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

Form 6-K

REPORT OF FOREIGN PRIVATE ISSUER
PURSUANT TO RULE 13a-16 OR 15d-16 UNDER THE
SECURITIES EXCHANGE ACT OF 1934

For the month of March 2010

Commission File Number: 001-33107

CANADIAN SOLAR INC.

No. 199 Lushan Road
Suzhou New District
Suzhou, Jiangsu 215129
People's Republic of China
(Address of principal executive office)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.

Form 20-F Form 40-F

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1):

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7):

Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.

Yes No

If "Yes" is marked, indicate below the file number assigned to the registrant in connection with Rule 12g3-2(b): 82- N/A

CANADIAN SOLAR INC.

Form 6-K

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SIGNATURE

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

CANADIAN SOLAR INC.

By: /s/ Shawn (Xiaohua) Qu

Name: Shawn (Xiaohua) Qu

Title: Chairman, President and Chief Executive Officer

Date: March 5, 2010

EXHIBIT INDEX

Exhibit 99.1 — Press Release



Canadian Solar Reports Fourth Quarter and Full Year 2009 Results

Ontario, Canada, March 3, 2010 — Canadian Solar Inc. (“the Company”, “Canadian Solar” or “we”) (NASDAQ: CSIQ), one of the world’s largest solar companies, today announced its unaudited financial results for the fourth quarter and the year ended December 31, 2009.

Financial Highlights

- 4Q09 net revenues of \$287.0 million, compared to 3Q09 net revenues of \$213.1 million and 4Q08 revenues of \$68.8 million.
- 4Q09 shipments of 155.5 MW, compared to 3Q09 shipments of 102.6 MW and 4Q08 shipments of 19.6MW. 4Q09 gross margin of 15.4%, compared to 3Q09 gross margin of 16.3% and 4Q08 gross margin of negative 42.7%. 4Q09 net income per diluted share of \$0.35 compared to 3Q09 net income per diluted share of \$0.69 and 4Q08 net loss of \$1.38 per diluted share.
- Full year 2009 net revenues of \$663.8 million, compared with full year 2008 net revenues of \$705.0 million.
- Full year 2009 shipments of 325.5 MW, a 94% increase over full year 2008 shipments of 167.5 MW.

For the fourth quarter of 2009, net revenues were \$287.0 million, compared to net revenues of \$68.8 for the fourth quarter of 2008 and \$213.1 million for the third quarter of 2009. Net income for the fourth quarter was \$14.9 million, or \$0.35 per diluted share, compared to a net loss of \$49.2 million, or \$1.38 per diluted share, for the fourth quarter of 2008.

4Q09 shipment is 155.5 MW including 146.5 MW of module sales, approximately 6.5 MW of off-spec solar cells, and 2.5 MW of modules shipped to a solar power plant project, which the Company built and sold during the quarter. The net proceeds of these project sales are classified as investment income in the profit and loss statement.

For the full year 2009, net revenues were \$663.8 million, compared to \$705.0 million for full year 2008. Net income for the full year 2009 was \$53.1 million, or \$1.41 per diluted share, compared to a net loss for the full year 2008 of \$7.5 million, or \$0.24 per diluted share.

Dr. Shawn Qu, Chairman and CEO, commented: “In 2009 we rebounded from net revenues of \$49.5 million in the first quarter to over \$287.0 million in the fourth quarter; a record for both our quarterly revenue and shipments. The rapid quarterly shipment and revenue increase we achieved is due to our world-wide market share growth and improving cost structure. We delivered products to more than 300 customers in seven core country markets and 18 secondary markets. In 2010 we expect shipments growth in ten core countries: Germany, Italy, Spain, the Czech Republic, France, the U.S., Canada, Japan, Korea and China. We are excited about our growth potential in these markets with the increasing brand recognition.”

Arthur Chien, CFO of CSI, noted: "Gross profit increased significantly to more than \$40 million in 4Q09, compared to a loss of nearly \$30 million in 4Q08. We achieved this increase by investing in our business to support revenue growth opportunities. Accordingly there were increased sales, general and administrative expenses during the quarter, both to support increased year end shipments and to prepare ourselves for ongoing growth in sales in 2010. 4Q09 results also reflect the impact of a \$5.1 million foreign exchange loss. Overall, we achieved an increase in net income for 2009 of \$53.1 million compared to a loss in 2008 of \$7.5 million. Both inventory days and accounts receivable days declined quarter over quarter, while our cash position, leverage ratios and balance sheet improved considerably year over year. We expect these improvements to continue into 2010."

Revenue by Geography

Region	4Q 2009		3Q 2009		4Q 2008		Year 2009		Year 2008	
	US\$M	%	US\$M	%	US\$M	%	US\$M	%	US\$M	%
Europe	236.7	82.5%	186.6	87.6%	52.8	76.7%	526.3	79.3%	631.1	89.5%
America	24.8	8.6%	12.9	6.0%	6.4	9.3%	56.5	8.5%	32.3	4.6%
Asia and others	25.5	8.9%	13.6	6.4%	9.6	14.0%	81.0	12.2%	41.6	5.9%
Total	287.0	100.0%	213.1	100.0%	68.8	100.0%	663.8	100.0%	705.0	100.0%

Recent Developments

- Enhanced selective emitter products are expected to begin shipping in March 2010.
- Produced first metal wrap-through (MWT) cells, and commenced testing and engineering work to determine the commercialization timeline of this product.
- Dual-axis trackers and specialty residential rooftop module products are expected to begin shipping in March 2010.
- Commenced the site selection and approvals process to establish a module manufacturing facility in Ontario, Canada.
- Entered into an 18 MW distribution deal with West Holding Ltd of Japan and a similar arrangement with another Japanese distributor. Started regular shipments in December 2009
- Entered into a 60 MW contract with Fire Energy Group. Fire Energy Group will promote and distribute Canadian Solar's PV products in Spain, Germany, Italy, the U.S., the Czech Republic, Morocco and China.
- The Company completed and sold its first 250 kW PV system in Ontario.
- Five of our solar module products are currently ranked amongst the highest performing in California's mandatory PV USA (PTC) ratings for P-Type modules. PTC ratings are becoming a widely accepted standard for measuring real-world module power and performance.
- Tai Seng Png, Vice President, Business Integration, resigned effective April 12, 2010. His duties are being assumed by Charlotte Xi Klein, Vice President, Global Operations.

Financial Outlook

The outlook below is based on the Company's current views with respect to operating and market conditions, its current order book and customers' forecasts, which are subject to change. The risks to our guidance also include changes in product pricing, availability and pricing of feedstock, and the project financing and exchange rate environment.

For the first quarter of 2010, we expect shipments of approximately 180 MW to 190 MW and gross margin in the mid-teens.

For the second quarter of 2010, we expect continued growth in MW shipments and a relatively stable pricing environment.

For the full year 2010, we reiterate expectations that shipments will be in the range of 600 MW to 700 MW. However, we recognize that the demand for our high quality solar modules will come in very strong from all major markets, including Germany, Italy, the U.S., the Czech Republic, Korea and Spain. We also expect strong growth from our newer markets, such as Canada, Japan and France. We plan to revisit and update our annual guidance as the year progresses.

Given the strong demand forecast, we expect to have an equal or slightly higher volume of externally purchased cells than internally produced cells in both Q1 and Q2. We are targeting to maintain a mid-teen gross margin level with this supply chain structure. The Company is on track to increase our internal cell production capacity from today's 420 MW to 700 MW by July 2010. We also believe that we are on track to improve the yield of our newly ramped-up ingot and wafer facility and expect a positive margin contribution in Q2. We also intend to further increase our internal ingot and wafer capacity in 2010.

Dr. Shawn Qu continued: "Demand is expected to be very strong for all of 2010. In the 1Q10, we are expecting shipments growth over 4Q09 with further sequential shipments growth in 2Q10. For the second half of the year, we expect the improved cost structure to result from both lower processing costs and from increased internal cell capacity. Finally some of our new premium products and new markets are expected to contribute positively to our earnings, especially in Q3 and Q4."

Investor Conference Call/Webcast Details

The Company will hold a conference call to discuss its financial results for the fourth quarter 2009 and business outlook today, Wednesday, March 3, 2010 at 8:00 a.m. U.S. Eastern Time (9:00 p.m. March 3, 2010 in Hong Kong). The dial-in phone number is +1-617-597-5343, with passcode 61962000. A live webcast of the conference call will also be available on Canadian Solar's website at <http://www.canadiansolar.com>.

A replay of the call will be available approximately one hour after the conclusion of the live call through 10:00 a.m. on March 10, 2010, U.S. Eastern Time (11:00 p.m., March 10, 2010 in Hong Kong) by telephone at +1-617-801-6888. To access the replay, use passcode 21133073. A webcast replay will also be available at <http://www.canadiansolar.com>.

About Canadian Solar Inc. (NASDAQ: CSIQ)

Canadian Solar Inc. is one of the world's largest solar companies. As a leading vertically integrated provider of ingot, wafer, solar cell, solar module and other solar applications, Canadian Solar designs, manufactures and delivers solar products and solar system solutions for on-grid and off-grid use to customers worldwide. With operations in North America, Europe and Asia, Canadian Solar provides premium quality, cost-effective and environmentally friendly solar solutions to support global, sustainable development. For more information, visit <http://www.canadiansolar.com>.

Safe Harbor/Forward-Looking Statements

Certain statements in this press release including statements regarding expected future demand, shipment volumes, production capacity, outsourcing volumes and cost structures, are forward-looking statements that involve a number of risks and uncertainties that could cause actual results to differ materially. These statements are made under the "Safe Harbor" provisions of the U.S. Private Securities Litigation Reform Act of 1995. In some cases, you can identify forward-looking statements by such terms as "believes," "expects," "anticipates," "intends," "estimates," the negative of these terms, or other comparable terminology. Factors that could cause actual results to differ include general business and economic conditions and the state of the solar industry; governmental support for the deployment of solar power; future available supplies of high-purity silicon; demand for end-use products by consumers and inventory levels of such products in the supply chain; changes in demand from significant customers, including customers of our silicon materials sales; changes in demand from major markets such as Germany and Canada; risks associated with building our new Ontario facility; changes in customer order patterns; changes in product mix; capacity utilization; level of competition; pricing pressure and declines in average selling prices; delays in new product introduction; continued success in technological innovations and delivery of products with the features customers demand; shortage in supply of materials or capacity requirements; availability of financing; exchange rate fluctuations; litigation and other risks as described in the Company's SEC filings, including its annual report on Form 20-F originally filed on June 8, 2009, as amended by its report on Form 20-F/A filed on October 14, 2009. Although the Company believes that the expectations reflected in the forward looking statements are reasonable, it cannot guarantee future results, level of activity, performance, or achievements. You should not place undue reliance on these forward-looking statements. All information provided in this press release is as of today's date, unless otherwise stated, and Canadian Solar undertakes no duty to update such information, except as required under applicable law.

Canadian Solar Inc.
Unaudited Condensed Consolidated Statements of Operations
(In Thousands of U.S. Dollars, Except Share And Per Share Data And Unless Otherwise Stated)

Item	2009 Q4	2009 Q3	2008 Q4	2009 1~12	2008 1~12
Net revenues	\$ 286,996	\$ 213,126	\$ 68,824	\$ 663,763	\$ 705,006
Cost of revenues	242,738	178,392	98,233	565,586	633,999
Gross profit (loss)	44,258	34,734	(29,409)	98,177	71,008
Selling expenses	10,453	6,564	1,768	22,127	10,608
General and administrative expenses	11,900	7,327	13,332	30,155	34,510
Research and development expenses	1,212	964	473	3,175	1,825
Total operating expenses	23,565	14,855	15,573	55,457	46,943
Income (loss) from operations	20,693	19,879	(44,982)	42,720	24,065
Interest expenses	(2,794)	(2,498)	(2,484)	(9,459)	(12,201)
Interest income	916	756	2,552	5,084	3,531
Gain on debt extinguishment	—	—	—	—	2,430
Debt conversion expenses	—	—	—	—	(10,170)
Gain (Loss) on foreign currency derivatives	935	(1,381)	7,031	9,870	14,455
Investment income	1,788	—	—	1,788	—
Exchange gain (loss)	(5,147)	9,665	(10,387)	7,680	(19,989)
Income (loss) before taxes	16,391	26,421	(48,270)	57,683	2,120
Income tax	(1,352)	(1,103)	(974)	(4,438)	(9,654)
Net income (loss)	15,039	25,318	(49,244)	53,245	(7,534)
Less: net income (loss) attributable to non-controlling interest	157	(25)	—	132	—
Net income (loss) attributable to CSI	\$ 14,882	\$ 25,343	\$ (49,244)	\$ 53,113	\$ (7,534)
Basic earnings (loss) per share	\$ 0.36	\$ 0.71	\$ (1.38)	\$ 1.43	\$ (0.24)
Basic weighted average outstanding shares	41,349,901	35,765,185	35,686,313	37,102,723	31,566,503
Diluted earnings (loss) per share	\$ 0.35	\$ 0.69	\$ (1.38)	\$ 1.41	\$ (0.24)
Diluted weighted average outstanding shares	42,421,414	36,571,071	35,686,313	37,743,464	31,566,503

Note: The fourth quarter 2008 net profit was decreased by \$757,748 and the twelve months to December, 2008 net profit was increased by \$1.9 million, as compared to the fourth quarter 2008 and the twelve months to December 30, 2008 net profit as per prior press release announcements due to retrospective application of ASC 470-20 on January 1, 2009.

Canadian Solar Inc.
Unaudited Condensed Consolidated Balance Sheets
(In Thousands of U.S. Dollars)

Item	December 31, 2009	December 31, 2008
Assets		
Current assets		
Cash and cash equivalents	\$ 160,111	\$ 115,661
Restricted cash	179,390	20,622
Accounts receivable, net of allowance for doubtful accounts	199,339	51,611
Inventories	138,759	92,683
Value added tax recoverable	39,494	17,493
Advances to suppliers	17,207	24,654
Foreign currency derivative assets	—	6,974
Prepaid and other current assets	28,663	9,317
Current assets — subtotal	762,963	339,015
Property, plant and equipment, net	217,136	165,542
Intangible assets	1,824	263
Advances to suppliers	44,054	43,087
Prepaid land use right	12,535	12,782
Investment	7,101	3,000
Deferred tax assets — non current	11,044	6,966
Total assets	1,056,657	570,655
Liabilities and equity		
Current liabilities		
Short term borrowings	251,702	110,665
Accounts payable	92,271	29,957
Notes payable	105,218	629
Other payables	34,906	24,043
Advances from customers	3,644	3,571
Amounts due to related parties	261	94
Foreign currency derivative liabilities	523	—
Other current liabilities	13,672	4,333
Current liabilities — subtotal	502,197	172,663
Accrued warranty costs	17,130	10,847
Liability for uncertain tax positions	10,705	8,704
Convertible notes	866	830
Long term borrowings	29,290	45,357
Total liabilities	560,188	238,401
Common shares	500,322	395,154
Additional paid in capital	(61,269)	(66,705)
Retained earnings (Accumulated deficit)	42,009	(11,104)
Accumulated other comprehensive income	15,122	14,909
Total Canadian Solar Inc. stockholders' equity	496,184	332,254
Non-controlling interest	285	—
Total equity	496,469	332,254
Total liabilities and equity	1,056,657	570,655