability to expand our business abroad could suffer. Furthermore, some of these risks, such as currency fluctuations, could influence our financial performance.

Imposition of anti-dumping and countervailing orders in one or more markets may result in additional costs to our customers, which could materially or adversely affect our business, results of operations, financial conditions and future prospects.

In October 2011, a trade action was filed with the U.S. Department of Commerce, or USDOC, and the U.S. International Trade Commission, or USITC, by the U.S. unit of SolarWorld AG and six other U.S. firms, accusing Chinese producers of crystalline silicon photovoltaic cells, or CSPV cells, whether or not incorporated into modules, of selling their products (i.e., CSPV cells or modules incorporating these cells) into the United States at less than fair value, or dumping, and of receiving countervailable subsidies from the Chinese authorities. These firms asked the U.S. government to impose anti-dumping and countervailing duties on CSPV cells imported from China. The USDOC and the USITC investigated the validity of these claims. We were identified as one of a number of Chinese exporting producers of the subject goods to the U.S. market. We also have affiliate U.S. operations that import the subject goods from China.

On October 9, 2012, the USDOC issued final affirmative determinations in the anti-dumping and countervailing duty investigations. On November 7, 2012, the USITC ruled that imports of CSPV cells had caused material injury to the U.S. CSPV industry. As a result of these rulings, the Company is required to pay cash deposits on CSPV cells imported into the U.S. from China, whether alone or incorporated into modules. The announced cash deposit rates applicable to the Company were 13.94% (anti-dumping duty) and 15.24% (countervailing duty). The actual rates at which duties will be assessed and payable may be subject to administrative review next year and may differ from the announced deposit rates. These duties could materially and adversely affect our affiliated U.S. import operations and increase our cost of selling into the United States, thus adversely affecting our export sales to the United States, which is one of our growing markets. A number of parties have filed notice of their intent to challenge the rulings of the USDOC and USITC in appeals to the U.S. Court of International Trade. Decisions on those appeals are not expected until next year.

On September 6, 2012, following a complaint lodged by SolarWorld AG and certain supporters, the European Commission initiated an anti-dumping investigation concerning imports into the EU of CSPV modules and key components (i.e., cells and wafers) originating in China. On November 8, 2012, following a complaint lodged by the same parties, the European Commission initiated an anti-subsidy investigation on these products. In each investigation, we were identified as one of a number of Chinese exporting producers of these products to the EU market. We also have affiliate EU operations that import these products from China.

The Company was not chosen as one of the "sampled" companies in these EU investigations, which were required to provide written information to the EU authorities.

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The Company requested "market economy treatment" in the anti-dumping investigation, but this request was denied. A number of other affected Chinese companies have filed an action for annulment of the decision that denied "market economy treatment".

On March 5, 2013, the European Commission published a Regulation making all imports of CSPV modules and key components originating in or consigned from China subject to registration by EU Member State customs authorities. This registration requirement is likely to remain in effect through the pendency of the investigations. The Company filed comments contesting this registration decision and requested a hearing to express its views.

Under the current timeline, we expect that provisional anti-dumping duties, if any, will be announced by June 6, 2013, provisional countervailing duties, if any, will be announced by August 8, 2013 and definitive anti-dumping and countervailing duties, if any, will be announced by December 5 and 7, 2013, respectively.

The EU is the largest market for solar products. Anti-dumping and/or countervailing (i.e., anti-subsidy) duties imposed on imports of our products into the EU could materially and adversely affect our affiliated EU import operations, increase our cost of selling into the EU, and adversely affect our EU export sales.

In late November 2012, India initiated an anti-dumping investigation on imported solar products from China, Taiwan, the United States and Malaysia. The scope of the Indian complaint includes thin-film and CSPV cells and modules, as well as "glass and other suitable substrates". The period of investigation is from January 1, 2011 to June 30, 2012. We completed and submitted a "sampling questionnaire" and were chosen by the Indian authorities to be a sampled company. We are now compiling the data requested of us. As with the U.S. and EU cases, duties on our sales to India could materially and adversely affect the Company, increasing our selling costs and reducing our export sales to India, which we view as a promising market.

It is possible that an anti-subsidy investigation on solar products may also be initiated in India.

Imposition of anti-dumping and countervailing orders in one or more markets may result in additional costs to our customers, which could materially and adversely affect our business, results of operations, financial conditions and future prospects.

Our quarterly operating results may fluctuate from period to period.

Our quarterly operating results may fluctuate from period to period based on a number of factors, including:

- the average selling prices of our solar modules, solar system kits and products;
- the rate and cost at which we are able to expand our internal manufacturing capacity;
- the availability and price of solar cells and wafers from our suppliers and toll manufacturers;
- the availability and price of raw materials, particularly high-purity silicon;
- changes in government incentive programs and regulations, particularly in our key and target markets;
- the unpredictable volume and timing of customer orders;
- the loss of one or more key customers or the significant reduction or postponement of orders;
- availability of financing for on-grid and off-grid solar power applications;

acquisition and investment costs;

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the timing of completion of construction of our utility-scale solar power projects;

the timing of successful customer acceptance testing of our utility-scale solar power projects;

geopolitical turmoil and natural disasters within any of the countries in which we operate or sell products;

foreign currency fluctuations, particularly in the U.S. dollar, Euro, RMB and Canadian dollar;

our ability to establish and expand customer relationships;

changes in our manufacturing costs;

the timing of new products or technology introduced or announced by our competitors;

increases or decreases in electricity rates due to changes in fossil fuel prices or other factors;

allowances for doubtful accounts and advances to suppliers;

inventory write-downs;

long-lived asset impairment;

depreciation charges relating to underutilized assets;

loss on firm purchase commitments under long-term supply agreements; and

construction progress of solar power projects and related revenue recognition.

We base our planned operating expenses in part on our expectations of future revenues. A significant portion of our expenses will be fixed in the short-term. If our revenues for a particular quarter are lower than we expect, we may not be able to reduce our operating expenses proportionately, which would harm our operating results for the quarter. This may cause us to miss analysts' estimates or any guidance announced by us. If we fail to meet or exceed analysts' estimates, investor expectations or our own future guidance, even by a small amount, our share price could decline, perhaps substantially.

Fluctuations in exchange rates could adversely affect our business, including our financial condition and results of operations.

The majority of our sales are denominated in Euros and U.S. dollars, with the remainder in other currencies such as the Renminbi, Canadian dollar, Japanese yen and British pound. Our Renminbi costs and expenses are primarily related to domestic sourcing of solar cells, silicon wafers and silicon, other raw materials, toll manufacturing fees, labor costs and local overhead expenses. From time to time, we enter into loan arrangements with Chinese commercial banks that are denominated primarily in Renminbi or U.S. dollars. The greater part of our cash and cash equivalents are denominated in Renminbi. Fluctuations in exchange rates, particularly among the U.S. dollar, Euro, Renminbi and Canadian dollar, may affect our net profit margins and may result in fluctuations in foreign exchange and operating gains or losses. We recorded foreign

exchange losses of $36.3 million, $40.0 million and $10.7 million in 2010, 2011 and 2012, respectively.

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. In late 2005, China amended its policy of tracking the value of the Renminbi to the U.S. dollar. The new policy permitted the Renminbi to fluctuate against a basket of foreign currencies, which caused the Renminbi to appreciate by approximately 21.5% against the U.S. dollar over the following three years. However, since 2008, the Renminbi has fluctuated against other freely traded currencies. In June 2010, the PRC government announced that it would allow greater flexibility for the Renminbi to fluctuate against the U.S. dollar, which resulted in further appreciation of the Renminbi.

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Between June 30, 2010 and December 31, 2012, the value of the Renminbi appreciated approximately 8.13% against the U.S. dollar. We cannot provide any assurances that the policy of the PRC government will not affect or the manner in which it may affect the exchange rate between the Renminbi and the U.S. dollar in the future. Since 2008, we have hedged part of our foreign currency exposures against the U.S. dollar using foreign currency forward or option contracts in order to limit our foreign exchange losses.

The collateral requirements to enter into hedging contracts and the expenses associated with purchasing currency options have increased. There are also notional limits on the size of the hedging transactions that we may enter into with any particular counterparty at any given time. However, the effectiveness of our hedging program may be limited with respect to cost effectiveness, cash management, exchange rate visibility and downside protection. We recorded a gain on change in foreign currency derivatives of $1.7 million in 2010, a loss on change in foreign currency derivatives of $5.8 million in 2011, and a loss on change in foreign currency derivatives of $4.4 million in 2012. The gains or losses on change in foreign currency derivatives are related to our hedging program.

Volatility in foreign exchange rates will hamper, to some extent, our ability to plan our pricing strategy. To the extent that we are unable to pass along increased costs resulting from exchange rate fluctuations to our customers, our profits may materially decrease. As a result, fluctuations in currency exchange rates could have a material and adverse effect on our financial condition and results of operations.

Seasonal variations in demand linked to construction cycles and weather conditions may influence our results of operations.

Our business is subject to seasonal variations in demand linked to construction cycles and weather conditions. Purchases of solar power products tend to decrease during the winter months in our key markets, such as Germany, due to adverse weather conditions that can complicate the installation of solar power systems. Demand from other countries, such as Canada, the U.S., China and South Korea, may also be subject to significant seasonality. Seasonal variations could adversely affect our results of operations and make them more volatile and unpredictable.

Our future success depends partly on our ability to significantly expand our capacity to manufacture solar components, which exposes us to a number of risks and uncertainties.

Our future success depends on our ability to significantly increase our capacity to manufacture solar components. If we are unable to do so, we may be unable to expand our business, maintain our competitive position, improve our profitability, and generate the cash flows we have currently forecasted. Our ability to establish additional manufacturing capacity is subject to significant risks and uncertainties, including:

- the need to raise significant additional funds to purchase raw materials and to build additional manufacturing facilities, which we may be unable to obtain on commercially reasonable terms or at all;
- delays and cost overruns as a result of a number of factors, many of which are beyond our control, including delays in equipment delivery by vendors;
- 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 our internal solar components manufacturing capabilities, we may be unable to expand our business as planned. Moreover, even if we do expand our

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manufacturing capacity, we might not be able to generate sufficient customer demand for our solar power products to support our increased production levels.

Our future success depends partly on our ability to expand our utility-scale solar power project pipelines in several key markets, which exposes us to a number of risks and uncertainties.

Our future success depends on our ability to expand our utility-scale solar power project pipelines. Our ability to expand our utility-scale solar project pipelines is subject to significant risks and uncertainties, including:

- the need to raise significant additional funds to develop from scratch or purchase late-stage solar power projects, which we may be unable to obtain on commercially reasonable terms or at all;
- 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 by relevant government authorities;
- 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 utility-scale solar power project pipelines, we may be unable to expand our business, maintain our competitive position, improve our profitability, and generate the cash flows we have currently forecasted.

Due to a variety of factors, including the general economic environment and conditions in financial markets, we may be unable to generate sufficient cash flows or have access to external financing necessary to fund planned operations and make adequate capital investments.

In the future we anticipate that our operating and capital expenditures requirements will increase substantially. To develop new products, support future growth, achieve operating efficiencies and maintain product quality, we must make significant capital investments in manufacturing technology, facilities and capital equipment, research and development, and product and process technology. We also anticipate that our operating costs will increase as we expand our manufacturing operations, hire additional personnel, make advance payments or pay more for our raw materials, including polysilicon, increase our sales and marketing efforts, invest in joint ventures and acquisitions, and continue our research and development efforts with respect to our products and manufacturing technologies. Certain of our suppliers require performance bonds issued by a bonding agency or letters of credit issued by financial institutions. Obtaining letters of credit requires adequate collateral. Our letter of credit facility is collateralized by restricted cash, which reduces the amount of cash available for operations.

We incurred moderate capital expenditures in 2012 related to improvements of our solar cell manufacturing capacity, technology and other projects. Going forward, and once market conditions for our solar products improve, we expect that we have to make additional capital expenditures to enhance our solar cell and module manufacturing capacity. Our capital expenditures and use of working capital may be greater than we expect if we invest in additional development and construction of solar power plants or decide to accelerate the increase of our manufacturing capacity, both internally and through investments in selected joint ventures. The financing that we require for the construction of solar power plants may not be available on terms acceptable to us. In addition, we could make additional investments in joint ventures or guarantee certain financial obligations of our joint ventures, which could reduce our cash flows, increase our indebtedness and expose us to the credit risk of our joint ventures. If our capital resources are insufficient to satisfy our liquidity requirements, we may seek to market additional equity or debt securities and/or obtain other debt financing. The economic

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environment and conditions in financial markets may limit our ability to raise equity or debt capital on acceptable terms. Lenders may be unwilling to lend funds that would be required to supplement cash flows to support daily operations. Further, increased debt would result in increased expenses and may give rise to restrictive covenants or collateral requirements. Financing arrangements, including project financing for our solar power plants, may not be available to us, or may not be available in amounts or on terms acceptable to us. We may also seek to sell assets, reduce or delay capital investments, or refinance or restructure our debt.

There can be no assurance that we will be able to generate sufficient cash flows, find other sources of capital to fund our operations and solar power plant projects, make adequate capital investments to remain competitive in terms of technology development and cost efficiency required by our projects. If adequate funds and alternative resources are not available on acceptable terms, our ability to fund our operations, develop and construct solar power plants, develop and expand our manufacturing operations and distribution network, maintain our research and development efforts, provide collateral for our projects or otherwise respond to competitive pressures would be significantly impaired. Our inability to do the foregoing could have a material and adverse effect on our business and results of operations.

We may be unable to obtain adequate financing due to market conditions and other factors, many of which are beyond our control, which may adversely influence our ability to grow our business.

Our operations are capital intensive. We rely on working capital financing from PRC commercial banks for our daily operations. Although we are currently able to obtain new working capital financing from PRC commercial banks, we cannot guarantee that we will continue to be able to do so on commercially reasonable terms or at all. Also, even though we are a publicly-traded company, we may not be able to raise capital via public equity and debt issuances due to market conditions and other factors, many of which are beyond our control. Our ability to obtain external financing is subject to a variety of uncertainties, including:

our future financial condition, results of operations and cash flows;

general market conditions for financing activities by manufacturers of photovoltaic and related products; and

economic, political and other conditions in the PRC and elsewhere.

If we are unable to obtain funding in a timely manner and on commercially acceptable terms, our growth prospects and future profitability may be adversely affected.

The construction by us of large utility-scale solar power projects may require us to obtain project financing. There can be no assurance that we will be able to obtain such project financing on terms acceptable to us or at all. If we are unable to obtain project financing, or if it is only available on terms which are not acceptable to us, we may be unable to fully execute our systems business plan. In addition, we generally expect to sell our projects by raising project equity capital from tax-oriented, strategic industry and other investors. Such investors may not be available or may only have limited resources, in which case our ability to sell our projects may be prevented or delayed and our business, financial condition, or results of operations may be adversely affected.

Our dependence on Chinese banks to extend our existing loans and provide additional loans exposes us to funding risks, which may materially and adversely affect our operations.

We require significant cash flow and funding to support our operations. For example, there is a significant time lag between the time that we make payments to our suppliers and the time that we collect payments from our customers. As a result, we rely on short-term borrowings to provide working capital for our daily operations. Since the majority of our short-term borrowings come from Chinese

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banks, we are exposed to lending policy changes by the Chinese banks. In 2012, we successfully extended our short-term borrowings and, as of December 31, 2012, we had outstanding short-term borrowings of $849.8 million with Chinese banks. Between January 1, 2013 and March 31, 2013, we obtained new borrowings of approximately $240.1 million from Chinese banks, including $94.9 million with due dates beyond December 31, 2013. Also, between January 1, 2013 and March 31, 2013, we renewed existing bank facilities of approximately $64 million from Chinese banks with due dates beyond December 31, 2013.

If the Chinese government changes its macroeconomic policies and forces Chinese banks to tighten their lending practices, or if Chinese banks are no longer willing to provide financing to solar power companies, including us, we may not be able to extend our short-term borrowings or make additional borrowings in the future. As a result, we may not be able to fund our operations to the same extent as in previous years, which may have a material and adverse effect on our operations.

Our project development and construction activities may not be successful; projects under development may not receive required permits, property rights, power purchase agreements, interconnection and transmission arrangements; or financing or construction of projects may not commence or continue as scheduled, all of which could increase our costs, delay or cancel a project, and have a material adverse effect on our revenue and profitability.

The development and construction of solar power plants involve known and unknown risks. We may be required to invest significant amounts of money for land and interconnection rights, preliminary engineering, permitting, legal and other expenses before we can determine whether a project is feasible. Success in developing a particular project is contingent upon, among other things:

- securing land rights and related permits, including satisfactory environmental assessments;
- receipt of required land use and construction permits and approvals;
- receipt of rights to interconnect to the electric grid;
- payment of interconnection and other deposits (some of which are non-refundable); negotiation of satisfactory EPC agreements; and
- obtaining construction financing, including debt, equity and tax credits.

In addition, successful completion of a particular project may be adversely affected by numerous factors, including:

- delays in obtaining and maintaining required governmental permits and approvals;
- potential challenges from local residents, environmental organizations, and others who may not support the project;
- unforeseen engineering problems; subsurface land conditions; construction delays; cost over-runs; labor, equipment and materials supply shortages or disruptions (including labor strikes);
- additional complexities when conducting project development or construction activities in foreign jurisdictions, including operating in accordance with the U.S. Foreign Corrupt Practices Act and applicable local laws and customs; and
- force majeure events, including adverse weather conditions and other events out of our control.

If we are unable to complete the development of a solar power project or we fail to meet any agreed upon system-level capacity or energy output guarantees or warranties (including 25 year power output performance guarantees) or other contract terms, or our projects cause grid interference or other damage, the EPC or other agreements related to the project may be terminated and/or we may be subject to significant damages, penalties and other obligations relating to the project, including

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obligations to repair, replace or supplement materials for the project. In 2013 and beyond, we still expect to invest a significant amount of capital to develop projects owned by us or third parties, which may limit the availability of capital to use for other purposes, such as contract damages or repurchase payments.

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

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

In order to deliver electricity, our solar power plants need to connect to the transmission grid. The lack of available capacity on the transmission grid could substantially impact our projects and cause reductions in project size, delays in project implementation, increases in costs from transmission upgrades and potential forfeiture of deposits that we may have made with respect to a given project. These transmission issues, as well as issues relating to the availability of large systems such as transformers and switch gear, could significantly impact our ability to build PV solar power plants, connect them to the grid, successfully complete customer acceptance testing, and receive payment for such solar power plants.

Developing solar power projects may require significant upfront investment prior to commencing construction, which could adversely affect our business and results from our operations.

Our solar power plant development cycles can take many months or years to mature. As a result, we may need to make significant upfront payments for, among other things, land rights and permitting in advance of commencing construction, and the receipt of any revenue, much of which is not recognized for several additional months following contract signing. Our inability to enter into sales contracts with customers after making such upfront payments could adversely affect our business and results of operations. Furthermore, we may become constrained in our ability to simultaneously fund our other business operations and these system investments through our long project development cycles.

Our liquidity may be adversely affected to the extent the project sale market weakens or we are not able to successfully complete the customer acceptance testing due to technical difficulties, equipment failure, or adverse weather, and we are unable to sell our solar projects at prices and on terms and timing that are acceptable to us.

Cancellations of customer orders may make us unable to recoup any prepayments made to suppliers.

In the past, we were generally required to make prepayments to certain suppliers of silicon wafers and cells and silicon raw materials. Although we require certain customers to make partial prepayments, there is a lag between the due date for the prepayment of purchased silicon wafers and cells and silicon raw materials and the time that our customers make prepayments. The purchase of solar wafers and cells and silicon raw materials through toll manufacturing arrangements has required,

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and will continue to require us to make significant commitments of working capital beyond the cash flows generated from our operations to support our estimated production output. In the event our customers cancel their orders, we may not be able to recoup prepayments made to suppliers, which could adversely influence our financial condition and results of operations.

Credit terms offered to some of our customers expose us to the credit risks of such customers and may increase our costs and expenses, which could in turn materially and adversely affect our revenues, liquidity and results of operations.

We offer some customers unsecured short-term or medium-term credit based on our relationships with them and market conditions. As a result, our claims for payments and sales credits rank as unsecured claims, which would expose us to credit risk if our customers become insolvent or bankrupt.

From time to time, we sell our products to high credit risk customers in order to gain early access to emerging or promising markets, increase our market share in existing key markets or because of the prospects of future sales with a rapidly growing customer. There are high credit risks in doing business with these customers because they are often small, young and high-growth companies with significant unfunded working capital, inadequate balance sheets and credit metrics and limited operating histories. If these customers are not able to obtain satisfactory working capital, maintain adequate cash flow, or obtain construction financing for the projects where our modules are used, they may be unable to pay for the products for which they have submitted purchase orders or of which they have taken delivery. Our legal recourse under such circumstances may be limited if the customer's financial resources are already constrained or if we wish to continue to do business with that customer. For example, we took back solar modules that we had sold and shipped to certain customers that were unable to pay under the terms of our agreements or to provide any security that would have allowed us to extend our payment terms. As a result, we resold the modules to other customers at lower prices, which negatively influenced our revenue and margins. Revenue recognition for this type of customer is deferred until cash is received. If more customers to whom we extend credit are unable to pay for our products, our revenues, liquidity and results of operations could be materially and adversely affected.

Our dependence on a limited number of silicon wafer and cell and silicon suppliers, and the limited number of suppliers for certain other components, such as silver metallization paste, solar module back-sheet, and ethylene vinyl acetate encapsulant, could prevent us from delivering our products to our customers in the required quantities or in a timely manner, which could result in order cancellations and decreased revenues.

We purchase silicon raw materials, which include solar grade silicon, silicon wafers and solar cells, from a limited number of third-party suppliers. Our largest supplier of raw materials by dollar amount of purchases accounted for approximately 10.3%, 20.5% and 18.1% of our total raw materials purchases in 2010, 2011 and 2012, respectively.

Our major suppliers of silicon wafers include GCL, ReneSola Ltd., or ReneSola, and Konca Solar Cell., Ltd, or Konca. Our major suppliers of solar cells include Topcell Solar International Co., Ltd, or Topcell, Shunfeng Photovoltaic International Limited, or Shunfeng, and Neo Solar. These suppliers may not always be able to meet our quantity requirements, or to keep pace with the price reductions or quality improvements, necessary for us to price our products competitively. Supply may also be interrupted by accidents, disasters or other unforeseen events over which we have no control. For example, in the first half of 2010 and the fourth quarter of 2011 and 2012, we experienced delivery issues with suppliers of silicon wafers, cells, connectors and encapsulants that caused us to miss shipment deadlines to some of our customers. Delivery problems may also occur with suppliers of other components, such as silver metallization paste, low-iron glass and solar module back sheet. The failure of a supplier, for whatever reason, to supply silicon wafers, solar cells, silicon raw materials or other essential components that meet our quality, quantity and cost requirements in a timely manner could impair our ability to manufacture our products or increase our costs. The impact could be more severe

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if we are unable to access alternative sources on a timely basis or on commercially reasonable terms, and could prevent us from delivering our products to our customers in the required quantities and at prices that are profitable. Problems of this kind could cause order cancellations, reduce our market share, harm our reputation and cause legal disputes with our customers.

We are developing and commercializing higher conversion efficiency cells, such as selective emitter and metal wrap-through cells, in order to produce higher-powered modules, which may command better prices. We cannot assure that we will be able to mass-produce these cells in a cost effective way, if at all.

Higher efficiency cell structures are becoming an increasingly important factor in cost competitiveness and brand recognition in the solar power industry. Such cells may yield higher power outputs at the same cost to produce as lower efficiency cells, thereby lowering the manufactured cost per watt. The ability to manufacture and sell modules made from such cells may also be an important competitive advantage because system owners can obtain a higher yield of electricity from the modules that have a similar infrastructure, footprint and system cost compared to systems with modules using lower efficiency cells. Higher conversion efficiency solar cells and the resulting higher output modules are also one of the considerations in maintaining a price premium over thin-film products. However, while we are making the necessary capital equipment and other investments to develop higher conversion efficiency products, there is no assurance that we will be able to commercialize some or any of these products in a cost effective way, or at all. In the near term, such products may command a modest premium. In the longer term, if our competitors are able to manufacture such products and we cannot do the same at all or in a cost efficient manner, we will be at a competitive disadvantage, which will likely influence our product pricing and our financial performance.

Since we cannot test our products for the duration of our standard warranty periods, we may be subject to unexpected warranty expense.

Before June 2009, we typically sold our standard solar modules with a two-year guarantee for defects in materials and workmanship and a 10-year and 25-year warranty against declines of more than 10% and 20%, respectively, from the initial minimum power generation capacity at the time of delivery. In June 2009, we increased our warranty against defects in materials and workmanship to six years. Effective August 1, 2011, we increased our warranty against defects in materials and workmanship to ten years and we guarantee that, for a period of 25 years, our modules will maintain the following performance levels:

during the first year, the actual power output of the module will be no less than 97% of the labeled power output;

from year 2 to year 24, the actual annual power output decline will be no more than 0.7%; and

by the end of year 25, the actual power output of the module will be no less than 80% of the labeled power output.

We believe our warranty periods are consistent with industry practice. Due to the long warranty period, we bear the risk of extensive warranty claims long after we have shipped our products and recognized revenue. We began selling specialty solar modules and products in 2002 and began selling standard solar modules in 2004. Any increase in the defect rate of our products would require us to increase our warranty reserves and would have a corresponding negative impact on our operating results. Although we conduct quality testing and inspection of our solar module products, our solar module products have not been and cannot be tested in an environment simulating the up-to-25-year warranty periods. In particular, unknown issues may surface after extended use. These issues could potentially affect our market reputation and adversely affect our revenues, giving rise to potential warranty claims by our customers. As a result, we may be subject to unexpected warranty costs and associated harm to our financial results as long as 25 years after the sale of our products.

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In addition to the solar module warranty above, for utility-scale solar power projects built by us, we provide a limited warranty against defects in workmanship under normal use, operation and service conditions for a period of five years following the energizing of the solar power plant. In resolving claims under the workmanship warranty, we have the option of remedying through repair, refurbishment or replacement of equipment.

In April 2010, we began entering into agreements with insurance companies to reduce some of this risk. Under the insurance policies, the insurance companies are obliged to reimburse us, subject to certain maximum claim limits and certain deductibles, for the actual product warranty costs that we incur under the terms of our warranty policy. The warranty insurance is renewable annually. See "Item 4. Information on the Company B. Business Overview Insurance." However, we cannot assure that potential warranty claims will not exceed the scope or amount of coverage under this insurance and, if they do, they could materially and adversely affect our business.

We may not continue to be successful in developing and maintaining a cost-effective solar cell manufacturing capability.

We plan to continue expanding our in-house solar cell manufacturing capabilities to support our core solar module manufacturing business. We expanded our annual solar cell production capacity from 800 MW as of December 31, 2010 to 1.5 GW as of December 31, 2011 and 1.6 GW as of December 31, 2012. To remain competitive going forward, we intend to further expand our total annual solar cell production capacity. However, we only have limited and recent operating experience in this area and may face significant product development challenges in our solar cell operations. Manufacturing solar cells is a complex process and we may not be able to produce solar cells of sufficient quality to meet our solar module manufacturing standards. Minor deviations in the manufacturing process can cause substantial decreases in yield and in some cases cause no yield output or production to be suspended. We will need to make capital expenditures to purchase manufacturing equipment for solar cell production and will also need to make significant investments in research and development to keep pace with technological advances in solar power technology. The technologies, designs and customer preferences for solar cells can change rapidly, and solar cell product life cycles are shorter than those for solar modules. We also face increased costs to comply with environmental laws and regulations. Any failure to successfully develop and maintain cost-effective solar cell manufacturing capability may have a material and adverse effect on our business and prospects. For example, we have in the past purchased a large percentage of solar cells from third parties. This negatively affected our margins compared with those of our competitors since it is less expensive to produce cells internally than to purchase them from third parties. Because third party solar cell purchases are usually made in a period of high demand, prices tend to be higher and availability reduced.

Although we intend to continue direct purchasing of solar cells and toll manufacturing arrangements through a limited number of strategic partners, our relationships with our solar cell suppliers may be disrupted if we engage in the large-scale production of solar cells ourselves. If solar cell suppliers discontinue or reduce the supply of solar cells to us, through direct sales or through toll manufacturing arrangements, and we are not able to compensate for the loss or reduction by manufacturing our own solar cells, our business and results of operations may be adversely affected.

It may be difficult to develop our internal production capabilities for silicon ingots and wafers or to achieve acceptable yields and product performance as a result of manufacturing problems.

We have been increasing our internal production capabilities for the manufacture of silicon ingots and wafers. We completed the initial phase of our silicon ingot and wafer plant in the third quarter of 2008 and reached a nameplate capacity of approximately 216 MW as of December 31, 2012. We have limited prior operational experience in ingot and silicon wafer production and will face significant challenges in further increasing our internal production capabilities. The technology is complex and will

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require costly equipment and hiring of highly skilled personnel. In addition, we may experience delays in further developing these capabilities and in obtaining the governmental permits required to carry on these operations.

If we are able to develop these production capabilities successfully, we will need to continuously enhance and modify these capabilities in order 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 silicon wafers can cause a percentage of the silicon wafers to be rejected, which would negatively affect our yields. We may experience manufacturing difficulties that cause production delays and lower than expected yields.

Problems in our facilities, including but not limited to production failures, construction delays, human errors, weather conditions, equipment malfunction or process contamination, may limit our ability to manufacture products, which could seriously harm our operations. We are also susceptible to floods, droughts, power losses and similar events beyond our control that would affect our facilities. A disruption in any step of the manufacturing process will require us to repeat each step and recycle the silicon debris, which would adversely affect our yields and manufacturing cost.

Our future growth depends in part on our ability to make strategic acquisitions and investments and to establish and maintain strategic relationships, and our failure to do so could have a material and adverse effect on our market penetration and revenue growth.

We may acquire other businesses, make strategic investments or establish strategic relationships with third parties to improve our market position or expand our products and services. We cannot assure you that we will be able to successfully make strategic acquisitions and investments or establish strategic relationships with third parties that will prove to be effective for our business. Our inability to do so could materially and adversely affect our market penetration, our revenue growth and our profitability.

Investments, strategic acquisitions and relationships with third parties could subject us to a number of risks, including risks associated with sharing proprietary information and loss of control of operations that are material to our business. Moreover, strategic acquisitions, investments and relationships may be expensive to implement and subject us to the risk of non-performance by a counterparty, which may in turn lead to monetary losses that materially and adversely affect our business.

If we are unable to attract, train and retain 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 technical personnel. Recruiting and retaining capable personnel, particularly those with expertise in the solar power industry, are vital to our success. There is substantial competition for qualified technical personnel, and there can be no assurance that we will be able to attract or retain sufficient technical personnel. If we are unable to attract and retain qualified employees, our business may be materially and adversely affected.

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Our dependence on a limited number of customers and our lack of long-term customer contracts may cause significant fluctuations or declines in our revenues.

We sell a substantial portion of our solar module products to a limited number of customers, including distributors, system integrators, project developers and installers who either integrate our products into their own products or sell them as part of their product portfolio. Our top five customers by revenues collectively accounted for approximately 26.0%, 29.2% and 21.6% of our net revenues in 2010, 2011 and 2012, respectively. We typically enter into one-year framework sales agreements with our customers, with quarterly firm orders stipulating prices and quantities. We anticipate that our dependence on a limited number of customers will continue for the foreseeable future. Consequently, any of the following events may cause material fluctuations or declines in our revenues:

reduced, delayed or cancelled orders from one or more of our significant customers;

the loss of one or more of our significant customers;

a significant customer's failure to pay for our products on time; and

a significant customer's financial problems or insolvency.

As we continue to expand our business and operations, our top customers continue to change. We cannot assure that we will be able to develop a consistent customer base.

Product liability claims against us could result in adverse publicity and potentially significant monetary damages.

We, along with other solar module product manufacturers, are exposed to risks associated with product liability claims if the use of our solar module products results in injury. Since our products generate electricity, it is possible that users could be injured or killed by our products due to product malfunctions, defects, improper installation or other causes. We shipped our first products in March 2002 and, because of our limited operating history, 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. Although we carry limited product liability insurance, we may not have adequate resources to satisfy a judgment if a successful claim is brought against us. The successful assertion of product liability claims against us could result in potentially significant monetary damages and require us to make significant payments. Even if the product liability claims against us are determined in our favor, we may suffer significant damage to our reputation.

Our founder, Dr. Shawn Qu, has substantial influence over our company and his interests may not be aligned with the interests of our other shareholders.

As of March 31, 2013, Dr. Shawn Qu, our founder, chairman, president and chief executive officer, beneficially owned 13,270,500 common shares, or 30.5% of our outstanding share capital. As a result, Dr. Qu has substantial influence over our business, including decisions regarding mergers, consolidations and the sale of all or substantially all of our assets, the election of directors and other significant corporate actions. This concentration of ownership may discourage, delay or prevent a change in control of our company, which could deprive our shareholders of an opportunity to receive a premium for their shares as part of a sale of our company and might reduce the price of our common shares.

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

Our success depends on our ability to use and develop our technology and know-how and sell our solar module products without infringing the intellectual property or other rights of third parties. The

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validity and scope of claims relating to solar power technology patents involve complex scientific, legal and factual questions and analyses and are therefore highly uncertain. We may be subject to litigation involving claims of patent infringement or the violation of intellectual property rights of third parties. Defending 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. Additionally, we use both imported and China-made equipment in our production lines, sometimes without sufficient supplier guarantees that our use of such equipment does not infringe third-party intellectual property rights. This creates a potential source of litigation or infringement claims. 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 or require us to seek licenses from third parties, pay ongoing royalties, redesign our products or subject us to injunctions prohibiting the manufacture and sale of our products or the use of our technologies. Protracted litigation could also defer customers or potential customers or limit their purchase or use of our products until such litigation is resolved.

Compliance with environmental regulations can be expensive, and noncompliance with these regulations may result in adverse publicity and potentially significant monetary damages, fines and the suspension or even termination of our business operations.

We are required to comply with all national and local environmental regulations. As we expanded our silicon reclamation program and research and development activities and moved into ingot, wafer and cell manufacturing, we began to generate material levels of noise, wastewater, gaseous wastes and other industrial waste in our business operations. Additionally, as we expanded our internal solar components production capacity, our risk of facility incidents with a potential environmental impact also increased. We believe that we comply with all environmental laws and regulations and have all necessary environmental permits to conduct our business as it is presently conducted. However, if more stringent regulations are adopted in the future, the costs of complying with these new regulations could be substantial. 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 our use or to restrict adequately the discharge, of hazardous substances could subject us to potentially significant monetary damages, fines or suspensions of our business operations.

Our solar modules and products must comply with the environmental regulations of the jurisdictions in which they are installed, and we may incur expenses to design and manufacture our products to comply with such regulations. For example, we increased our expenditures to comply with the EU's Restriction of Hazardous Substances Directive, which took effect in July 2006, by reducing the amount of lead and other restricted substances in our solar module products. Furthermore, we may need to comply with the EU's Waste Electrical and Electronic Equipment Directive if solar modules and products are re-classified as consumer electronics under the directive or if our customers located in other markets demand that they comply with this directive. This would require us to implement manufacturing process changes, such as changing the soldering materials used in module manufacturing, in order to continue to sell our products in these markets. If compliance is unduly expensive or unduly difficult, we may lose market share and our financial results may be adversely affected.

We may not be successful in establishing our brand name in important markets and the products we sell under our brand name may compete with the products we manufacture on an original equipment manufacturer, or OEM, basis for our customers.

We sell our products primarily under our own brand name but also on an OEM basis. In certain markets, our brand may not be as prominent as other more established solar power vendors, and there can be no assurance that the "CSI" or "Canadian Solar" brand name or any of our possible future

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brand names will gain acceptance among customers. Moreover, because the range of products that we sell under our own brands and those we manufacture for our OEM customers may be substantially similar, we cannot assure that we will not directly or indirectly compete with our OEM customers, which could negatively affect our relationship with them.

Failure to protect our intellectual property rights in connection with new specialty solar modules and products may undermine our competitive position.

As we develop and bring to market new specialty solar modules and products, we may need to increase our expenditures to protect our intellectual property. Our failure to protect our intellectual property rights may undermine our competitive position. We currently have 151 patents and 133 patent applications pending in the PRC for products that contribute a relatively small percentage of our net revenues. We have two United States patents, issued in November 2009 and February 2010. We also have three patent applications pending in Europe. We applied for registration of the "Canadian Solar" trademark in the United States in March 2009 and subsequently in a number of other jurisdictions, including Australia, Canada, Europe, India, South Korea, Japan, the United Arab Emirates, Bosnia and Herzegovina, Switzerland, Ghana, Croatia, Israel, Kenya, Liechtenstein, Singapore, Morocco, Egypt, Vietnam, Turkey, South Africa, Argentina, Peru, Brazil, Bangladesh and Indonesia. Among these applications, the "Canadian Solar" trademark has been registered in the United States, Australia, Canada, Europe, South Korea, Japan, the United Arab Emirates and Hong Kong. We also have 56 registered trademarks and 11 trademark applications pending in the PRC, and 25 registered trademarks and 41 trademark applications pending outside of China. These intellectual property rights afford only limited protection and the actions we take to protect our rights as we develop new specialty solar modules and products may not be adequate. Policing the unauthorized use of proprietary technology can be difficult and expensive. In addition, litigation, which can be costly and divert management attention, 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.

If our internal control over financial reporting or disclosure controls and procedures are not effective, there may be errors in our financial statements that could require a restatement or our filing may not be timely and investors may lose confidence in our reported financial information, which could lead to a decline in our stock price.

We are subject to the reporting obligations under U.S. securities laws. The Securities and Exchange Commission, or SEC, as required by Section 404 of the Sarbanes-Oxley Act of 2002, adopted rules requiring every public company to include a management report on its internal control over financial reporting in its annual report, which contains management's assessment of the effectiveness of its internal control over financial reporting. In addition, an independent registered public accounting firm must report on the effectiveness of the company's internal controls over financial reporting. As of December 31, 2012, our management concluded that our internal control over financial reporting was effective as well. However, we cannot assure that material weaknesses in our internal controls over financial reporting will not be identified in the future. Any material weaknesses in our internal controls could cause us not to meet our periodic reporting obligations in a timely manner or result in material misstatements in our financial statements. Material weaknesses in our internal controls over financial reporting could also cause investors to lose confidence in our reported financial information, leading to a decline in our share price.

We face risks related to an SEC subpoena and private securities litigation.

We received a subpoena from the SEC requesting documents relating to, among other things, certain sales transactions in 2009. We cannot predict when the SEC will complete its investigation or what its outcome will be. In addition, our company and certain of our directors and executive officers

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have been named as defendants in class action lawsuits in the United States and Canada. The lawsuits in the United States were consolidated into one class action, which was recently dismissed with prejudice. The lawsuit in Canada continues. As a preliminary matter, we challenged the Ontario Court's jurisdiction to hear the plaintiff's claim, but this motion was unsuccessful. The plaintiff is now pursuing his motion for class certification and for court approval to assert the statutory cause of action under the Ontario Securities Act. The plaintiff's motions will be heard by the court in June 2013. There is no guarantee that we will not become party to additional lawsuits or appeals to lawsuits that have been dismissed. See "Item 8. Financial Information A. Consolidated Statements and Other Financial Information Legal and Administrative Proceedings." We are generally obligated, to the extent permitted by law, to indemnify our directors and officers who are named defendants in these lawsuits. We may be required to pay judgments or settlements and incur expenses in aggregate amounts that could have a material and adverse effect on our financial condition or results of operations.

Risks Related to Doing Business in China

The enforcement of the labor contract law and increases in labor costs in the PRC may adversely affect our business and our profitability.

The Labor Contract Law came into effect on January 1, 2008, and the Implementation Rules thereunder were promulgated and became effective on September 18, 2008. The Labor Contract Law and the Implementation Rules imposed stringent requirements on employers with regard to executing written employment contracts, hiring temporary employees, and dismissing employees. In addition, under the Regulations on Paid Annual Leave for Employees, which came into effect on January 1, 2008, and their Implementation Measures, which were promulgated and became effective on September 18, 2008, employees who have served for more than one year with an employer are entitled to a paid vacation ranging from five to 15 days, depending on their length of service. Employees who waive such vacation time at the request of the employer must be compensated for each vacation day waived at a rate equal to three times their normal daily salary. Our labor costs are expected to continue to increase due to these new laws and regulations. Higher labor costs and labor disputes with our employees stemming from these new rules and regulations could adversely affect our business, financial condition, and results of operations.

A change in our effective tax rate can have a significant adverse impact on our business.

A number of factors may adversely impact our future effective tax rates, such as the jurisdictions in which our profits are determined to be earned and taxed; changes in the valuation of our deferred tax assets and liabilities; adjustments to estimated taxes upon finalization of various tax returns; adjustments to the interpretation of transfer pricing standards; changes in available tax credits; changes in stock-based compensation expenses; changes in tax laws or the interpretation of such tax laws (for example, proposals for fundamental U.S. international tax reform); changes in U.S. GAAP; expiration or the inability to renew tax rulings or tax holiday incentives; and the repatriation of non-U.S. earnings for which we have not previously provided for U.S. taxes. A change in our effective tax rate due to any of these factors may adversely influence our future results from operations.

In recent years, our subsidiaries have lost certain tax benefits and we expect to pay additional PRC taxes as a result, which could have a material and adverse impact on our financial condition and results of operations.

On January 1, 2008, the Enterprise Income Tax Law, or the EIT Law, came into effect in China. Under the EIT Law, both foreign-invested enterprises and domestic enterprises are subject to a uniform enterprise income tax rate of 25%. There is a transition period for enterprises that were established prior to March 16, 2007 (the promulgation date of the EIT Law) and were given preferential tax treatment under the previous tax law. Enterprises that were subject to an enterprise income tax rate lower than 25% will have the new uniform enterprise income tax rate of 25% phased

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in over a five-year period from the effective date of the EIT Law. Enterprises that were entitled to exemptions or reductions from the standard enterprise income tax rate for a fixed term may continue to enjoy such treatment until the fixed term expires, subject to certain limitations. The EIT Law provides for preferential tax treatment for certain categories of industries and projects that are strongly supported and encouraged by the state. For example, enterprises classified as a "High and New Technology Enterprise," or HNTE, are entitled to a 15% enterprise income tax rate provided that such HNTE satisfies other applicable statutory requirements.

Our subsidiary, CSI Solartronics (Changshu) Co., Ltd., or CSI Solartronics, has been recognized as an HNTE. However, because it does not satisfy certain requirements for the reduced 15% enterprise income tax rate, CSI Solartronics is still subject to a 25% enterprise income tax rate. CSI Solar Manufacture Inc., or CSI Manufacturing, was subject to a reduced enterprise income tax rate of 12.5% to the end of 2009, when its tax holiday expired. CSI Cells Co. Ltd., or CSI Cells and Canadian Solar Manufacturing (Luoyang) Inc., or CSI Luoyang Manufacturing, were subject to a reduced enterprise income tax rate of 12.5% until the end of 2011, when their tax holidays expired. Currently, CSI Cells is subject to a preferential enterprise income tax rate of 15% for the three years from 2012 to 2014, resulting from its HNTE status recognized in 2009 and renewed in 2012. Canadian Solar Manufacturing (Changshu) Inc. (formerly known as Changshu CSI Advanced Solar Inc.), or CSI Changshu Manufacturing, was exempt from enterprise income tax for 2009 and was subject to a reduced enterprise income tax rate of 12.5% for 2010, 2011 and 2012, at which time its tax holiday expired as well. As the preferential tax benefits enjoyed by our PRC subsidiaries expired, their effective tax rates increased significantly.

There are significant uncertainties in our tax liabilities regarding our income under the EIT Law.

We are a Canadian company with substantially all of our manufacturing operations in China. Under the EIT Law and its implementation regulations, both of which became effective on January 1, 2008, enterprises established outside China whose "effective management" is located in China are considered PRC tax residents and will generally be subject to the uniform 25% enterprise income tax rate on their global income. Under the implementation regulations, the term "effective management" is defined as substantial and overall management and control over aspects such as the production and business, personnel, accounts and properties of an enterprise. Currently there are no detailed rules or precedents governing the procedures and specific criteria for determining a company's effective management, which are applicable to us. As a substantial number of the members of our management team are located in China, we may be considered as a PRC tax resident under the EIT Law and, therefore, subject to the uniform 25% enterprise income tax rate on our global income. If our global income is subject to PRC enterprise income tax at the rate of 25%, our financial condition and results of operation may be materially and adversely affected.

Dividends payable by us to our non-Chinese shareholders and gains on the sale of our common shares may become subject to PRC enterprise income tax liabilities.

The implementation regulations of the EIT Law provide that (i) if the enterprise that distributes dividends is domiciled in the PRC or (ii) if gains are realized from transferring equity interests of enterprises domiciled in the PRC, then such dividends or capital gains will be treated as China-sourced income. Also, income sourced within China is determined based on the following principles for equity interest transfers and dividends: (x) for income from transfers of equity interests, source is determined in accordance with the place where the invested enterprise is located; and (y) for income from equity interests such as dividends and profit distributions, source is determined in accordance with the place of the enterprise which makes the distribution.

Currently there are no detailed rules or precedents governing the procedures and specific criteria for determining what it means to be domiciled in the PRC. As a result, it is not clear how the concept

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of "China domicile" will be interpreted under the EIT Law. The concept of domicile may be interpreted simply as the jurisdiction where the enterprise is a tax resident. Therefore, if we are considered a PRC tax resident enterprise for tax purposes, any dividends we pay to our overseas shareholders as well as any gains realized by such shareholders from the transfer of our common shares may be regarded as China-sourced income and, consequently, be subject to PRC withholding tax at a rate of up to 10%. The investment returns of our overseas investors, and the value of their investments in us, may be materially and adversely affected if any dividends we pay to them, or any gains realized by them on the transfer of our common shares are subject to PRC withholding tax.

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

Certain of our revenues and expenses are denominated in Renminbi. If our revenues denominated in Renminbi increase or our 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, if any, in respect of our common shares. Under China's existing foreign exchange regulations, our PRC subsidiaries are able to pay dividends in foreign currencies without prior approval from the State Administration of Foreign Exchange, or SAFE, by complying with certain procedural requirements. However, we cannot assure that the PRC government will not take further measures in the future to restrict access to foreign currencies for current account transactions.

Foreign exchange transactions by our PRC subsidiaries under most capital accounts continue to be subject to significant foreign exchange controls and require the approval of PRC governmental authorities. In particular, if we finance our PRC subsidiaries by means of additional capital contributions, certain government authorities, including the Ministry of Commerce or its local counterparts, must approve these capital contributions. These limitations could affect the ability of our PRC subsidiaries to obtain foreign exchange through equity financing.

Uncertainties with respect to the Chinese legal system could materially and adversely affect us.

We conduct substantially all of our manufacturing operations through our subsidiaries in China. These subsidiaries 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 is still developing, the implementation and enforcement of many laws, regulations and rules may be inconsistent, which may limit legal protections available to us. In addition, any litigation in China may be protracted and may result in substantial costs and divert our resources and the attention of our management.

Risks Related to Our Common Shares

The market price for our common stocks may be volatile.

The market price for our common shares has been highly volatile and subject to wide fluctuations. During the period from November 9, 2006, the first day on which our common shares were listed on the Nasdaq Global Market, until December 31, 2012, the market price of our common shares ranged from $1.95 to $51.80 per share. The closing market price of our common shares on December 31, 2012 was $3.40 per share. The market price of our common shares may continue to be volatile and subject to wide fluctuations in response to a wide variety of factors, including the following:

- announcements of technological or competitive developments;

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regulatory developments in our target markets affecting us, our customers or 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;

the departure of executive officers and key research personnel;

patent litigation and other intellectual property disputes;

litigation and other disputes with our long-term suppliers;

fluctuations in the exchange rates between the U.S. dollar, the Euro and the RMB;

SEC investigations or private securities litigation;

the release or expiration of lock-up or other transfer restrictions on our outstanding common shares; and

sales or anticipated sales of additional common shares.

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 common shares.

Substantial future sales of our common shares in the public market, or the perception that such sales could occur, could cause the price of our common shares to decline.

Sales of our common shares in the public market, or the perception that such sales could occur, could cause the market price of our common shares to decline. As of December 31, 2012, we had 43,242,426 common shares outstanding. The number of common shares outstanding and available for sale will increase when our employees and former employees who are holders of restricted share units and options to acquire our common shares become entitled to the underlying shares under the terms of their units or options. To the extent these shares are sold into the market, the market price of our common shares could decline.

Your right to participate in any future rights offerings may be limited, which may cause dilution to your holdings.

We may from time to time distribute rights to our shareholders, including rights to acquire our securities. However, we cannot make these rights available in the United States unless we register the rights and the securities to which the rights relate under the Securities Act or an exemption from the registration requirements is available. We are under no obligation to file a registration statement with respect to any such rights or securities or to endeavor to cause a registration statement to be declared effective. Moreover, we may not be able to establish an exemption from registration under the Securities Act. Accordingly, you may be unable to participate in our rights offerings and may experience dilution in your holdings.

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Our articles of continuance contain anti-takeover provisions that could adversely affect the rights of holders of our common shares.

The following provisions in our amended articles of continuance may deprive our shareholders of the opportunity to sell their shares at a premium over the prevailing market price by delaying or preventing a change of control of our company:

Our board of directors has the authority, without approval from the shareholders, to issue an unlimited number of preferred shares in one or more series. Our board of directors may establish the number of shares to be included in each such series and may fix the designations, preferences, powers and other rights of the shares of a series of preferred shares.

Our board of directors is entitled to fix and may change the number of directors within the minimum and maximum number of directors provided for in our articles. Our board of directors may appoint one or more additional directors to hold office for a term expiring no later than the close of the next annual meeting of shareholders, subject to the limitation that the total number of directors so appointed may not exceed one-third of the number of directors elected at the previous annual meeting of shareholders.

You may have difficulty enforcing judgments obtained against us.

We are a corporation organized under the laws of Canada and a substantial portion of our assets is located outside of the United States. A substantial portion of our current business operations is conducted in the PRC. In addition, a majority 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 is 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. court 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, many of whom are not residents of the United States and whose assets are located in significant part outside of the United States. In addition, there is uncertainty as to whether the courts of Canada or the PRC would recognize or enforce judgments of U.S. courts against us or such persons predicated upon the civil liability provisions of the securities laws of the United States or any state. In addition, it is uncertain whether such Canadian or PRC courts would be competent to hear original actions brought in Canada or the PRC against us or such persons predicated upon the securities laws of the United States or any state.

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 common shares.

Based on the market price of our common shares, 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, 2012. 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. Because the value of our assets for purposes of the PFIC test will generally be determined by reference to the market price of our common shares, fluctuations in the market price of the common shares may cause us to become a PFIC. In addition, changes in the composition of our income or assets may cause us to become a PFIC. If we are a PFIC for any taxable year during which a U.S. Holder (as defined in "Item 10. Additional Information E. Taxation

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U.S. Federal Income Taxation") holds a common share, certain adverse U.S. federal income tax consequences could apply to such U.S. Holder. See "Item 10. Additional Information E. Taxation U.S. Federal Income Taxation Passive Foreign Investment Company."

The audit report included in this annual report on Form 20-F was prepared by auditors who are not inspected by the Public Company Accounting Oversight Board and, as a result, you are deprived of the benefits of such inspection.

The independent registered public accounting firm that issues the audit reports included in our annual reports filed with the SEC, as auditors of companies that are traded publicly in the United States and a firm registered with the Public Company Accounting Oversight Board (United States), or the "PCAOB", is required by the laws of the United States to undergo regular inspections by the PCAOB to assess its compliance with the laws of the United States and professional standards. Because our auditors are located in the PRC, a jurisdiction where the PCAOB is currently unable to conduct inspections without the approval of the PRC authorities, our auditors are not currently inspected by the PCAOB.

Inspections of other firms that the PCAOB has conducted outside 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. This lack of PCAOB inspections in China prevents the PCAOB from regularly evaluating our auditor's audits and its quality control procedures. As a result, investors may be deprived of the benefits of PCAOB inspections.

The inability of the PCAOB to conduct inspections of auditors 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 lose confidence in our reported financial information and procedures and the quality of our financial statements.

Recently, the SEC commenced administrative proceedings under Rule 102(e) of its Rules of Practice and under the Sarbanes-Oxley Act against the Chinese affiliates of five global accounting firms, including our independent registered public accounting firm. The Rule 102(e) proceedings initiated by the SEC relate to these firms' failure to produce documents, including audit work papers, at the request of the SEC pursuant to Section 106 of the Sarbanes-Oxley Act, as the auditors located in the PRC are not in a position lawfully to produce documents directly to the SEC because of restrictions under PRC law and specific directives issued by the China Securities Regulatory Commission, or CSRC. As the administrative proceedings are ongoing, it is impossible to determine their outcome or their consequences to us. The issues raised by the proceedings are not specific to our independent registered public accounting firm or to us, but affect equally all audit firms based in China and all China-based businesses with securities listed in the United States. However, if the administrative judge were to find in favor of the SEC under the proceedings then, depending upon the remedies sought by the SEC, these audit firms could be barred from practicing before the SEC. As a result, listed companies in the United States with major PRC operations would find it difficult or impossible to retain auditors in respect of their operations in the PRC, which may result in their delisting. Moreover, any negative news about the proceedings against these audit firms may erode investor confidence in China-based, United States-listed companies and the market price of our common shares may be adversely affected.

ITEM 4. *INFORMATION ON THE COMPANY*

A. History and Development of the Company

Our legal and commercial name is Canadian Solar Inc. We were incorporated under the laws of the Province of Ontario, Canada in October 2001. We changed our jurisdiction by continuing under the Canadian federal corporate statute, the Canada Business Corporations Act, or CBCA, effective June 1, 2006. As a result, we are governed by the CBCA.

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We have formed the following significant subsidiaries, all of which are incorporated in China and wholly owned except as otherwise noted:

CSI Solartronics (Changshu) Co., Ltd., or CSI Solartronics, incorporated in November 2001, which has operations located in Changshu, China, where we develop solar power projects;

CSI Solar Technologies Inc., or CSI Technologies, incorporated in August 2003, which has operations located in Changshu, China, where we develop solar module products;

CSI Solar Manufacture Inc., or CSI Manufacturing, incorporated in January 2005, which has operations located in Suzhou, China, where we manufacture primarily standard solar modules;

Canadian Solar Manufacturing (Luoyang) Inc. (formerly known as CSI Central Power Co. Ltd.), or CSI Luoyang Manufacturing, incorporated in February 2006, which has operations located in Luoyang, China, where we manufacture solar modules, solar ingots and solar wafers;

Canadian Solar Manufacturing (Changshu) Inc. (formerly known as Changshu CSI Advanced Solar Inc.), or CSI Changshu Manufacturing, incorporated in August 2006, which has operations located in Changshu, China, where we manufacture solar modules;

CSI Cells Co., Ltd., or CSI Cells, incorporated in August 2006, which has operations located in Suzhou, China, where we manufacture solar cells;

Canadian Solar (USA) Inc., incorporated in Delaware, USA in June 2007, through which we carry out marketing and sales activities in the United States;

CSI Project Consulting GmbH, or CSI Germany Projects, incorporated in Germany in May 2009, a 70% owned subsidiary through which we invested in CVB Solar GmbH, a German solar power project. In January 2011, CSI Germany Projects sold all of its interest in CVB Solar GmbH to its joint venture partner;

Canadian Solar Japan K.K., or CSI Japan, incorporated in Japan as a wholly owned subsidiary in June 2009, through which we conduct marketing and sales activities in Japan. Between December 2009 and May 2010, we sold an aggregate of 28% of the outstanding capital stock of CSI Japan to two Japanese companies; in August 2010, we increased our capital contribution in CSI Japan. We currently hold 90.67% of CSI Japan;

Canadian Solar Solutions Inc., or CSSI, incorporated in Ontario, Canada in June 2009, through which we conduct marketing and sales activities in Canada. CSSI itself has a number of wholly-owned and non-wholly-owned subsidiaries, all of which were incorporated in Ontario, Canada in November 2009, through which we conduct project development activities in Canada;

CSI Solar Power (China) Inc. incorporated in July 2009, which is located in Suzhou, China and serves as a holding company for our subsidiaries in China;

Canadian Solar EMEA GmbH, (formerly known as Canadian Solar (Deutschland) GmbH), incorporated in Germany in August 2009, through which we conduct marketing and sales activities in Europe;

Canadian Solar Manufacturing (Ontario) Inc., or CSI Ontario Manufacturing, incorporated in Ontario, Canada in June 2010, where we manufacture solar modules;

Canadian Solar (Australia) Pty., Ltd., incorporated in New South Wales, Australia in February 2011, though which we conduct marketing and sales activities in Australia;

Canadian Solar International Limited, incorporated in Hong Kong in March 2011, through which we carry out sales and marketing activities;

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Canadian Solar O&M (Ontario) Inc., incorporated in Ontario, Canada in May 2011, through which we operate and maintain solar farms;

CSI-Cenergy Holdings, LLC, incorporated in California, USA, in July 2011, through which we develop solar power projects;

Suzhou Sanysolar Materials Technology Co., Ltd., incorporated in August 2011 in Suzhou, China where we produce solar module materials;

Canadian Solar South East Asia Pte., Ltd., incorporated in Singapore in September 2011, through which we carry out sales and marketing activities in Southeast Asia;

CSI Project Holdco LLC, incorporated in Delaware, USA in November 2011, through which we develop solar power projects;

Canadian Solar Manufacturing (Suzhou) Inc., or CSI Suzhou Manufacturing, incorporated in Suzhou, China in February 2012. CSI Suzhou Manufacturing is a joint venture formed by us and two Suzhou-based companies, Suzhou Science & Technology Town Co., and Suzhou New District Economic Development Group Corporation for the purpose of building and operating a 600 MW cell production facility and a 600 MW module production facility, located in Suzhou, China;

Canadian Solar South Africa Pty., Ltd, incorporated in Bryanston, South Africa, in June 2012, which carries out sales and marketing activities in South Africa;

Canadian Solar Brasil Servicos De Consultoria EM Energia Solar Ltda., incorporated in Sao Paulo, Brazil in November 14, 2012, through which we carry out energy consultancy, certification and importation activities in Brazil;

Canadian Solar Middle East Ltd., incorporated in Abu Dhabi, United Arab Emirates in December 10, 2012, through which we carry out marketing, energy generation and consultancy activities in Middle East;

Canadian Solar International Project Holding Limited, incorporated in Hong Kong in January 2013, through which we intend to carry out financing activities for our project business; and

Canadian Solartronics (Suzhou) Co., Ltd., incorporated in Suzhou, China in March 2013, through which we intend to carry out solar power project development and consulting services in China.

See "Item 4. Information on the Company C. Organizational Structure" for additional information on our corporate structure.

Our principal executive office is located at 545 Speedvale Avenue West, Guelph, Ontario, Canada N1K 1E6. Our telephone number at this address is (1-519) 837-1881 and our fax number is (1-519) 837-2550.

Our principal place of business is located at No. 199 Lushan Road, Suzhou New District, Suzhou, Jiangsu 215129, People's Republic of China.

All inquiries to us should be directed at the address and telephone number of our principal executive offices set forth above. Our website is www.canadiansolar.com. The information contained on or accessible through our website does not form part of this annual report.

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B. Business Overview

Overview

We design, develop, and manufacture solar wafers, cells and solar module products that convert sunlight into electricity for a variety of uses. We are incorporated in Canada and conduct most of our manufacturing operations in China. Our products include a range of solar modules built to general specifications for use in a wide range of residential, commercial and industrial solar power generation systems. We also design and produce specialty solar modules and products based on our customers' requirements. Specialty solar modules and products consist of customized solar modules that our customers incorporate into their own products, such as building integrated photovoltaic modules, or BIPV modules, and complete specialty products, such as portable solar home systems and solar-powered car battery chargers. We sell our products under our "Canadian Solar" brand name and to OEM customers under their brand names. In addition, we also sell total solar power system kits for residential applications, and build-to-order solar systems for commercial and solar power plants for utility-scale applications.

We believe we offer one of the broadest crystalline silicon solar module product lines in the industry. Our product lines range from modules of medium power, to high efficiency, high-power output mono-crystalline modules, as well as a range of specialty products. We currently sell our products to a diverse customer base in various markets worldwide, including Germany, Spain, Italy, France, the Czech Republic, the U.S., Canada, China, Japan and India, among others. We sell our standard solar modules to distributors and system integrators, as well as to solar project developers. We sell our solar power system kits to distributors and installers, and we sell our commercial system and utility-scale power plants to independent power producers and investors.

We employ a flexible (or virtual) vertically integrated business model that combines internal manufacturing capacity with direct material purchases for both cells and wafers. We believe this approach has benefited us by lowering the cost of materials of our module products. We also believe that this approach provides us with greater flexibility to respond to short-term demand increases.

Over the past several quarters we have taken steps to become more vertically integrated at the cell to module production steps of the manufacturing value chain. As of December 31, 2012, we had:

- 2.4 GW of total annual solar module manufacturing capacity, 330 MW of which is located in Ontario, Canada with the balance located in China;
- 1.6 GW of total annual solar cell manufacturing capacity in China; and
- 216 MW of total annual ingot and wafer manufacturing capacity in China.

We intend to use substantially all of the silicon wafers that we manufacture to supply our own solar cell plant and to use substantially all of the solar cells that we manufacture to produce our own solar module products.

We are focused on reducing our production costs by improving solar cell conversion efficiency, enhancing manufacturing yields and reducing raw material costs. In January 2009, we established a new solar cell efficiency research center to develop more efficient cell structures, and we have been making ongoing improvements in solar cell conversion efficiency and product cost control. We began shipping new products, such as higher efficiency modules, in late 2011 and expect to increase the sales volumes of these products during 2013.

In the fourth quarter of 2009, we began the conversion of our first cell line to Enhanced Selective Emitter, or ESE, production, and we started to ship ESE-based module products in March 2010. By December 31, 2012, our total ESE capacity was 60 MW.

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In the third quarter of 2011, we began the conversion of some of our cell lines to Efficient Long-Term Photovoltaic Solution, or ELPS, production. We began shipping ELPS-based modules in November 2011 and expect to build our capacity for ELPS-based cells and modules to 180 MW by the end of 2013.

Our Products and Services

We design, develop, manufacture and sell solar cell and solar module products, primarily standard solar modules. We are also engaged in the total solution business, which includes solar power project development and sales, EPC services, O&M services and sales of solar system kits.

Standard Solar Modules

Our standard solar modules are arrays of interconnected solar cells encapsulated in weatherproof frames. We produce a wide variety of standard solar modules, ranging from 0.2 W to in excess of 300 W in power and using multi-crystalline or mono-crystalline cells in several different formats, including general purpose 60 pieces 6" cell and 72 pieces 5" cell formats, small modules for specialty products (see below) and larger formats for ground-mounted projects. Larger formats include a 72 pieces 6" cell format and a 96 pieces 5" cell format. In 2009, most of the modules that we shipped were assembled with 6" multi-crystalline cells. In 2010, we started shipping a higher percentage of modules assembled with 6" monocrystalline cells.

We have applied for and received quality and safety certifications for modules with improved frames for rail-less mounting systems, an AC module and higher-powered modules in standard formats, such as a 60 pieces 6" cell, 260 W module. We expect such modules to be substantially cheaper to install because they require less labor and materials, especially in rooftop applications. In the third quarter of 2011, we began assembling modules using ELPS, a wrap-through cell architecture, on a commercial basis. These modules can achieve module conversion efficiencies in excess of 19%. In 2012, our research and development team continued to improve the cell efficiency of ELPS, bringing the efficiency under laboratory conditions to 21.1%.

We successfully launched high powered ELPS modules in Japan at the beginning of 2012. ELPS modules in 48 cells with 215 W power output are used in residential solar power systems in Japan, and ELPS modules in 60 cells with 270 W power output are mainly used in commercial PV systems of up to 2 MW in Japan. We also began developing Quartech modules using 4 bus bar solar cell technology, which improves module reliability and efficiency. Quartech modules in 6 × 10 cell arrays have module power wattages of between 250 W and 255 W. With this cell technology improvement, we will be able to offer customers higher module wattages. We expect to launch new Quartech modules in March 2013. During 2012, we also developed and are offering to customers a Residential AC module that addresses some of the limitations of the first generation micro inverters. Our Residential AC module is designed to save installers time and materials during installation and provide homeowners with a cost effective and reliable solution. These products are built to general specifications for a wide range of residential, commercial and industrial solar power generation systems.

We design our standard solar modules to be durable under harsh weather conditions and easy to transport and install. We sell our standard solar modules under our brand name and to OEM customers under their brand names. Since we began selling our solar module products in March 2002, we have increased our annual module production capacity from 2.0 MW to 2.4 GW as of December 31, 2012.

Specialty Solar Modules and Products

As part of our strategy to broaden our products portfolio and address a wider cross section of the solar power market, we have been actively developing our building integrated photovoltaic, or BIPV,

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product line. Our BIPV products have various advantages over standard solar modules, including improved aesthetics, direct integration into building structures and the ability to be used in a wider range of applications, including residential and commercial roofing and architectural glazing. We used our BIPV products and systems in our BIPV solar glass roofing system project in Luoyang and we supplied BIPV products and systems for facilities at the Beijing Olympic Games. We believe that the demand for BIPV solutions will grow in our key markets, including China, Europe and North America. We plan to work closely with our customers to design and develop specialty solar modules and products that meet their individual requirements.

Solar Cells

We completed construction of four solar cell production lines in 2007, and we have gradually expanded our total annual solar cell nameplate production capacity to 1.6 GW as of December 31, 2012. Going forward, we expect to continue to increase our cell capacity in line with the growth in demand for our solar module products. We intend to use substantially all of our solar cells to manufacture our own solar module products.

We make our solar cells from both mono-crystalline and multi-crystalline silicon wafers through multiple manufacturing steps, including surface texturization, diffusion, plasma-enhanced chemical vapor deposition and surface metallization. A functional solar cell generates a flow of electricity when exposed to light. The metal on the cell surface collects and carries away the current to the external circuitry.

Solar System Kits

We began selling solar system kits in 2010, and today we sell them primarily to the Canadian and Japanese markets. A solar system kit is a ready-to-install package consisting of solar modules produced by us and components, such as inverters, racking system and other accessories, supplied by third parties. A typical residential rooftop solar system generates approximately 3.0 KW AC output. A commercial rooftop solar system generates between 30 KW to 500 KW AC output. Both are mounted on the rooftop of buildings.

Solar Power Development Projects

We also develop, build and sell solar power projects. Prior to 2008, we completed projects in Western China and conducted solar power forums in Beijing, Xining, Suzhou and Luoyang.

In early 2010, we began to ship CE certified 11 to 14 kW two-axis trackers for ground-mounted applications. We are also developing single-axis trackers and smaller trackers intended for smaller ground-mounted installations.

In the second half of 2009, we began developing utility-scale solar energy farm projects, also referred to as solar power plant projects, and partnering with solar energy farm project developers. Once completed, the solar power plants are sold to end-buyers such as independent power producers or infrastructure fund investors. In December 2009, we completed a solar power plant project in Germany and we started to construct similar projects in Canada in 2011.

In December 2011, we entered into a sales agreement with TransCanada Energy Ltd., an affiliate of TransCanada Corporation, a North American energy infrastructure company. Under this agreement, TransCanada Energy Ltd. will acquire from us nine solar power plants totaling 86 MW for approximately C$470 million ($472 million). We completed construction of two plants in the fourth quarter of 2012. These plants are now in the testing phase before completion of their sale to TransCanada Energy Ltd. We expect to complete construction of six additional plants in 2013 and one in the first quarter of 2015.

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In June 2012, we completed the acquisition of a majority interest in 16 solar power plant projects in Ontario, Canada, representing approximately 190 MW DC to 200 MW DC, from SkyPower Limited, or SkyPower, for a total consideration of approximately C$185 million ($186 million).

In August 2012, we completed the sale of our first utility-scale solar power plant in Canada, representing approximately 11 MW DC, to Stonepeak Infrastructure Partners for approximately C$48.0 million ($48.2 million).

In December 2012, we entered into an agreement with SunEdison Power Canada Inc., or SunEdison, to acquire four solar power plant projects, representing approximately 46.5 MW DC, for an aggregate transaction price of approximately C$37.0 million ($37.2 million).

Solar System EPC Contracting and Subcontracting

In late 2010, we began entering into a number of EPC contracting arrangements with solar project development partners in Canada. Under these arrangements, the solar farm project developer owns the project and we are contracted to perform the engineering design, procurement and construction work for the project.

In 2012, we entered into EPC contract and O&M service agreement with Penn Energy Renewables Ltd. for the construction and operation of three solar farm projects, totaling 28.7 MW AC, in Ontario, Canada.

Operating and Maintenance Services

In the second half of 2012, we started to provide O&M services, for solar power plants in commercial operations. Depending on the terms of our O&M service contracts, our O&M services include inspections, repair and replacement of plant equipment, site management and administrative support services.

Supply Chain Management

Our business depends on our ability to obtain a stable and cost-effective supply of polysilicon, silicon wafers and solar cells. Our principal wafer suppliers include GCL, ReneSola and Konca. Our principal solar cell suppliers include Topcell, Shunfeng and Neo Solar. Although this strategy may reduce our gross margin, it has allowed us to commit less capital in the form of pre-payments to polysilicon manufacturers compared to other solar module producers of our size and to reduce our capital expenditures for ingot and wafer capacity.

In the third quarter of 2010, silicon wafer and polysilicon supply tightened compared to previous years. However, these raw materials began to decrease in price during the fourth quarter of 2010 and moved back into an oversupply environment in 2011. The oversupply environment continued into 2012 across the entire photovoltaic supply chain, particularly at the polysilicon production stage. See "Item 3. Key Information D. Risk Factors Risks Related to Our Company and Our Industry We have, from time to time, entered into long-term supply agreements with polysilicon and wafer suppliers. Long-term supply agreements may make it difficult for us to adjust our raw material costs should prices decrease. Also, if we chose to prematurely terminate any of these agreements, we may not be able to recover all or any part of the advance payments we have made to these suppliers and we may be subject to litigation."

Through the third quarter of 2010, polysilicon remained relatively inexpensive at $45 to $55 per kilogram. In late 2010, polysilicon increased to approximately $80 to $90 per kilogram but decreased to approximately $27 per kilogram by December 31, 2011 and to $24.66 per kilogram by December 31, 2012 due to oversupply. In 2013, we expect that there will continue to be a modest oversupply of polysilicon materials and that polysilicon prices will remain low. We plan to continue to purchase most

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of our silicon wafers and all of our polysilicon requirement externally. We are currently diversifying our wafer and polysilicon suppliers, particularly with top tier international suppliers.

Silicon Raw Materials and Solar Wafers

Silicon feedstock, which consists of high-purity solar grade silicon, is the starting point of the silicon based solar PV module supply chain. Our current principal suppliers of silicon wafers are GCL, ReneSola and Konca.

Our silicon wafer agreements set forth price and quantity information, delivery terms and technical specifications. Generally, payment is required after delivery has been made and the product has been inspected and approved by us. While the contracts set forth specific price terms, most of them also include mechanisms to change the price, either upwards or downwards, based on market conditions. We require the seller to bear the costs and risks of transporting solar wafers to our facilities. We currently do not have any long-term supply contracts for silicon wafers with fixed price or quantity terms.

In 2007 and 2008, due to shortages of polysilicon and silicon wafers, we entered into a number of long-term supply agreements with several silicon and wafer suppliers in an effort to secure raw materials to meet our production requirements. These suppliers included GCL, Neo Solar, Deutsche Solar, LDK and a UMG-Si supplier.

In response to a decline in the price of polysilicon, beginning in 2009, we began discussing adjustments in the unit price and volume terms under our supply agreements with these suppliers. In 2009 and thereafter, we amended our agreements with certain of these suppliers to adjust the purchase price to prevailing market prices at the time we place a purchase order and to reduce the quantity of products that we are required to purchase. Under our supply agreements with certain suppliers, and consistent with historical industry practice, we made advance payments prior to scheduled delivery dates. The advance payments were made without collateral and were to be credited against the purchase prices payable by us. As of December 31, 2012, the balance of advance payments made to suppliers totaled $45.4 million.

See "Item 3. Key Information D. Risk Factors Risks Related to Our Company and Our Industry We have, from time to time, entered into long-term supply agreements with polysilicon and wafer suppliers. Long-term supply agreements may make it difficult for us to adjust our raw material costs should prices decrease. Also, if we chose to prematurely terminate any of these agreements, we may not be able to recover all or any part of the advance payments we have made to these suppliers and we may be subject to litigation."

Solar Cells

In addition to manufacturing our own solar cells and toll manufacturing arrangements with our solar cell suppliers, we purchase solar cells from a number of international and local suppliers, including Topcell, Shunfeng and Neo Solar.

Our solar cell agreements set forth price and quantity information, delivery terms and technical specifications. Generally, payment is required within a certain number of days after delivery. These contracts generally provide for a period of time during which we can inspect the product and request the seller to make replacements for damaged goods. We generally require the seller to bear the costs and risks of transporting solar cells until they have been delivered to the location specified in the contract. We currently do not have any long-term supply contracts for solar cells with fixed price or quantity terms.

Although we have established relationships with cell suppliers, we experienced a shortage of solar cell supplies in late 2009 and 2010. As we expand our business, we expect to increase our solar cell manufacturing capacity and diversify our solar cell supply channel to ensure we have the flexibility to adapt to future changes in the supply of, and demand for, solar cells.

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Solar Module Manufacturing

We assemble our solar modules by interconnecting multiple solar cells by tabbing and stringing them into a desired electrical configuration. We lay the interconnected cells, laminate them in a vacuum, cure them by heating and package them in a protective lightweight anodized aluminum frame. We seal and weatherproof our solar modules to withstand high levels of ultraviolet radiation, moisture and extreme temperatures.

We selectively use automation to enhance the quality and consistency of our finished products and to improve the efficiency of our manufacturing processes. Key equipment in our manufacturing process includes automatic laminators, simulators and solar cell testers. The design of our assembly lines provides flexibility to adjust the ratio of automated equipment to skilled labor in order to maximize quality and efficiency. We purchase our manufacturing equipment primarily from Chinese suppliers. Our proximity to these Chinese manufacturers is an advantage because they typically sell manufacturing equipment at more competitive prices than similar international equipment manufacturers. We source critical testing equipment from international manufacturers.

Quality Control and Certifications

We have registered our quality control system according to the requirements of ISO 9001:2000 and ISO/TS 16949 standards. The latter quality control standard originated from the QS 9000 and VDA quality systems and is now the world-wide quality system standard for the automotive industry. TUV Rheinland Group, a leading international service company that documents the safety and quality of products, systems and services, audits our quality systems. We inspect and test incoming raw materials to ensure their quality. We monitor our manufacturing processes to ensure quality control and we inspect finished products by conducting reliability and other tests.

We have obtained IEC 61215 and IEC 61730 (previously TUV Class II safety) European standards for sales in Europe. We have also obtained certifications of CAN ORD-UL 1703 and UL 1703, which allow us to sell products in North America. In 2009, we obtained the necessary certifications to sell our modules in Japan, South Korea and Great Britain and to several of the Chinese solar programs, including Golden Sun. We have obtained IEC and UL certifications for higher-powered modules of 280 W and above, a solar laminate for BIPV applications in France with TUV certification. In 2011, we completed IEC61215/61730 and UL1703 certification for modules designed to be assembled from metal wrap-through cells, and extended laminate certification in North American market. Our certified portfolio was also increased with the addition of model CS5P-P and several small models. Power outputs for our product portfolio were further increased through the qualification of quasi-mono wafers. In 2011, we also completed DLG ammoniac resistance testing and obtained the salt mist certification for our leading module CS6P-P. In 2012, we achieved the highest ratings possible in the two most significant standard tests for ammonia resistance of solar modules, which were the IEC62716 draft C ammonia corrosion test and the DLG standard test. In 2013, we extended the salt mist certification under IEC 61701 ed.2 Severity 1 to all of our standard PV modules at VDE. In addition, we were able to register more key module types at JET for Japan; enhanced the maximum system voltage up to 1000V for our CSA certification (North America), allowing significant cost reduction for our EPC partners; and again raised the ranking of CEC PTC ratings.

We successfully assisted Suzhou Gaochuangte New Energy Co., Ltd. (an EPC company in which we have invested) to receive the first PV plant certificate from TUV SUD in China under the IEC 62446 standard. The new half-cell module designed by our R&D team was fully certified by CSA and VDE, two worldwide recognized certification bodies, in 2012. We also started providing our customers with third-party-approved PAN files (testing per IEC61853-1) for all our key module series, allowing more accurate energy yield simulation and better return-on-investment analysis for their projects. In 2013, we intend to obtain certifications for double glasses and DC-to-AC/DC-to-DC module designs. We will continue our efforts for general improvements in module and component designs and

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seek to obtain corresponding certifications. With the emergence of new markets that we are expanding into, we have made and expect to make efforts to comply with new certification schemes that apply to us, such as INMETRO for Brazil and the UNI9177 fire test for Italy that we have now complied with.

Our PV test laboratory is registered with the ISO 17025 quality improvement program, and has been accepted for the Mutual Data Acceptance Program by the CSA in Canada, VDE in Germany, Intertek in the U.S. and CGC in China. The PV test laboratory allows us to conduct some product certification testing in-house, which should decrease time-to-market and certification costs.

Markets and Customers

We sell our standard solar modules primarily to distributors, system integrators and OEM customers. Our distributor customers include companies that are exclusive solar component and system distributors and engineering and design firms that include our standard solar modules in their system installations. Our system integrator customers typically design and sell complete, integrated systems that include our standard solar modules along with other system components. We sell our solar modules and products to various manufacturers who either integrate these products into their own products or sell and market them as part of their product portfolio. Our standard solar module customers include leading solar distributors and system integrators. Our specialty solar module and products customers include manufacturers who incorporate our customized solar modules in their bus stop, road lighting and marine lighting products.

A small number of customers have historically accounted for a major portion of our net revenues. In 2010, 2011 and 2012, our top five customers by net revenues collectively accounted for approximately 26.0%, 29.2% and 25.5%, respectively, of our total net revenues. Sales to our largest customer in those years accounted for 11.0%, 6.6% and 8.4%, respectively, of our total net revenues.

The following table sets forth, for the periods indicated, certain information relating to our total net revenues derived from our customers categorized by their geographic location for the periods indicated:

	Years Ended December 31,					
	2010		2011		2012	
Region	Total Net Revenues	%	Total Net Revenues	%	Total Net Revenues	%
	(In thousands of $, except for percentages)					
Europe	1,193,449	79.8	1,233,201	65.0	656,460	50.7
Asia and others	186,366	12.5	330,803	17.4	296,117	22.9
America	115,694	7.7	334,918	17.6	342,252	26.4
Total	1,495,509	100.0	1,898,922	100.0	1,294,829	100.0

As we expand our manufacturing capacity and enhance our brand name, we continue to develop new customer relationships in a wider range of geographic markets to decrease our market concentration. In 2012, we significantly increased our total number of customers, gained market share in Europe, the U.S. and Japan and achieved a leading market share in India, Canada, and Chile. We strive to achieve or maintain a leading market share in Thailand, Japan, India, Canada and Chile in 2013, while exploring other emerging solar markets, including Southeast Asia, Africa, the Middle East, Central Asia and South America. These markets have been significantly influenced by past and current government subsidies and incentives. While we expect to expand our markets, we expect that the European markets will remain our major markets in the near future.

Germany. The renewable energy laws in Germany require electricity transmission grid operators to connect various renewable energy sources to their electricity transmission grids and to purchase all electricity generated by such sources at guaranteed feed-in tariffs. Additional

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regulatory support measures include investment cost subsidies, low-interest loans and tax relief to end users of renewable energy.

Germany's renewable energy policy has had a strong solar power focus, which contributed to Germany's surpassing Japan in 2004 as the leading solar power market in terms of annual installation growth. According to Solarbuzz, the German market remained the largest single-country market in the world, growing slightly year-over-year, from 7.45 GW at the end of 2011 to 7.50 GW at the end of 2012. Our products are used in large, ground-mounted solar power fields, commercial rooftops and residential rooftops. After the unprecedented expansion in December 2011, the German government decided on another amendment of the Renewable Energy Act, which became effective on April 1, 2012. This new law implemented a considerable reduction of the feed-in tariff initially, and set monthly decline of 1% of feed-in tariff until October 1, 2012. Since October 1, 2012, the monthly decline of feed-in tariff was modified every three months based on market conditions. The reduction rates of feed-in tariff for November 1, December 1, 2012, and January 1, 2013 were 2.5%. The new Renewable Energy Act excludes new PV systems above 10 MW from being eligible for the feed-in tariff. A "Market Integration Model" was also introduced, which allows for systems above 10 kW and up to 1 MW to be paid a feed-in tariff for only 90% of electricity produced with the remaining electricity being either self-consumed or sold on the free market.

Spain. According to Solarbuzz, the Spanish market shrunk by 46.6% from 483 MW in 2011 to 258 MW in 2012. In Spain, the feed-in tariff for solar power energy is fully guaranteed for the first 25 years of system operation and 80% thereafter. The Spanish feed-in tariff for applications of less than 100 kWh was initially €0.4404 per kWh for the first 25 years of system operation and €0.3523 per kWh thereafter for systems installed until September 2008. Funding for the national PV program during 2010 was regulated by Royal Decree RD1578/2008. The quarterly quota calls allocate awards and modify feed-in tariff rates according to fulfillment of quota. In February 2013, the annual feed-in tariff revision to the consumer price index was modified, resulting in negative feed-in tariff movement. The National Renewable Energy Action Plan (2012-2020) of Spain reduced significantly the renewable energy content planned for 2020 from previous plans. Current plan contemplates further reducing the 2020 PV target from 8.5 GW as set forth in the National Renewable Energy Action Plan to 7 GW.

Czech Republic. According to Solarbuzz, the Czech Republic market increased approximately 58% from 51 MW in 2011 to 121 MW in 2012. The country's initial legal basis for establishing feed-in tariff rates for electricity from renewable energy sources was set by the Renewable Energy Law on August 1, 2005. The respective remuneration rates became effective on January 1, 2006. The PV funding scheme in the Czech Republic is based on two alternative funding mechanisms, a feed-in tariff system and a green bonus scheme. The feed-in tariffs (and green premium rates) for the next calendar year are determined by the Energy Regulatory Office in November each year. The feed-in tariff rate for existing installations increases each year typically between 2% and 4%, depending on the consumer price index. There is no fixed annual reduction of tariffs for newly installed systems. As with the feed-in tariffs, the green bonus rates are also paid over 20-year duration, and the tariffs for already existing systems are adjusted annually. The green bonus remuneration has also depended on the system size from 2009. In March 2010, the government enacted a law that allowed a reduction of the incentive tariffs for newly installed systems to exceed 5% per year. In addition, it implemented a third system size category. In February 2013, the government indicated it might further decrease funding for PV with the focus shifting towards "more efficient renewable energy".

Italy. According to Solarbuzz, the Italian market shrunk by 46% from 6.21 GW in 2011 to 3.35 GW in 2012. At the end of 2011, the Italian feed-in tariff for systems ranged from €0.172 per kWh, for larger ground-mounted systems, to €0.298 per kWh for smaller BIPV

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systems, a relatively modest decline from the previous year's rates. System owners may also benefit from self-consumption with a reduced electrical bill. The Italian market saw an enormous boost in large installations in 2009, 2010 and 2011, and the Italian government is expected to implement much lower feed-in tariffs in order to control the market growth. In August 2012, the funding scheme Conto Energia V became effective. The new scheme put a strong focus on roof systems and self-consumption.

North America. According to Solarbuzz, the North America territory installed 3.49 GW in 2012, becoming third in the world in terms of solar capacity installed in 2012. The North American market is comprised of two countries, the United States and Canada.

In the United States, over 10 states offer significant incentives, with California offering the most preferential incentives. In January 2006, the California Public Utilities Commission enacted the California Solar Initiative, a $2.9 billion program that subsidizes solar power systems by $2.80 per watt. Due to excessive demand, this subsidy was reduced to $2.50 per watt. Combined with federal tax credits for solar power usage, the subsidy may account for as much as 50% of the cost of a solar power system. The program will last until 2016 and is expected to dramatically increase the use of solar power for on-grid applications in California. Incentives in other U.S. states include state renewable energy credits, capital subsidies and in some states, such as Vermont, feed-in tariff. Many states and various federal departments are also subject to renewable energy portfolio standards that mandate minimum percentages of renewable energy production by utilities. These provisions were further expanded in 2010 to include a cash grant in lieu of the investment tax credit and were uncapped with respect to system size (the previous maximum rebate was $2,000) to allow larger organizations such as utilities to take advantage of the tax credit or cash in-lieu of the grant for large scale projects. The constrained appetite for tax equity may limit the effectiveness of some of these provisions, such as accelerated depreciation. This federal cash grant program was closed to new applications at the end of 2011, and during 2012, over $2 billion project funds were awarded to renewable energy projects. Despite the decline in PV incentives during the year, separate renewable energy portfolio standards of various states kept demand strong for PV systems in the U.S. market.

The Canadian market was driven almost entirely by Ontario in 2012, which stimulated market demand via its feed-in tariff program. The Ontario market was once driven by RESOP, a program that offered renewable energy projects up to 10 MW a guaranteed tariff of C$0.42/kWh for 20 years. The program closed in May 2008 due to overwhelming uptake and projects in the pipeline were frozen until May 2009 when Ontario passed the Green Energy Act and with it a new feed-in tariff program. Both programs were administered by the Ontario Power Authority, or OPA, which is responsible for setting rates, regulations, and monitoring all feed-in tariff activity.

China. According to Solarbuzz, China's Renewable Energy Law, which went into effect on January 1, 2006, authorizes the relevant authorities to set favorable prices for the purchase of on-grid electricity generated by solar power and provides other financial incentives for the development of renewable energy projects. China's top-level controlling agency on energy policy has been the government's central planning agency, National Development and Reform Commission of PRC, or the NDRC, with the ancillary National Energy Administration specifically focusing on energy supply and production. The National Energy Commission, a new ministerial level regulatory organization headed by Premier Wen, was established in January 2010 to oversee all energy related sectors in China.

On March 23, 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 Interim Measures, to support the development of solar PV technology in China. Local governments are encouraged to issue and implement supporting

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policies. Under the Interim Measures, a subsidy, which is set at RMB20 per watt, peaked in 2009, which covers solar PV technology integrated into building construction.

China finances its off-grid solar installations through the now-completed township program and the current village program. The five-year plan from 2006 to 2010 was targeted to provide electricity to 29,000 villages, mainly in western China. The Ministry of Housing and Urban-Rural Development (formerly, the Ministry of Construction) has promulgated directives encouraging the development and use of solar power in urban and rural areas. Various local authorities have also introduced initiatives to encourage the adoption of renewable energy, including solar power.

Beginning in March 2009, several policy initiatives were announced, including open bidding for a 20-year operating license for a 10 MW solar power plant project in Gansu Province of China and the "Golden Sun" program, which subsidizes the capital expenses of solar projects by approximately $2.00 per watt. A number of provincial incentives were announced as well. However, the central government has not approved a definitive implementation scheme or any of the provincial schemes.

The 2010 "Golden Sun" project list was released in November 2010 with 120 new projects totaling 272 MW. The subsidies provided by the government will cover 50% of the total PV project cost.

The release of the feed-in tariff in 2011 greatly stimulated the Chinese market. During 2012, the national feed-in tariff was revised from RMB1.15 per kWh to RMB1 per kWh, with provincial feed-in tariff revised to levels ranging from RMB1.2 per kWh to RMB1.3 per kWh across different provinces. The rebate level of the "Golden Sun" project was decreased to RMB8 per watt and then to RMB5.5 per watt during 2012, while the rebate level of the Solar Rooftop project was decreased to RMB7 per watt and RMB5.5 per watt for BIPV and BAPV projects respectively during the year.

Japan. According to Solarbuzz, the Japanese market showed strong growth in 2012, increasing from 1.24 GW in 2011 to 1.84 GW in 2012, or a 48% year-over-year growth. The residential segment was the primary driver of PV market uptake in Japan in 2012, as strong federal and local incentives made installing PV attractive. There has also been a push for solar uptake in Japan as a response to the decommissioning of nuclear power plants in the wake of the natural/industrial disasters of the past few years. The Japanese government has announced a long-term goal of increasing installed solar power capacity by between 20 and 55 times, which would require 28 GW or more of solar power capacity by 2020. Japan is a signatory to the Kyoto Protocol, which requires it to reduce greenhouse gas emissions by 6% from the 1990 baseline level by 2012 and by 20% by 2020. Japan currently funds a number of programs supporting domestic solar power installations and has announced a plan to begin installing solar power systems on federal buildings through 2012. As Japan will not likely reach its renewable energy (including solar) targets, Japan is increasing its incentives for solar power installations. To refuel the declining domestic market, the federal government brought back the nationwide residential subsidy in 2009. The residential program was re-launched in January 2009 under a fiscal year 2008 supplemental budget of Japanese Yen 9.0 billion. Besides the upfront cash incentives, the federal government crafted a net feed-in tariff policy, requiring electric power utilities to buy excess electricity generated by PV systems at a premium rate. In 2012, residential systems continue to be eligible for a 10-year net feed-in tariff, with electricity exported by the system compensated at Japanese Yen 42 per kWh for systems less than 10 kW in total capacity. A feed-in tariff program was also launched in July 2012 for non-residential systems, which served as one of the key factors driving demand in Japan during the year. This program was launched as a gross feed-in tariff, whereby all electricity produced receives Japanese Yen 42 per kWh for 20 years.

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Australia. According to Solarbuzz, the Australian market slightly grew by 4% from 0.75 GW in 2011 to 0.78 GW in 2012. The Australian market has been dominated by the residential segment since 2008, as a result of incentive policies that favored small-scale rooftop systems. Despite the policy revisions during 2012, residential installations were steady, reflecting the resiliency of the sector and improved economics created by PV price declines. The on-grid residential segment continued to dominate the market as the largest customer group. The main federal incentive active during 2010 was the Solar Credits program, which provided a renewable energy credit multiplier for the first 1.5 kW of small-scale renewable energy systems. The result of the program was an upfront rebate of between 4,000 Australian dollars and 6,200 Australian dollars for 1.5 kW systems depending on location. The Solar Credits program was the successor of the Solar Homes and Communities Program, or SHCP, which offered an Australian dollar 8 per watt rebate on the first 1,000 W of a solar PV system. The SHCP was cancelled in June 2009 but continued to impact 2010 market size due to the significant backlog of installations. The Solar Credits Program is part of the Renewable Energy Target, which is set to ensure that Australia will generate 45,000 GWh (20%) of its energy from renewable sources by 2020. Due to the uncertain nature of federal incentive programs, the states/territories have launched their own programs to drive PV demand. The programs that drive the vast majority of systems are feed-in tariffs. These feed-in tariffs mainly affected the residential segment as each program has different eligibility requirements that work to minimize system sizes or specify directly that the rates are only accessible by residential customers. Along with changes to programs affecting small-scale residential systems, the past year also brought news of funding changes for utility-scale projects. The biggest news came in January 2011 and concerned the Solar Flagships program. The Australia government revised its Solar Flagships program, which was originally scheduled to install 150 MW of utility-scale solar PV and 250 MW of CSP plants by 2016. As well, every region intends to have a PV specific feed-in tariff or net-metering policy in 2010. During 2012, a number of state-level policies were revised downwards or expired. The Queensland Government reduced the state's feed-in tariff from Australian Dollar 0.44 per kWh to Australian Dollar 0.08 per kWh for all applications after July 9, 2012. The state of Victoria reduced the state's feed-in tariff from Australian Dollar 0.25 per kWh to just Australian Dollar 0.08 per kWh for all systems installed after September 30, 2012, despite that the rate will be re-adjusted annually based on the wholesale electricity price.

Sales and Marketing

Standard Solar Modules

We market and sell our standard solar modules worldwide, primarily through a direct sales force and market-focused sales agents. Our direct sales personnel and sales agent representatives cover our markets in Europe, North America and Asia. Our marketing activities include trade shows, conferences, sales training, product launch events, advertising and public relations campaigns. Working closely with our sales and product development teams, our marketing team is also responsible for collecting market intelligence and supporting our sales team's lead generation efforts. We have marketing staff in the U.S., China, Europe, Canada, Japan and South Korea.

We sell our products primarily under three types of arrangements: (i) sales contracts to distributors, (ii) sales to systems integrators, EPCs and project developers ("project" customers) and (iii) OEM/tolling manufacturing arrangements.

Sales contracts to distributors and project customers. We enter into annual sales and/or distribution agreements with most of our key customers. We typically use either letters of credit or wire money transfers prior to shipping to secure payment. We also provide short-term credit sales ranging from 30 to 60 days. For some customers, we provide medium-term credit sales from 60 to 120 days. We use credit insurance coverage for credit sales. In 2012, we sold

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approximately 1,467.0 MW of modules under sales contracts to distributors and project customers.

OEM/tolling manufacturing arrangements. Under these arrangements, we purchase silicon wafers and solar cells from customers, and then sell solar module products back to the same customers, who then sell those products under their own brands. In addition, we have been using our own solar cells or cells that we purchase to make modules for a limited number of strategic customers who brand the finished solar module products with their own labels. Since 2009, this has been the primary OEM arrangement. In 2012, we sold approximately 23.1 MW of modules under the OEM arrangement.

Specialty Solar Modules and Products

We target our sales and marketing efforts for our specialty solar modules and products at companies in selected industry sectors, including the automotive, telecommunications and light-emitting diode, or LED, lighting sectors. As standard solar modules increasingly become commoditized and technology advancements allow solar power to be used in more off-grid applications, we will expand our sales and marketing focus on our specialty solar modules and products and capabilities. Our sales and marketing team works with our specialty solar modules and products development team to take into account changing customer preferences and demands to ensure that our sales and marketing team is able to effectively communicate to customers our product development changes and innovations. We intend to establish additional relationships in other market sectors as the specialty solar modules and products market expands.

Solar System Kits

In 2010, we commenced the sale of solar system kits. A solar system kit is a ready-to-install package consisting of solar modules produced by us and components, such as inverters, racking system and other accessories, supplied by third parties. In 2012, we sold approximately 38.7 MW of system kits primarily in Canada and Japan.

Solar Power Development Projects

In the second half of 2009, we began partnering with solar farm project developers to develop and construct solar farm projects. In April 2010, the OPA in Ontario, Canada, awarded us and our partners contract offers for 176 MW AC of open-field solar power generation projects. The projects were developed in partnership with several leading renewable energy developers in the Ontario market. In December 2011, we entered into a sales agreement with TransCanada Energy Ltd. whereby TransCanada Energy Ltd. will acquire from us nine solar power plants totaling 86 MW AC for approximately C$470 million ($472 million). We completed construction of two plants in the fourth quarter of 2012. These plants are now in the testing phase before completion of their sale to TransCanada Energy Ltd. We expect to complete construction of six additional plants in 2013 and one in the first quarter of 2015.

In April 2012, we entered into a purchase and international joint venture agreement, with SkyPower, Canada's largest owner and developer of solar projects, to build and deploy solar energy solutions in Ontario, and to jointly develop solar projects internationally in selected emerging markets. We completed the acquisition of a majority interest in 16 solar projects representing approximately 190 MW to 200 MW DC from SkyPower in June 2012 for a total consideration of approximately C$185 million ($186 million). Each of these projects was awarded a 20-year power purchase contract by the OPA. Fifteen of these contracts were issued under Ontario's Feed-In-Tariff Program, and one was issued as part of Ontario's Renewable Energy Standard Offer Program. We have filed REA applications for all sixteen of the projects and expect to receive Notices to Proceed (NTP) with, and

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expect to start construction on, these projects prior to the end of the third quarter of 2013. These projects are expected to generate over C$800 million ($803 million) in revenue for us in the next two years. In June 2012, we also launched a 50/50 international joint venture with SkyPower to focus on developing solar power plants in selected emerging markets.

In August 2012, we completed the sale of our first utility-scale solar power plant in Canada, representing approximately 11 MW DC, to Stonepeak Infrastructure Partners for approximately C$48.0 million ($48.2 million). As the project developer, EPC and construction financier, we built the solar power plant to provide clean, renewable energy to power more than 1,200 homes in eastern Ontario near the town of Napanee.

In December 2012, we entered into an agreement with SunEdison to acquire four solar power plant projects, representing approximately 46.5 MW DC, for an aggregate transaction price of approximately C$37.0 million ($37.2 million). Under this agreement, we acquired 100% equity interest in two utility-scale solar power projects in Ontario, Canada. Subsequently we completed the purchase of one additional utility-scale solar power project in Ontario, Canada from SunEdison and are conducting due diligence on another project. When all of the above mentioned transactions are completed we expect to acquire the majority interest in a total of four utility-scale solar power projects in Canada with an option to purchase a fifth solar project at a later date from SunEdison.

During 2012, we have expanded our utility-scale project pipeline in the United States to approximately 255 MW. We expect to complete construction of solar power projects totaling approximately 100 MW in the United States in 2013.

In addition to Canada and the U.S., we have developed a robust pipeline in Japan and China and see potential for solar power projects in countries such as India and South America.

Solar System EPC contracting and subcontracting

Beginning in late 2010, we have entered into a number of EPC contracting arrangements with solar project development partners in Canada. Under these arrangements, the solar farm project developer owns the projects and we are contracted to perform the EPC work.

In August 2012, we entered into an 18.7 MW AC EPC contract and O&M service agreement with Penn Energy Renewables Ltd. for the construction and operation of two new solar farm projects in Ontario, Canada. In October 2012, this arrangement was expanded to include an additional 10 MW AC EPC contract and O&M service agreement for the construction and operation of a third solar farm project in Ontario, Canada, totaling 28.7 MW AC for the three projects. We expect to complete these projects in the second half of 2013.

In 2011, we completed approximately 23 MW of solar system EPC contracts in China, and approximately 31MW of solar system EPC contracts in Ontario, Canada. The EPC contracts in China were completed through our affiliated company, Suzhou Gaochuangte New Energy Co., Ltd., or Gaochuangte, in which we own a 40% equity interest. During 2012, we completed approximately 0.3 MW of solar system EPC contracts in Ontario, Canada. We expect to complete more EPC contracts in 2013.

Operating and Maintenance Services

In the second half of 2012, we started to provide O&M services for solar power plants in commercial operations. Depending on the terms of our O&M service contracts, our O&M services include inspections, repair and replacement of plant equipment, site management and administrative support services.

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Customer Support and Service

We typically sell our standard solar modules with a ten-year warranty against defects in materials and workmanship and a linear power performance warranty that guarantees that the actual power output of our modules will be no less than 97% of the labeled power output during the first year and will decline by no more than 0.7% annually so that, by the end of year 25, the actual power output will be no less than 80% of the labeled power output.

For utility-scale solar power projects built by us, we also provide a limited warranty against defects in workmanship under normal use, operation and service conditions for a period of five years following the energizing of the solar power plant. In resolving claims under the workmanship warranty, we have the option of remedying through repair, refurbishment or replacement of equipment.

Our customer support and service function grew in 2012. We expanded our customer resources four fold, and established two functional support groups to address technical inquiries and warranty related issues. Our current structure enhances our ability to handle our customer's questions and concerns in a timely and professional manner. There has been an increase in claims, but this increase has been in line with our higher sales volumes, and due to the resolution of legacy issues through the warranty process.

For 2013, we have renewed our product warranty insurance coverage to provide additional security to our customers. See " Insurance" below. The customer support and service function will continue to expand and to improve services to our customers. With our entry in the Ontario market for solar systems and the introduction of our Smart Module product in the North America market, a new segment in the support and service function will be created to address technical inquiries and product related issues for these two new business lines.

Competition

The market for solar module products is competitive and evolving. We compete with international companies such as SunPower, First Solar and Sharp Solar, and China-based companies such as Suntech, Yingli and Trina. Some of our competitors are developing or producing products based on alternative solar technologies, such as thin film PV materials, that may ultimately have costs similar to, or lower than, our projected costs. Solar modules produced using thin film materials, such as cadmium telluride and copper indium gallium selenide technology, are generally less efficient, with module conversion efficiencies ranging from approximately 5% to 11% according to company filings, but require significantly less silicon to produce than crystalline silicon solar modules, such as our products, and are less susceptible to increases in silicon costs. Some of our competitors have also become vertically integrated, from upstream polysilicon manufacturing to solar system integration. In addition, the solar power market in general competes with other sources of renewable and alternative energy and conventional power generation.

We believe that the key competitive factors in the market for solar module products include:

price;

the ability to deliver products to customers on time and in the required volumes;

product quality and associated service issues;

nameplate power and other performance parameters of the module, such as power tolerances;

value-added services such as system design and installation;

value-added features such as those that make a module easier or cheaper to install;

additional system components such as mounting systems, delivered as a package or bundle;

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brand equity and any good reputation resulting from the above items, including the willingness of banks to finance projects using a particular module supplier;

customer relationships and distribution channels; and

the aesthetic appearance of solar module products.

In the immediate future, we believe that our ability to compete depends on delivering a cost-effective product in a timely manner and developing and maintaining a strong brand name based on high quality products and strong relationships with downstream customers. It also depends on our ability to effectively manage our cash flow and balance sheet and to maintain our relationships with the financial institutions that fund solar projects. Consolidation of the solar industry is already occurring and is expected to continue in the near future. We believe that such consolidation will benefit our company in the long-term. We believe that the key to competing successfully in the long-term is to produce innovative, high quality products at competitive prices and develop an integrated sales approach that includes services, ancillary products, such as mounting systems and inverters, and value-added product features. We believe that a good marketing program and the strong relationships that we are building with customers and suppliers will support us in this competitive environment.

Insurance

We maintain property risk insurance policies with reputable insurance companies to cover our equipment, facilities and buildings, including improvements, office furniture and inventory. These insurance policies cover losses due to fire, floods and other natural disasters. Our manufacturing facilities in China are also covered by business interruption insurance. However, significant damage to any of our manufacturing facilities, whether as a result of fire or other causes, could still have a material and adverse effect on our results of operations. We have maintained general commercial and product liability coverage at the same levels since 2009. We have also been actively working with China Export & Credit Insurance Corporation, or Sinosure, since early 2008. Credit insurance is designed to offset the collection risk of our account receivables for customers within the credit limits approved by Sinosure. Risks related to marine, air and inland transit for the export of our products and domestic transportation of materials and products are covered under cargo transportation insurance. We also maintain director and officer liability insurance. We consider our overall insurance coverage to be adequate. We currently take a 1% warranty provision against our revenue on solar modules and 0.8% warranty provision against our revenue on sales of solar system kits and solar power projects.

Since April 2010, we have purchased product warranty insurance policies underwritten by A-rated insurance companies on an annual basis to back up our product warranties. These insurance policies apply to our warranty against defects in workmanship and material and our warranty relating to power output. The costs of these policies are charged to cost of revenues as part of warranty cost in the period the covered modules, solar system kits and solar power projects were sold. We believe that our warranty improves the marketability of our products and our customers are willing to pay more for products with warranties backed by insurance.

Environmental Matters

Except for as disclosed in the "Item 3. Key Information D. Risk Factors Risks Related to Doing Business in China," we believe we have obtained the environmental permits necessary to conduct the business currently carried on by us at our existing manufacturing facilities. We have conducted environmental studies in conjunction with our solar power development projects to assess and reduce the environmental impact of our facilities.

Our products must comply with the environmental regulations of the jurisdictions in which they are installed. We make efforts to ensure that our products comply with the EU's Restriction of Hazardous

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Substances Directive, which took effect in July 2006, by reducing the amount of lead and other restricted substances used in our solar module products.

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.

Government Regulations

This section sets forth a summary of certain 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 revised in December 2009. The revised Renewable Energy Law, which became effective on April 1, 2010, sets forth policies to encourage the development and use of solar energy and other non-fossil energy and their 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 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 photovoltaic 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 subject to certain regulations of the relevant authorities.

In November 2005, the NDRC promulgated the Renewable Energy Industry Development Guidance Catalogue, in which solar power figured prominently. In January 2006, the NDRC promulgated two implementation directives with respect to the Renewable Energy Law. In January 2007, the NDRC promulgated another related implementation directive. These directives set forth specific measures for setting the price of electricity generated by solar and other renewable power generation systems, for sharing additional expenses, and for allocating administrative and supervisory authority among different government agencies at the national and provincial levels. They also stipulate the responsibilities of electricity grid companies and power generation companies with respect to the implementation of the Renewable Energy Law.

In August 2007, the NDRC promulgated the Medium and Long-Term Development Plan for the Renewable Energy Industry. This plan sets forth national policy to provide financial allowance and preferential tax regulations for the renewable energy industry. A similar demonstration of the PRC government's commitment to renewable energy was also stipulated in the Eleventh Five-Year Plan for Renewable Energy Development, which was promulgated by the NDRC in March 2008. The Outline of the Twelfth Five-Year Plan for National Economic and Social Development of the PRC, which was approved by the National People's Congress in March 2011, and the Twelfth Five-Year Plan for Renewable Energy Development, which was promulgated by the National Energy Administration in August 2012 also demonstrates a commitment to promote the development of renewable energy to enhance the competitiveness of the renewable energy industry.

China's Ministry of Housing and Urban-Rural Development (formerly, the Ministry of Construction) also issued a directive in June 2005 which seeks to expand the use of solar energy in residential and commercial buildings and encourages the increased application of solar energy in different townships. Similarly, China's State Council promulgated a directive in July 2005, which sets forth specific measures to conserve energy resources. In November 2005, China's Ministry of Housing

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and Urban-Rural Development promulgated the Administrative Provisions on Energy Conservation for Civil Constructions which encourages the development of solar energy. In August 2006, the State Council issued the Decision on Strengthening the Work of Energy Conservation which encourages the great development of the solar energy and other renewable energy. In addition, on April 1, 2008, the PRC Energy Conservation Law came into effect. Among other objectives, this law encourages the installation of solar power facilities in buildings to improve energy-efficiency. In July 2009, China's Ministry of Finance and Ministry of Housing and Urban-Rural Development jointly promulgated "the Urban Demonstration Implementation Program of the Renewable Energy Building Construction" and "the Implementation Program of Acceleration in Rural Application of the Renewable Energy Building Construction" to support the development of the new energy industry and the new energy-saving industry.

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 development of solar photovoltaic technology in China. Local governments are encouraged to issue and implement supporting policies. Under the Interim Measures, a subsidy, which is set at RMB20 per Watt-peak for 2009, will cover solar PV technology integrated into building construction. The Interim Measures do not apply to projects completed before the promulgation date of the Interim Measures. Also in March 2009, China's Ministry of Finance and Ministry of Housing and Urban-Rural Development jointly promulgated the Implementation Opinion on Acceleration in the Application of Solar Photovoltaic Technology in Building Construction. On March 8, 2011, China's Ministry of Finance and Ministry of Housing and Urban-Rural Development jointly promulgated the Notice on Further Application of Renewable Energy in Building Construction, which aims to raise the percentage of renewable energy used in buildings.

In July 2009, China's Ministry of Finance and Ministry of Science and Technology and the National Energy Administration jointly published an announcement containing the guidelines for the "Golden Sun" demonstration program. Under the program, the PRC government will provide a 50%-70% subsidy for the capital costs of PV systems and the relevant power transmission and distribution systems for up to 20 MW of PV system projects in each province, with the aim to industrialize and expand the scale of China's solar power industry. The program requires that each PV project must have a minimum capacity of 300 kW, be completed within one year and have an operational term of not less than 20 years. On September 21, 2010 and November 19, 2010, China's Ministry of Finance, Ministry of Science and Technology, Ministry of Housing and Urban-Rural Development and the National Energy Administration published two announcements regarding the "Golden Sun" demonstration program to specify the terms for bid solicitation for key equipment and the standards for subsidies and supervision and management of projects.

In September 2009, the PRC State Council approved and circulated the Opinions of the National Development and Reform Commission and other Nine Governmental Authorities on Restraining the Production Capacity Surplus and Duplicate Construction in Certain Industries and Guiding the Industries for Healthy Development. These opinions concluded that polysilicon production capacity in China has exceeded the demand and adopted the policy of imposing more stringent requirements on the construction of new polysilicon manufacturing projects in China. These opinions also stated in general terms that the government should encourage polysilicon manufacturers to enhance cooperation and affiliation with downstream solar product manufacturers to extend their product lines. However, these opinions do not provide any detailed measures for the implementation of this policy. As we are not a polysilicon manufacturer and do not expect to manufacture polysilicon in the future, we believe the issuance and circulation of these opinions will not have any material impact on our business or our silicon wafer, solar cell and solar module capacity expansion plans.

In July 2011, the NDRC issued the Circular on Improving the On-Grid Price Policy for Photovoltaic Power, which aims to stimulate the photovoltaic power industry by regulating the price of

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photovoltaic power. On August 21, 2012, China's Ministry of Finance and Ministry of Housing and Urban-Rural Development jointly promulgated the Notice on Improving Policies for Application of Renewal Energy in Building and Adjusting Fund Allocation and Management Method, which aims to promote the use of solar energy and other new energy products in public facilities and residences, further amplifying the effect of the policies for application of renewable energy in buildings.

Environmental Regulations

As we have expanded our ingot, silicon wafer and solar cell manufacturing capacities, we have begun to generate material levels of noise, wastewater, gaseous wastes and other industrial waste. Additionally, as we expand our internal solar components production capacity, our risk of facility incidents that would negatively affect the environment also increases. We are subject to a variety of governmental regulations related to the storage, use and disposal of hazardous materials. The major environmental laws and regulations applicable to us include the PRC Environmental Protection Law, which became effective in 1982, as amended and promulgated in 2008, the PRC Law on the Prevention and Control of Noise Pollution, which became effective in 1996, the PRC Law on the Prevention and Control of Air Pollution, which became effective in 1987, as amended and promulgated in 1995 and 2000, the PRC Law on the Prevention and Control of Water Pollution, which became effective in 1984, as amended and promulgated in 1996 and 2008, the PRC Law on the Prevention and Control of Solid Waste Pollution, which became effective in 1995, as amended and promulgated in 2004, the PRC Law on Evaluation of Environmental Affects, the PRC Law on Promotion of Clean Production, which became effective in 2012, and the Regulations on the Administration of Construction Project Environmental Protection, which became effective in 1998.

Further, some of our PRC subsidiaries are located in Suzhou, China, which is adjacent to Taihu Lake, a nationally renowned and protected body of water. As a result, production at these subsidiaries is subject to the Regulation of Jiangsu Province on Preventing Water Pollution in Taihu Lake, which became effective in June 2008 and was further revised and promulgated on September 29, 2010 and January 12, 2012, and the Implementation Plan of Jiangsu Province on Comprehensive Treatment of Water Environment in Taihu Lake Basin, which was promulgated in February 2009. Because of these two new regulations, the environmental protection requirements imposed on nearby manufacturing projects, especially new projects, have increased noticeably, and Jiangsu Province has stopped approving construction of new manufacturing projects that increase the amount of nitrogen and phosphorus released into Taihu Lake.

Admission of Foreign Investment

The principal regulation governing foreign ownership of solar power businesses in the PRC is the Foreign Investment Industrial Guidance Catalogue. Under the current catalogue, which was amended in 2011 and became effective on January 30, 2012, the solar power related business is classified as an "encouraged foreign investment industry." Companies that operate in encouraged foreign investment industries and satisfy applicable statutory requirements are eligible for preferential treatment, including exemption from customs and input value added taxes, or VAT, of certain self-used equipment and priority consideration in obtaining land use rights provided by certain local governments.

While the 2004 catalogue only applied to the construction and operation of solar power stations, the 2007 catalogue expanded its application also applies to the production of solar cell manufacturing machines, the production of solar powered air conditioning, heating and drying systems and the manufacture of solar cells, and the current 2011 catalogue also covers the manufacture of solar battery, solar light collector glass and etc.

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Administration of Foreign Invested Companies

The establishment, approval, registered capital requirement and day-to-day operational matters of wholly foreign-owned enterprises, are regulated by the Wholly Foreign-Owned Enterprise Law of the PRC, effective in 1986 and amended in 2000, and the Implementation Rules of the Wholly Foreign-owned Enterprise Law of the PRC, effective in 1990 and amended in 2001. The establishment, operation and management of corporate entities in China are governed by the Company Law of the PRC, or the Company Law, effective in 1994 and amended in 1999, 2004 and 2005. The Company Law is applicable to our PRC subsidiaries unless PRC laws on foreign investment stipulate otherwise.

Income and VAT Taxes

PRC enterprise income tax is calculated based on taxable income determined under PRC accounting principles. Our major operating subsidiaries, CSI Solartronics, CSI Manufacturing, CSI Cells, CSI Technologies, CSI Changshu Manufacturing and CSI Luoyang Manufacturing, are governed by the EIT Law, which became effective on January 1, 2008.

Under the EIT Law, both foreign-invested enterprises and domestic enterprises are subject to a uniform enterprise income tax rate of 25%. There is a transition period for enterprises that were given preferential tax treatment under the previous tax law. Enterprises that were subject to an enterprise income tax rate lower than 25% will have the new uniform enterprise income tax rate of 25% phased in over a five-year period from the effective date of the EIT Law. Enterprises that were entitled to exemptions or reductions from the standard income tax rate for a fixed term may continue to enjoy such treatment until the fixed term expires, subject to certain limitations.

The EIT Law provides for preferential tax treatment for certain categories of industries and projects that are strongly supported and encouraged by the state. For example, enterprises classified as HNTEs are entitled to a 15% enterprise income tax rate, provided that such HNTEs satisfy other applicable statutory requirements.

Our subsidiary CSI Solartronics has been recognized as an HNTE. However, because CSI Solartronics does not meet certain requirements for the reduced 15% enterprise income tax rate, it is still subject to a 25% enterprise income tax rate. CSI Manufacturing was subject to a reduced enterprise income tax rate of 12.5% until the end of 2009, when its tax holiday expired. CSI Cells and CSI Luoyang Manufacturing were subject to a reduced enterprise income tax rate of 12.5% until the end of 2011, when their tax holidays expired. Currently, CSI Cells is subject to a preferential enterprise income tax rate of 15% for the three years from 2012 to 2014, resulting from its HNTE status recognized in 2009 and renewed in 2012. CSI Changshu Manufacturing and CSI Technologies were exempt from EIT for 2009 and were subject to a reduced enterprise income tax rate of 12.5% from 2010 through to and including 2012, at which time their tax holidays expired as well. As the preferential tax benefits enjoyed by our PRC subsidiaries expired, their effective tax rates increased significantly.

The EIT Law also provides that enterprises established outside China whose "effective management" is located in China are considered PRC tax residents and will generally be subject to the uniform 25% enterprise income tax rate on their global income. Under the implementation regulations, the term "effective management" is defined as substantial and overall management and control over such aspects as the production and business, personnel, accounts and properties of an enterprise. Currently there are no other detailed rules or precedents governing the procedures and specific criteria for determining an enterprise's effective management, which are applicable to us. As a substantial number of the members of our management team are located in China, we may be considered a PRC tax resident under the EIT Law and, therefore, subject to the uniform 25% enterprise income tax rate on our global income.

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Under the EIT Law and implementing regulations issued by the State Council, PRC withholding tax at the rate of 10% is applicable to interest and dividends payable to investors from companies that are not "resident enterprises" in the PRC, to the extent such interest or dividends have their sources within the PRC. If our Canadian parent entity is deemed a PRC tax resident under the EIT Law based on the location of our effective management, dividends distributed from our PRC subsidiaries to our Canadian parent entity could be exempt from Chinese dividend withholding tax. However, in that case, dividends from us to our shareholders may be regarded as China-sourced income and, consequently, be subject to Chinese withholding tax at the rate of 10%, or at a lower treaty rate if applicable. Similarly, if we are considered a PRC tax resident, any gain realized by our shareholders from the transfer of our common shares is also subject to Chinese withholding tax at the rate of 10% if such gain is regarded as income derived from sources within the PRC. It is unclear whether any dividends that we pay on our common shares or any gains that our shareholders may realize from the transfer of our common shares would be treated as income derived from sources within the PRC and subject to PRC tax.

Pursuant to a November 2008 amendment to the Provisional Regulation of the PRC on Value Added Tax issued by the PRC State Council, all entities and individuals that are engaged in the sale of goods, the provision of repairs and replacement services and the importation of goods in China are required to pay VAT. Gross proceeds from sales and importation of goods and provision of services are generally subject to VAT at a rate of 17%, with exceptions for certain categories of goods that are taxed at a rate of 13%. When exporting goods, the exporter is entitled to a refund of a portion or all of the VAT that it has already paid or borne.

In December 2008, the Ministry of Finance and the State Administration of Taxation jointly issued implementation rules for the VAT effective from January 1, 2009. Under the new rules, fixed assets (mainly including equipment and manufacturing facilities) are now eligible for credit for input VAT. Previously, input VAT on fixed assets purchases was not deductible from the current period's output VAT derived from the sales of goods, but had to be included in the cost of the assets. The new rule permits this deduction except in the case of equipment purchased for non-taxable projects or tax-exempted projects where the deduction of input VAT is not allowed. However, the qualified fixed assets could also be eligible for input VAT if the fixed assets are used for both taxable projects and non-taxable projects or tax-exempted projects. Presently, no further detailed rules clarify under what circumstance the fixed assets are considered as being used for both taxable and non-taxable or tax exempt projects. Because of the new VAT rules, our PRC subsidiaries may benefit from future input VAT credit on our capital expenditures.

Under the former rules, equipment imported for qualified projects was entitled to an import VAT exemption and domestic equipment purchased for qualified projects were entitled to a VAT refund. However, such exemption and refund were both eliminated as of January 1, 2009.

Foreign Currency Exchange

Foreign currency exchange regulation in China is primarily governed by the Foreign Currency Administration Rules (1996), as amended in 2008, and the Settlement, Sale and Payment of Foreign Exchange Administration Rules (1996), or the Settlement Rules.

Currently, the Renminbi is convertible for current account items, including the distribution of dividends, interest payments, trade and service-related foreign exchange transactions. Conversion of the Renminbi for most capital account items, such as direct investment, security investment and repatriation of investment, however, is still subject to the approval of SAFE.

Under the Settlement Rules, foreign-invested enterprises may buy, sell and/or remit foreign currencies only at those banks authorized to conduct foreign exchange business after providing valid commercial documents and, in the case of most capital account item transactions, obtaining approval from SAFE. Capital investments by foreign-invested enterprises outside of China are also subject to

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limitations, which include approvals by the Ministry of Commerce, SAFE and the State Reform and Development Commission.

Dividend Distribution

The principal regulations governing distribution of dividends paid by wholly foreign owned enterprises include the Wholly Foreign-Owned Enterprise Law of the PRC, effective in 1986 and amended in 2000, the Implementation Rules of the Wholly Foreign-Owned Enterprise Law of the PRC, effective in 1990 and amended in 2001, the Company Law effective in 1994 and amended in 1999, 2004 and 2005 and the New EIT Law and its implementation rules, both effective in 2008.

Under these laws, foreign-invested enterprises in China may pay dividends only out of their accumulated profits, if any, determined in accordance with PRC accounting standards and regulations. In addition, a wholly foreign owned enterprise in China is required to set aside at least 10% of its after-tax profits determined in accordance with PRC accounting standards each year to its general reserves until the accumulative amount of such reserves reach 50% of its registered capital. These reserves are not distributable as cash dividends. The board of directors of a foreign-invested enterprise has the discretion to allocate a portion of its after-tax profits to staff welfare and bonus funds, which may not be distributed to equity owners except in the event of liquidation.

Employment

The major laws and regulations governing the employment relationship, including wage and hour requirements, working and safety conditions, social insurance, housing funds and other welfare. The PRC Labor Law which became effective on January 1, 1995 and amended on August 27, 2009, the Labor Contract Law of the People's Republic of China, which became effective on January 1, 2008, and its Implementing Regulation, which became effective on September 18, 2008, permit workers in both state-owned and private enterprises in the PRC to bargain collectively. The PRC Labor Law and the PRC Labor Contract Law provide for collective contracts to be developed through collaboration between the labor unions (or worker representatives in the absence of a union) and management that specify such matters as working conditions, wage scales, and hours of work. The PRC Labor Contract Law and its Implementing Regulation impose certain requirements with respect to human resources management, including, among other things, signing labor contracts with employees, terminating labor contracts, paying remuneration and compensation and making social insurance contributions. In addition, the PRC Labor Contract Law requires employers to provide remuneration packages that meet the relevant local minimum standards. The PRC Labor Contract Law has enhanced rights for the nation's workers, including permitting open-ended labor contracts and severance payments. It requires employers to provide written contracts to their workers, restricts the use of temporary labor and makes it harder for employers to lay off employees. It also requires that employees with fixed-term contracts be entitled to an indefinite-term contract after a fixed-term contract is renewed twice or the employee has worked for the employer for a consecutive ten-year period.

Under applicable PRC laws, rules and regulations, including the Social Insurance Law promulgated by the Standing Committee of the National People's Congress and effective as of July 1, 2011, the Rules on Implementing the Social Insurance Law issued by Ministry of Human Resource and Social Security and effective as of July 1, 2011, the Interim Regulations on the Collection and Payment of Social Security Funds promulgated by the State Council and effective as of January 22, 1999, the Interim Measures Concerning Maternity Insurance promulgated by the Ministry of Labor and effective as of January 1, 1995, the Regulations on Occupational Injury Insurance promulgated by the State Council and effective as of January 1, 2004 and amended on December 20, 2010, and the Regulations on the Administration of Housing Accumulation Funds promulgated by the State Council and effective as of April 3, 1999 and amended on March 24, 2002, employers are required to contribute, on behalf of their employees, to a number of social security funds, including funds for basic pension insurance,

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unemployment insurance, basic medical insurance, occupational injury insurance, maternity leave insurance, and to housing accumulation funds. These payments are made to local administrative authorities and any employer who fails to contribute may be fined and ordered to remediate on payments within a stipulated time period.

C. Organizational Structure

The following table sets forth our company's organizational structure, including the place of formation, our ownership interest in each of our significant subsidiaries as of the date of this annual report.

Name of entity	Place of incorporation	Ownership interest
CSI Solartronics (Changshu) Co., Ltd.	PRC	100%
CSI Solar Technologies Inc.	PRC	100%
CSI Solar Manufacture Inc.	PRC	100%
Canadian Solar Manufacturing (Luoyang) Inc.	PRC	100%
Canadian Solar Manufacturing (Changshu) Inc.	PRC	100%
CSI Cells Co., Ltd.	PRC	100%
Canadian Solar (USA) Inc.	USA	100%
CSI Project Consulting GmbH	Germany	70%
Canadian Solar Japan K.K.	Japan	90.67%
Canadian Solar Solutions Inc.	Canada	100%
CSI Solar Power (China) Inc.	PRC	100%
Canadian Solar EMEA GmbH	Germany	100%
Canadian Solar Manufacturing (Ontario) Inc.	Canada	100%
Canadian Solar (Australia) Pty., Ltd.	Australia	100%
Canadian Solar International Ltd.	Hong Kong	100%
Canadian Solar O&M (Ontario) Inc.	Canada	100%
CSI-Cenergy Holdings LLC	USA	62.50%
Suzhou Sanysolar Materials Technology Co., Ltd.	PRC	80%
Canadian Solar South East Asia Pte., Ltd.	Singapore	100%
CSI Project Holdco LLC	USA	100%
Canadian Solar Manufacturing (Suzhou) Inc.	PRC	61%
Canadian Solar South Africa Pty., Ltd.	South Africa	100%
Canadian Solar Brasil Servicos De Consultoria EM Energia Solar Ltda.	Brazil	100%
Canadian Solar Middle East Ltd.	United Arab Emirates	100%
Canadian Solar International Project Holding Limited	Hong Kong	100%
Canadian Solartronics (Suzhou) Co., Ltd.	PRC	100%

See "Item 4. Information on the Company A. History and Development of the Company" for additional information on our corporate structure.

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D. Property, Plant and Equipment

The following is a summary of our properties, including information on our manufacturing facilities and office buildings as of the date of this annual report:

CSI Changshu Manufacturing rents approximately 31,119 square meters of floor area in Changshu, including 13,889 square meters for manufacturing facilities under a lease effective from June 1, 2012 to May 31, 2013, 8,852 square meters for manufacturing facilities under a lease effective from October 1, 2012 to September 30, 2013, and 8,378 square meters for manufacturing facilities under a lease effective from April 1, 2010 to March 31, 2013, which we will renew for a period from April 1, 2013 to March 31, 2014.

CSI Luoyang Manufacturing holds a land use rights certificate for approximately 35,345 square meters of land in Luoyang (Phase I), on which we have constructed a manufacturing facility for module manufacturing and an office building. The floor area of all workshops and office buildings in Phase I is approximately 6,761 square meters. The property ownership certificate was granted in June 2008. In 2008, CSI Luoyang Manufacturing obtained the land use rights for approximately 79,685 square meters of adjacent land (Phase II), on which we have constructed wafer manufacturing facilities. The floor area of Phase II is 30,071 square meters. We expect to receive the property ownership certificate upon passing the required inspection.

CSI Cells holds a land use rights certificate for approximately 75,661 square meters of land in Suzhou. We completed the construction of our first solar cell manufacturing facilities on this site in the first quarter of 2007. The Phase I manufacturing facility has a 14,077 square meter workshop and office building, for which we obtained the property ownership certificate. The Phase II cell manufacturing facilities, with 30,102 square meters of workshop space, were completed in 2009. The Phase III cell manufacturing facilities, with a total floor area of approximately 21,448 square meters of manufacturing and office space, was completed in August 2011. We have passed the required inspection and are in the process of obtaining property ownership certificate from the competent government authority. In addition, CSI Cells merged with CSI Solar New Energy (Suzhou) Co., Ltd. in 2012, which has a land use rights certificate for approximately 10,000 square meters of land in Suzhou.

CSI Changshu Manufacturing holds a land use rights certificate for approximately 40,000 square meters of land in Changshu, on which we have built a module manufacturing facility of approximately 23,671 square meters. Production in this facility began in April 2008. We also constructed a canteen and a dormitory for employees in September 2010 with a total floor area of 11,283 square meters. The property ownership certificate was granted in March 2011.

CSI Changshu Manufacturing also holds a land use rights certificate for approximately 180,000 square meters of land in Changshu, on which we have built two module manufacturing facilities, three warehouses and other buildings with a total floor area of approximately 62,093 square meters (Phase I). Production in this facility began in August 2008 and construction of the central warehouses was completed in April 2010. Phase I occupies 78,320 square meters of land. We completed the construction of Phase II manufacturing facilities with an additional warehouse and four other buildings, which has approximately 46,507 square meters of floor area and occupies 22,442 square meters of land, in the first half of 2011. Phase III manufacturing facilities on the remaining land are still in the design and planning stage. We have passed the required inspection and are in the process of obtaining property ownership certificate from the competent government authority.

CSI Suzhou Manufacturing bought a piece of land for approximately 96,249 square meters in May 31, 2012.

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CSI Ontario Manufacturing has leased approximately 14,851 square meters of manufacturing facilities in Guelph, Ontario, Canada for a term of 10 years commencing August 1, 2010. It also leases a warehouse of 7,912 square meters and an office building of 1,146 square meters on the same premises for the same term.

ITEM 4A. ***UNRESOLVED STAFF COMMENTS***

None.

ITEM 5. ***OPERATING AND FINANCIAL REVIEW AND PROSPECTS***

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and the related notes included elsewhere in this annual report on Form 20-F. This discussion may contain forward-looking statements based upon current expectations that involve risks and uncertainties. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth under "Item 3. Key Information D. Risk Factors" or in other parts of this annual report on Form 20-F.

A. Operating Results

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

- government subsidies and the availability of financing for solar projects;
- industry and seasonal demand;
- product pricing;
- the cost of solar cells and wafers and silicon raw materials relative to the selling prices of modules and the impact of certain of our long-term purchase commitments; and
- foreign exchange.

Government Subsidies and the Availability of Financing for Solar Projects

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 subsidies and economic incentives and financing for solar projects. For a detailed discussion of government subsidies and incentives, possible changes in government policy and associated risks to our business, see "Item 3. Key Information D. Risk Factors Risks Related to Our Company and Our Industry Governments may revise, reduce or eliminate subsidies and economic incentives for solar power, which could cause demand for our products to decline." and "Item 4. Information on the Company B. Business Overview Markets and Customers."

Additionally, the continuing weak global economy and uncertain global economic outlook, especially in Europe, could limit the availability of debt or equity for solar power projects, or increase the cost thereof, and adversely impact our customers' ability to finance the purchase of our products or to construct solar power projects. See "Item 3. Key Information D. Risk Factors Risks Related to Our Company and Our Industry The execution of our growth strategy depends upon the continued availability of third-party financing arrangements for our customers, which is affected by general economic conditions. Tight credit markets could depress demand or prices for solar products, hamper our expansion and materially affect our results of operations."

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Industry and Seasonal Demand

Our business and revenue growth depend on the demand for solar power. Although solar power technology has been used for several decades, the solar power market has only started to grow significantly in the past few years. See "Item 4. Information on the Company B. Business Overview" for a more detailed discussion of the factors driving the growth of the solar power industry and the challenges that it faces. In addition, industry demand is affected by seasonality. Demand tends to be lower in winter, primarily because adverse weather conditions complicate the installation of solar power systems, particularly in Germany, one of our key markets. For example, our sales to Germany slowed significantly in the fourth quarter of 2008 and the first quarter of 2009 due to changes in seasonal demand, together with inventory clearing efforts by some solar module producers and a significant reduction of subsidies in Spain, coupled with the global financial crisis. However, the demand from other key markets may offset seasonal fluctuations from time to time. In anticipation of strong demand for systems in 2010, distributors continued to purchase modules late in the fourth quarter of 2009 and early in the first quarter of 2010, even though this is traditionally the slowest season for solar installations. Weakened global economic conditions continued to affect the availability of financing in the European markets in 2011, which in turn slowed the demand for solar power projects. If governments around the world continue to approve subsidies that encourage the use of solar energy, we expect to be able to take advantage of the diversity of global markets to mitigate some of the effects of seasonality on our business results in the future.

See "Item 3. Key Information D. Risk Factors Risks Related to Our Company and Our Industry If sufficient demand for solar power products does not develop or takes longer to develop than we anticipate, our revenues may not continue to increase or may even decline, and we may be unable to sustain our profitability."

Product Pricing

Prior to 2004, all of our net revenues were generated from sales of specialty solar modules and products. We began selling standard solar modules in 2004. In 2010 and 2011, we generated net revenues of 94.8% and 89.1%, respectively from our solar module business, which comprises primarily sales of standard solar modules and specialty solar modules, with the remainder coming from our total solution business, which comprises solar power project development and sales, EPC services, O&M services and sales of solar system kits. In 2012, we generated 88.5% of our net revenues from our solar module business with 11.5% coming from our total solution business.

Our standard solar modules are priced based on either the actual flash test result or the nameplate capacity of our panels, expressed in Watts-peak. The actual price per watt is affected by overall demand in the solar power industry and increasingly also by the total power of the module. Higher-powered modules usually command slightly higher prices per watt. We price our standard solar modules based on the prevailing market price at the time we enter into sales contracts with our customers, taking into account the size of the contract, the strength and history of our relationship with each customer and our silicon wafer, solar cell and silicon raw materials costs. During the first few years of our operations, the average selling prices for standard solar modules rose year-to-year across the industry, primarily because of high demand. Correspondingly, the average selling price of our standard solar module products ranged from $3.62 to $4.23 during the period from 2004 to 2008. Following a peak in the third quarter of 2008, the industry-wide average selling price of solar modules has declined sharply, as market demand has declined and competition increased due to the worldwide credit crisis, reduction in subsidies in certain solar markets, and increased manufacturing output. In 2009, the average selling price of our standard solar modules continued to fall, with an average selling price of $1.93 per watt in the fourth quarter of 2009. Thereafter, the average selling price of our standard solar modules has generally continued to fall due to an oversupply of solar modules and, in the fourth quarter of 2012, the average selling price was $0.67 per watt.

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Price of Solar Cells and Wafers and Silicon Raw Materials

We produce solar modules, which are an array of interconnected solar cells encased in a weatherproof frame, and products that use solar modules. Solar cells are the most important component of solar modules. Our solar cells are currently made from mono-crystalline and multi-crystalline silicon wafers through multiple manufacturing steps. Silicon wafers are the most important material for making solar cells. If we are unable to procure silicon, wafers and cells at prices that decline in line with our solar module pricing, our revenues and margins could be adversely impacted, either due to relatively high costs compared to our competitors or further write-downs of inventory, or both. Our market share could decline if competitors are able to offer better pricing than we are. See "Item 3. Key Information D. Risk Factors Risks Related to Our Company and Our Industry We have, from time to time, entered into long-term supply agreements with polysilicon and wafer suppliers. Long-term supply agreements may make it difficult for us to adjust our raw material costs should prices decrease. Also, if we chose to prematurely terminate any of these agreements, we may not be able to recover all or any part of the advance payments we have made to these suppliers and we may be subject to litigation." Currently, we acquire a large percentage of our requirements of solar wafers through purchasing arrangements and limited tolling arrangements. We also acquire a large portion of our requirements of solar cells through purchase arrangements.

Foreign Exchange

The majority of our sales are denominated in Euros and U.S. dollars, with the remainder in other currencies such as the Renminbi, Canadian dollar, Japanese yen and British pound. Our Renminbi costs and expenses are primarily related to domestic sourcing of solar cells, silicon wafers and silicon, other raw materials, toll manufacturing fees, labor costs and local overhead expenses. From time to time, we enter into loan arrangements with Chinese commercial banks that are denominated primarily in U.S. dollars or Renminbi. The greater part of our cash and cash equivalents are denominated in Renminbi. Fluctuations in exchange rates, particularly among the U.S. dollar, Euro, Renminbi and Canadian dollar, may affect our net profit margins and may result in fluctuations in foreign exchange and operating gains or losses. Since 2008, we hedge part of our foreign currency exposures against the U.S. dollar using foreign currency forward or option contracts in order to limit our foreign exchange losses. However, the effectiveness of our hedging program may be limited with respect to cost effectiveness, cash management, exchange rate visibility and downside protection. We incurred a foreign exchange loss of $36.3 million, $40.0 million and $10.7 million in 2010, 2011 and 2012, respectively. For our hedging program, we recorded a gain on change in foreign currency derivatives of $1.7 million in 2010, incurred a loss on change in foreign currency derivatives of $5.8 million in 2011 and incurred a loss on change in foreign currency derivatives of $4.4 million in 2012.

Overview of Financial Results

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

Net Revenues

Revenues generated from our solar module business, which comprises primarily sales of standard solar modules and specialty solar modules, accounted for 94.8%, 89.1% and 88.5% of our net revenues in 2010, 2011 and 2012, respectively. Revenues generated from our total solution business, which comprises primarily solar power project development and sales, EPC services, O&M services and sales of solar system kits, represented 5.2%, 10.9% and 11.5% of our net revenues in 2010, 2011 and 2012, respectively. As we continue to expand our business into the downstream segment of the industry, we expect that around 50% of our net revenues will be generated from our total solution business in 2013, primarily from our utility-scale solar power project pipelines in Canada and the U.S., as well as our residential system kits business in Japan. We believe this strategy of focusing on the downstream

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segment of the business will help to put us in a good competitive position and possibly increase our margins and overall profitability.

The main factors affecting our net revenues include average selling prices per watt and unit volume shipped, both of which depend on product supply and demand.

Our net revenues are net of business tax, VAT, returns and exchanges.

Cost of Revenues

Our cost of revenues consists primarily of the costs of:

- solar cells;
- silicon wafers;
- high purity and solar grade silicon materials;
- materials used in solar cell production, such as metallic pastes;
- installation components in solar system kits, such as inverters and racking systems;
- other materials for the production of solar modules such as glass, aluminum frames, EVA (ethylene vinyl acetate, an encapsulant used to seal the module), junction boxes and polymer back sheets;
- production labor, including salaries and benefits for manufacturing personnel;
- warranty costs;
- overhead, including utilities, production equipment maintenance, share-based compensation expenses for options granted to employees in our manufacturing department and other support expenses associated with the manufacture of our solar power products;
- depreciation and amortization of manufacturing equipment and facilities, which are increasing as we expand our manufacturing capabilities;
- inventory write-downs;
- depreciation charges relating to underutilized assets;
- acquisition costs of solar power plants;

development costs (including interconnection fees and permitting costs) of solar power plants;

project management and engineering costs;

EPC costs (consisting of costs of the components of solar power system other than solar modules, such as inverters, electrical and mounting hardware, trackers, grid interconnection equipment, wiring and other devices);

interest costs capitalized for solar power plants during construction period; and

site-specific costs

Solar wafers and cells and silicon raw materials make up the major portion of our cost of revenues. Where we manufacture solar wafers in our own manufacturing facilities, the cost of the solar wafers consists of:

the costs of purchasing high purity and solar grade silicon raw materials;

labor costs incurred in manufacturing solar wafers;

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- the costs of other materials and utilities we use for manufacturing solar wafers; and
- depreciation charges incurred for our solar wafer manufacturing facility, equipment and building.

Where we manufacture solar cells in our own manufacturing facilities, the cost of the solar cells consists of:

- the costs of purchasing solar wafers;
- labor costs incurred in manufacturing solar cells;
- the costs of other materials and utilities we use for manufacturing the solar cells; and
- depreciation charges incurred for our solar cell manufacturing facility, equipment and building.

In 2010, 2011 and 2012, we obtained some of our solar wafers and cells through toll manufacturing arrangements, under which we source and provide silicon feedstock to suppliers of ingots, wafers and cells. These suppliers convert these silicon raw materials into the solar wafers and cells that we use for our production of solar modules. The costs of solar wafers and cells that we obtain through these toll manufacturing arrangements consist of:

- costs of purchasing the silicon feedstock;
- labor costs incurred in inventory management;
- labor costs incurred in blending the silicon feedstock as part of our silicon feedstock blending program; and
- tolling fees charged by our suppliers under the tolling arrangements.

The payments we make to our suppliers for the solar wafers and cells and the payments our suppliers make to us for the silicon feedstock that we source and provide are generally settled separately under these tolling arrangements. We do not include payments we receive for providing silicon feedstock as part of these toll manufacturing arrangements in our net revenues.

In 2010, we began selling solar system kits. Solar modules make up a substantial portion of the cost of revenue on solar system kits. The cost of revenue on these solar modules is the cost of revenue on solar modules manufactured by us. The other components that make up the cost of solar system kits comprise the costs of purchased inverters, racking systems and other installation components.

Our cost of revenues also includes warranty costs. We accrue 1.0% of our net revenues on solar modules and 0.8% on solar system kits and solar power projects as warranty costs at the time revenues are recognized. Before June 2009, we typically sold our standard solar modules with a two-year warranty against defects in materials and workmanship and a 10-year and 25-year warranty against declines of more than 10% and 20%, respectively, from the initial minimum power generation capacity at the time of delivery. In June 2009, we increased our warranty against defects in materials and workmanship to six years. Effective August 1, 2011, we increased our warranty against defects in materials and workmanship to ten years and we guarantee that, for a period of 25 years, our modules will maintain the following performance levels:

- during the first year, the actual power output of the module will be no less than 97% of the labeled power output;

from year 2 to year 24, the actual annual power output decline of the module will be no more than 0.7%; and

by the end of year 25, the actual power output of the module will be no less than 80% of the labeled power output.

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We have the right to repair or replace solar modules, at our option, under the terms of the warranty policy. We maintain warranty reserves to cover potential liabilities that could arise under these guarantees and warranties. Since April 2010, we have entered into agreements with a group of insurance companies to back up these warranties. Under these insurance policies, the insurance companies are obliged to reimburse us, subject to certain maximum claim limits and certain deductibles, for the actual product warranty costs that we incur under the terms of our warranty policy. We record the insurance premiums initially as prepaid expenses and amortize them over the respective policy period, normally one year. If we determine that the product warranty costs to be reimbursed from the insurance companies are probable and determinable, an asset is recognized on our balance sheet. The warranty insurance is renewable annually. See "Item 4. Information on the Company B. Business Overview Insurance."

Our cost of revenues has historically decreased due to the decrease of our net revenues. Write-downs of inventory included in our cost of revenue were $2.1 million, $8.5 million and $3.1 million in 2010, 2011 and 2012, respectively. We recorded a loss on firm purchase commitments of $1.6 million, $10.6 million and nil for the years ended December 31, 2010, 2011 and 2012, respectively. The losses were computed using the lower of cost or market method.

In December 2011, Deutsche Solar gave notice to us to terminate the 12-year wafer supply agreement with immediate effect. Deutsche Solar stated that the reason for the termination was an alleged breach of the agreement by us. In the notice, Deutsche Solar reserved its right to claim damage of €148.6 million ($196.0 million) in court. As a result of the termination, we reclassified the accrued loss on firm purchase commitments reserve of $27.9 million as of December 31, 2011 to loss contingency accruals. In addition, we made a full bad debt allowance of $17.4 million against the balance of our advance payments to Deutsche Solar. The accrued amount of $27.9 million represents our best estimate for our loss contingency. Deutsche Solar did not specify the basis for its claimed damage of €148.6 million ($196.0 million) on the notice. See "Item 3. Key Information D. Risk Factors Risks Related to Our Company and Our Industry We have, from time to time, entered into long-term supply agreements with polysilicon and wafer suppliers. Long-term supply agreements may make it difficult for us to adjust our raw material costs should prices decrease. Also, if we chose to prematurely terminate any of these agreements, we may not be able to recover all or any part of the advance payments we have made to these suppliers and we may be subject to litigation."

Gross Profit/Gross Margin

Our gross profit is affected by a number of factors, including the average selling price of our products, our product mix, loss on firm purchase commitments under long-term supply agreements, and our ability to cost-effectively manage our supply chain.

Operating Expenses

Our operating expenses include selling expenses, general and administrative expenses, and research development expenses. Our operating expenses have increased in recent years as our business has grown rapidly. We expect this trend to continue as our net revenues grow in the future. On a percentage basis, however, we expect our operating expenses to decline or remain constant with the growth of our operations.

Selling Expenses

Selling expenses consist primarily of salaries and benefits, transportation and customs expenses for delivery of our products, sales commissions for our sales personnel and sales agents, advertising, promotional and trade show expenses, and other sales and marketing expenses. As we expand our business, we will increase our sales and marketing efforts and target companies in selected industry

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sectors in response to evolving industry trends. We expect as we increase our sales volume our selling expenses will increase as we hire additional sales personnel, target more markets and initiate additional marketing programs to reach our goal of continuing to be a leading global brand.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and benefits for our administrative and finance personnel, consulting and professional service fees, government and administration fees and insurance fees. We expect our general and administrative expenses to increase to support the anticipated growth of our business. Non-recurring general and administrative expenses increased significantly in 2010 because of increased legal, accounting and other professional fees related to our audit committee investigation and the shareholder class action lawsuits. In 2010, the expenses for legal and professional services were $16.2 million. In 2011 and 2012, we recovered $4.4 million and $3.5 million, respectively, of the costs incurred in 2010 under our director and officer liability insurance policy. See "Item 8. Financial Information A. Consolidated Statements and Other Financial Information Legal and Administrative Proceedings."

Research and Development Expenses

Research and development expenses consist primarily of costs of raw materials used in our research and development activities, salaries and benefits for research and development personnel and prototype and equipment costs related to the design, development, testing and enhancement of our products and our silicon reclamation program. We continue to increase our expenses on research and development. These expenses are primarily related to our ongoing efforts to improve our ingot and wafer, solar cell and module manufacturing processes.

We expect to devote more efforts to research and development in the future. We also expect that our research and development expenses will increase as we hire additional research and development personnel, expand and promote innovation in our products portfolio, and devote more resources towards using new technologies and alternative materials to grow ingots, cut wafers and manufacture solar cells and solar system accessories such as inverters.

Share-based Compensation Expenses

Under our share incentive plan, as of December 31, 2012, we had outstanding:

2,617,477 stock options;

1,670,531 restricted share units; and

352,780 restricted shares.

For a description of the stock options, restricted shares, and restricted share units granted, including the exercise prices and vesting periods, see "Item 6. Directors, Senior Management and Employees B. Compensation of Directors and Executive Officers Share-based Compensation Share Incentive Plan." We recognize share-based compensation to employees as expenses in our statement of operations based on the fair value of the equity awarded on the date of the grant. The compensation expense is recognized over the period in which the recipient is required to provide service in exchange for the equity award.

We have made an estimate of expected forfeitures and are recognizing compensation costs only for those equity awards that we expect to vest. We estimate our forfeitures based on past employee retention rates and our expectations of future retention rates. We will prospectively revise our forfeiture rates based on actual history. Our share-based compensation expenses may change based on changes to our actual forfeitures.

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For the year ended December 31, 2012, we recorded share-based compensation expenses of approximately $5.2 million, compared to approximately $4.1 million for the year ended December 31, 2011. We have categorized these share-based compensation expenses in our:

- cost of revenues;
- selling expenses;
- general and administrative expenses; and
- research and development expenses,

depending on the job functions of the individuals to whom we granted the options, restricted shares and restricted share units. The following table sets forth, for the periods indicated, the allocation of our share-based compensation expenses both in absolute amounts and as a percentage of total share-based compensation expenses.

	Years Ended December 31,					
	2010		2011		2012	
	(In thousands of $, except for percentages)					
Share-based compensation expenses included in:						
Cost of revenues	231	6.0%	686	16.9%	870	16.8%
Selling expenses	509	13.1	683	16.8	964	18.6
General and administrative expenses	2,873	74.1	2,442	60.1	3,037	58.5
Research and development expenses	264	6.8	250	6.2	315	6.1
Total share-based compensation expenses	3,877	100.0%	4,061	100.0%	5,186	100.0%

We expect to incur additional share-based compensation expenses as we expand our operations. For example, we anticipate that selling expenses will increase as we hire additional sales personnel to further expand our worldwide marketing activities in line with the expected growth of our operations.

Interest Expenses

Interest expenses consist primarily of interest incurred with respect to our short and long-term loans from Chinese commercial banks and the 6% convertible notes we issued privately to qualified institutional investors. We repaid the outstanding convertible notes in full in 2012.

Gain (Loss) on Change in Fair Value of Derivatives

The gain on change in fair value of derivatives in our 2010 financial statements and the loss on change in fair value of derivatives in our 2011 and 2012 financial statements were associated with hedging part of our expected cash flows and balances denominated in foreign currencies, mainly in Euros and Canadian dollars.

Income Tax Expense

We recognize deferred tax assets and liabilities for temporary differences between the financial statement and income tax bases of assets and liabilities. Valuation allowances are provided against deferred tax assets when management cannot conclude that it is more likely than not that some portion or all deferred tax assets will be realized.

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We are governed by the CBCA, a federal statute of Canada and are registered to carry on business in Ontario. This subjects us to both Canadian federal and Ontario provincial corporate income taxes. Our combined tax rates were 31.0%, 28.25% and 26.5% for the years ended 2010, 2011 and 2012, respectively.

PRC enterprise income tax is calculated based on taxable income determined under PRC accounting principles. Our major operating subsidiaries, CSI Solartronics, CSI Manufacturing, CSI Cells, CSI Luoyang Manufacturing, CSI Technologies and CSI Changshu Manufacturing, are subject to taxation in China. CSI Solartronics has been recognized as an HNTE. However, because CSI Solartronics does not meet certain requirements for the reduced 15% enterprise income tax rate, CSI Solartronics is still subject to a 25% enterprise income tax rate. CSI Cells and CSI Luoyang Manufacturing were subject to a reduced enterprise income tax rate of 12.5% until the end of 2011, when their tax holidays expired. Currently, CSI Cells is subject to a preferential enterprise income tax rate of 15% for the three years from 2012 to 2014, resulting from its HNTE status recognized in 2009 and renewed in 2012. CSI Technologies and CSI Changshu Manufacturing were subject to a reduced enterprise income tax rate of 12.5% until the end of 2012, when their tax holidays expired. CSI Manufacturing is subject to a standard 25% enterprise income tax rate. When the preferential tax benefits enjoyed by our PRC subsidiaries expired, their effective tax rates increased significantly.

The EIT Law provides that enterprises established outside China whose "effective management" is located in China are considered PRC tax residents and will generally be subject to the uniform 25% enterprise income tax rate on their global income. Under the implementation regulations, the term "effective management" is defined as substantial and overall management and control over such aspects as the production and business, personnel, accounts and properties of an enterprise. Currently there are no detailed rules or precedents governing the procedures and specific criteria for determining an enterprise's effective management. As a substantial number of the members of our management team are located in China, we may be considered a PRC tax resident under the EIT Law and, therefore, subject to the uniform 25% enterprise income tax rate as it relates to our global income.

Under the EIT Law and implementing regulations issued by the State Council, the PRC withholding tax rate of 10% is generally applicable to interest and dividends payable to investors that are not "resident enterprises" in the PRC, to the extent such interest or dividends have their sources within the PRC. We consider the undistributed earnings of our PRC subsidiaries (approximately $116.3 million at December 31, 2012) to be indefinitely reinvested in China, and, consequently, we have made no provision for withholding taxes for those amounts.

Critical Accounting Policies

We prepare 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 fiscal period and (iii) the reported amounts of revenues and expenses during each fiscal period. We regularly 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.

When reviewing our financial statements, the following should be considered: (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

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the following accounting policies involve the most significant judgments and estimates used in the preparation of our financial statements.

Revenue Recognition

Sales of modules, solar system kits and silicon materials are recorded when products are delivered and title and risk of loss or damage has passed to the customers. A solar system kit is a ready-to-install package consisting of solar modules produced by us and components, such as inverters, racking system, tracker and other accessories, supplied by third parties. We only recognize revenues when prices to the seller are fixed or determinable and collectability is reasonably assured. If collectability is not reasonably assured, we recognize revenue only upon collection of cash. Revenues also include reimbursements of shipping and handling costs of products sold to customers. Sales agreements typically contain customary product warranties but do not contain any post-shipment obligations or any return or credit provisions.

A majority of our contracts provide that products are shipped under the terms of free on board, or FOB, ex-works or cost, insurance and freight, or CIF. Under FOB, we fulfill our obligation to deliver when the goods have passed over the ship's rail at the named port of shipment. The customer has to bear all costs and risks of loss or damage to the goods from that point. Under ex-works, we fulfill our obligation to deliver when we have made the goods available at our premises to the customer. The customer bears all costs and risks involved in taking the goods from our premises to the desired destination. Under CIF, we must pay the costs, marine insurance and freight necessary to bring the goods to the named port of destination, but the risk of loss of or damage to the goods as well as any additional costs due to events occurring after the time the goods have been delivered on board the vessel, is transferred to the customer when the goods pass the ship's rail in the port of shipment.

We use the percentage of completion method to recognize revenue from systems integration projects for which we provide EPC services under an EPC contract when the contract price is fixed or determinable. We use the cost-to-cost method to measure the percentage of completion and recognize revenue based on the estimated progress to completion. We periodically revise our profit estimates based on changes in facts, and immediately recognize any losses that are identified on contracts. Incurred costs include all direct material, labor, subcontractor cost, and other associated costs. We recognize job material costs as incurred costs when the job materials have been permanently attached or fitted to the solar power systems as required by the engineering design. The construction periods normally extend beyond six months and less than one year.

We recognize revenue from the sale of project assets in accordance with ASC 360-20, Real Estate Sales. For these transactions, we determined that the project assets, which represent the costs of constructing solar power projects, represent "integral" equipment and as such, the entire transaction is in substance the sale of real estate and subject to the revenue recognition guidance under ASC 360-20 Real Estate Sales. 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 receivable is not subject to any future subordination, and we have transferred the usual risk and rewards of ownership to the buyer. If these criteria are met and we execute a sales agreement prior to the delivery of the solar power project which has an original construction period of three months or longer, we recognize revenue and profit under the percentage of completion method of accounting applicable to real estate sales when we can reasonably estimate progress towards completion. If the criteria for recognition under the full accrual method are met except that the buyer's initial and continuing investment is less than the level determined to be adequate, we recognize revenue using the installment method. Under the installment method, we record revenue up to costs incurred and apportions each cash receipt from the buyer between cost recovered and profit in the same ratio as total cost and total profit bear to the sales value. During 2012, we recognized $48.9 million of revenue using the full accrual method.

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We allocate revenue for transactions involving multiple-element arrangements to each unit of accounting on a relative fair value basis. We estimate fair value on each unit of accounting on the following basis (i) vendor-specific objective evidence of selling price, if it exists, otherwise, (ii) third-party evidence of selling price. If neither (i) nor (ii) exists, management's best estimate of the selling price for that unit of accounting is used. We recognize revenue for each unit of accounting when the revenue recognition criteria have been met.

Sales to customers are recorded net of estimated returns.

We enter into toll manufacturing arrangements in which we receive wafers and return finished modules. In those cases, the title of the wafers received and risk of loss remains with the seller. As a result, we do not recognize inventory on the balance sheet. We recognize a service fee as revenue when the processed modules are delivered. During the years ended December 31, 2010, 2011 and 2012, we recognized revenue of nil, $24.7 million, and $7.9 million, respectively, under the toll manufacturing arrangements.

We enter into buy/sell arrangements with certain raw material vendors pursuant to which we sell finished goods, comprising either solar cells or solar modules, in exchange for raw materials, typically silicon wafers. These arrangements are made with counterparties in the same line of business as us and are executed as a means of securing a consistent supply of raw materials. The transactions are recorded in revenues and cost of revenues at fair value on a gross basis. During the years ended December 31, 2010, 2011, and 2012, we purchased nil, $21.5 million, and nil of raw materials, respectively, and sold nil, $43.9 million, nil of finished goods under these buy-and-sell arrangements respectively.

As of December 31, 2010, 2011 and 2012, we had inventories of $18.8 million, $23.2 million and $18.6 million, respectively, relating to sales to customers where revenues were not recognized given that payment collection was not reasonably assured. The delivered product remains as inventories on our consolidated balance sheets, regardless of whether title has been transferred. In such cases, we recognize revenues, relieve inventories and recognize the cost of revenue when payment is collected from customers.

Warranty Cost

Before June 2009, we typically sold our standard solar modules and products with up to a two-year guarantee for defects in materials and workmanship and a 10-year and 25-year warranty against declines of more than 10% and 20%, respectively, from the initial minimum power generation capacity at the time of delivery. In June 2009, we increased our warranty against defects in materials and workmanship to six years. Effective August 1, 2011, we increased our warranty against defects in materials and workmanship to ten years and we guarantee that for a period of 25 years, our modules will maintain the following performance levels:

during the first year, the actual power output of the module will be no less than 97% of the labeled power output;

from year 2 to year 24, the actual annual power output decline of the module will be no more than 0.7%; and

by the end of year 25, the actual power output of the module will be no less than 80% of the labeled power output.

In addition to the solar module warranty above, for utility-scale solar power projects built by us, we also provide a limited warranty against defects in workmanship under normal use, operation and service conditions for a period of five years following the energizing of the solar power plant. In resolving claims under the workmanship warranty, we have the option of remedying through repair, refurbishment or replacement of equipment.

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We have the right to repair or replace solar modules, at our option, under the terms of the warranty policy. We maintain warranty reserves to cover potential liabilities that could arise under these guarantees and warranties. Due to limited warranty claims to date, we accrue the estimated costs of warranties based on an assessment of our competitors' accrual history, industry-standard accelerated testing, estimates of failure rates from our quality review, and other assumptions that we believe to be reasonable under the circumstances. Actual warranty costs are accumulated and charged against the accrued warranty liability. To the extent that accrual warranty costs differ from the estimates, we will prospectively revise our accrual rate. There was no prospective reversion for each period presented. We currently take a 1% warranty provision against our revenue for sales of solar modules and 0.8% for solar system kits and solar power projects.

Since April 2010, we have entered into agreements with a group of insurance companies to back up our warranties. Under the insurance policies, the insurance companies are obliged to reimburse us, subject to certain maximum claim limits and certain deductibles, for the actual product warranty costs that we incur under the terms of our warranty policy. We record the insurance premiums initially as prepaid expenses and amortize them over the respective policy period, normally one year. If we determine that the product warranty costs to be reimbursed from the insurance companies are probable and determinable, an asset is recognized on our balance sheet.

Impairment of Long-lived Assets

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. When these events occur, we measure impairment by comparing the carrying amount of the assets to future undiscounted net cash flows expected to result from the use of the assets and their eventual disposition. If the sum of the expected undiscounted cash flow is less than the carrying amount of the assets, we will recognize an impairment loss based on the fair value of the assets. There was no impairment charge recognized during the years ended December 31, 2010, 2011 and 2012.

Allowance for Doubtful Accounts

We conduct credit evaluations of our customers and generally do not require collateral or other security from them. We establish allowances for doubtful accounts primarily based upon the age of our receivables and factors surrounding the credit risk of specific customers. As of December 31, 2010, 2011 and 2012, an allowance for doubtful accounts receivable of $8.0 million, $9.5 million and $47.6 million, respectively, was established for certain customers for whom management sees a credit risk on the collection of accounts receivable balances. The allowance for doubtful accounts receivable as of December 31, 2012 included $18.6 million relating to one customer in China with severe liquidity issues. An allowance of $10 million for doubtful accounts receivable was made in 2009 in connection with a particular customer due to the fact that the customer's account was more than 90 days overdue and the customer had communicated to us that it was unable to pay. We recovered the full overdue amount in 2010 after having taken legal proceedings against the customer. From mid-2009, we started to purchase insurance from Sinosure for accounts receivable to mitigate collection risks from some customers. We establish allowances for all doubtful accounts according to our allowance policy regardless of whether such accounts are covered by Sinosure insurance. For the amounts recoverable from Sinosure, we recorded $4.2 million, $5.3 million and $9.5 million in prepaid expenses and other current assets as of December 31, 2010, 2011 and 2012, respectively.

With respect to advances to suppliers, primarily suppliers of solar cells, solar wafers and silicon raw materials, we perform ongoing credit evaluations of their financial condition. We generally do not require collateral or security against advances to suppliers, as they tend to be recurring supply partners. However, we maintained a reserve for potential credit losses for advances to suppliers as of December 31, 2010, 2011 and 2012 of $19.4 million, $38.1 million and $38.5 million, respectively. The

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reserves as of December 31, 2012 include allowances on advances to LDK of $9.5 million, allowances on advances to a UMG-Si supplier of $10.2 million and allowances on advances to Deutsche Solar of $17.7 million.

Inventories

Inventories are stated at the lower of cost or market. Cost is determined by the weighted average method. Cost of inventories consists of costs of direct materials and, where applicable, direct labor costs, tolling costs and any overhead that we incur in bringing the inventories to their present location and condition.

Adjustments are recorded to write down the cost of obsolete and excess inventories to the estimated market value based on historical and forecast demand. The write-down of inventories for the years ended December 31, 2010, 2011 and 2012 were $2.1 million, $8.5 million and $3.1 million, respectively.

In the past, we entered into firm purchase commitments to acquire materials from our suppliers. A firm purchase commitment represents an agreement that specifies all significant terms, including the price and timing of the transactions, and includes a disincentive for non-performance that is sufficiently large to make performance probable, such as a take-or-pay provision which requires us to pay for committed volumes regardless of whether we actually acquire the materials. We evaluate these agreements and record a loss, if any, on firm purchase commitments using the same lower of cost or market approach that is used to value inventory. The computation of the loss on firm purchase commitments is subject to several estimates, including primarily the ultimate selling price of the finished goods of which these raw materials comprise a part, and is therefore inherently uncertain. Further, we only record the expected loss as it relates to the following fiscal period, as we are unable to reasonably estimate future market prices beyond one year. As a result, changes in the cost of materials or sales price of modules will directly affect the computation of the estimated loss on firm purchase commitments and our consolidated financial statements in the following years. We purchased the minimum contracted volume for year 2009 under our 12-year supply agreement with Deutsche Solar. We did not, however, purchase the minimum contracted volumes for years 2010 and 2011. The agreement contains a provision stating that if we do not order