



ISSUER RATING
Long term

OUTLOOK
Negative

Initiation date 03/12/2021
Rating Date 13/12/2024

Contacts

Lead analyst

Benjamin Fazilleau
benjamin.fazilleau@ethifinance.com

Committee chair

Marc Pierron
marc.pierron@ethifinance.com

Rating Action and Rationale

- EthiFinance Ratings affirms Canadian Solar Inc’s rating at “BBB”, changing its outlook from “Stable” to “Negative”.
- The change in the outlook is explained by 3 factors. The first is the significant weighting of minority interests in the CSI Solar division (38%) since 2023, which may dilute the cash transfer to the holding in the event of a dividend distribution to support the Recurrent Energy division. The second factor is the patent infringement claims and warning letters received by Canadian Solar. One claim received in 2023 is considered immaterial, while the impact on the other claim and warning letter received in 2024 is currently unknown. The third factor is our expectation that credit metrics will deteriorate from 2024 onwards. In 2023, there was indeed a strategy shift in the Recurrent Energy division to operate more photovoltaic power plants and less asset rotation. This change in business model will consequently require a significant amount of capex, which will be financed by debt. The entry of Blackrock in 2024 with a USD 500m capital injection and a 20% stake acts as a mitigant.
- This rating is underpinned by i) a sector with solid fundamentals (medium levels of profitability, controlled volatility, high barriers to entry and favourable growth prospects) which is further supported by the positive impact of ESG on its assessment; and ii) the strong competitive positioning based on its vertical integration, its appropriate size and an outstanding diversification. On the financial side, we highlight the controlled indebtedness (NFD/EBITDA ratio < 4x)
- On the other hand, the rating is constrained by i) the satisfactory capitalisation, reflected in an average Equity/TFD ratio < 80%, ii) the significant presence of minority shareholders, which may dilute the dividend to the holding company in the event of a distribution. On the one hand, the equity injection supports the financial policy to control the net debt. On the other hand, it has an impact on the circulation of cash within the group and makes governance more complex. The NFD/EBITDA of 1.7x at the end of 2023 is exceptional given the partial IPO of CSI Solar. We expect a gradual increase from 3x to 4x in the coming years to support the new strategy in the Recurrent Energy division.
- According to our methodology, the renewable energy sector (capital goods) is well aligned with ESG factors (heatmap score of between 1 and 2). This consideration results in a one-category upgrade (three notches) on the industry risk assessment. The group’s ESG policies are considered neutral (ESG score between 3 and 3.5), resulting in a rating that is not affected by these factors.

Issuer Description

Canadian Solar is a multinational company involved in i) the manufacturing of photovoltaic panels; ii) the manufacturing of battery energy storage systems; iii) the development and operations of solar power and battery storage plants. Founded in 2001 in Canada, Canadian Solar now employs 18,500 people and sells products and services in more than 160 countries. Headquartered in Canada, Canadian Solar has been listed on the Nasdaq since 2006. Its main division, CSI Solar, which manufactures products in China, Southeast Asia, and the U.S., has been listed on the Shanghai Stock Exchange since 2023. For 2023, the sales of Canadian Solar were USD 7,614m with EBITDA of USD 895m (EBITDA margin of 11.8%). The NFD/EBITDA ratio stood at 1.7x at the end of 2023. Canadian Solar’s market capitalisation reached USD 794m (9/12/2024).

Fundamentals

Business Risk Profile

Industry Risk Assessment

- The renewable energy sector offers high growth prospects. The manufacturing of photovoltaic (PV) panels is subject to medium volatility, offers medium margins and rather high barriers to entry.

As Canadian Solar’s main activity is manufacturing, we use the sector “capital goods” sector for our industry risk assessment. The capital goods sector is characterised by medium volatility, rather high barriers to entry (significant capex required to build up a plant) and a medium level of profitability (EBIT margin ~10%). In particular, the photovoltaic sector has increasingly strong growth prospects with a CAGR between 6.9% and 14% over the next 5 to 6 years. This growth will be underpinned by rising electricity demand and the increasing penetration of solar generation in the energy mix, driven by favourable policies and financial returns. The global PV sector is dominated by Chinese companies, which could be affected by geopolitical turmoil between China and the US. Consequently, the market is global.

- An industry that benefits from positive ESG impact.

The renewable energy industry is well aligned with ESG factors (sector heatmap score between 1 and 2). This consideration results in a one category upgrade (three notches) on the industry risk assessment. The industry

contributes to pollution reduction and biodiversity protection as a substitute for highly-polluting traditional energy sources. However, related construction emits GHG and uses significant resources. The impact on consumers and communities is positive as clean energy contributes to good health and economic development. The impact on suppliers is medium as China, where ESG issues may exist, is involved in much of the supply chain.

Competitive Positioning

- **Solar has a strong competitive positioning among PV manufacturing companies.**

Canadian Solar operates in a global industry. It is one of the top 5 manufacturers with an estimated market share of 9% at the end of 2022.

Its strong market position is based on its vertical integration: Canadian Solar's CSI Solar division manufactures ingots, wafers, cells, modules and, from 2022, battery energy storage systems (BESS). The Recurrent Energy division is responsible for i) the EPC and financing of a project; and ii) the O&M of the solar power plants that sell electricity. The use of CSI Solar panels in the construction of its projects is an example of synergy.

Since 2023, we note a change in the strategy. Last year, the company planned to gain additional market share by an important facility expansion plan that is no longer on the agenda. Indeed, we note important shifts to its strategy: i) the production of PERC cells was converted to TOPCon cells, a more efficient category of cells that is expected to be dominant in the market in the coming years; ii) the assembly of batteries and its production expansion whose demand is expected to grow globally; iii) the opening of manufacturing plants of cells and modules in the US. On one hand, this allows the group to avoid tariffs and anti-countervailing measures imposed by the US for imported Chinese or Asian goods. On the other hand, these plants benefit from US incentives from to relocate industrial activities in the country; and iv) the focus made on operating more PV plants, instead of selling them, to generate stable and recurring revenues from the sales of electricity.

Limitations include the fact Canadian Solar i) is not positioned into hydrogen auxiliary modules, unlike one of its competitors; ii) has currently 2 patent infringements claims and one warning letter.

- **A good diversification.**

The mix of sales by region has been balanced since 2008, with a similar weighting between the Americas, Asia and Europe & others. No single customer accounts for more than 4% of sales. Limitations include the dependence on polysilicon (the main raw material) and the concentration of suppliers in the market, but not to an extent that EthiFinance Ratings considers problematic.

Shareholder Structure and Governance

- **A listed company with prudent financial policy and recurrent equity raise making the ownership and cash circulation into the whole group more complex.**

The majority shareholder is Shawn (Xiaohua) Qu, the founder of Canadian Solar, with a 21.3% stake.

Canadian Solar Inc. is a publicly traded company in the United States. CSI Solar is listed in China. Canadian Solar Inc. owns 64% of CSI Solar and therefore consolidates 100% of its operations. The group has a proven track record in raising equity. In 2023, CSI Solar went public, allowing the group to raise USD 928m. In 2024, Blackrock, an investment fund, entered the capital of the Recurrent Energy division with a capital injection of USD 500m, equivalent to a 20% stake. The strategy to operate more solar projects to generate revenues from electricity sales rather than rotating projects requires an important amount of capex and we understand that Blackrock's venue will support the financing through equity.

These recurring capital injections support the financial policy and investment plan to reduce the use of debt financing and control net leverage. We consider the financial policy to be relatively prudent with an average NFD/EBITDA <4x and no dividend payout, which we expect to be maintained next year.

As a constraint, we note i) the complex ownership structure with the presence of minority shareholders in each division, which limits the circulation of cash across the group, and ii) potential Chinese administrative oversight on information disclosure and share issuance in the overseas market, following a law that was enforced in March 2023.

- **A neutral ESG policy.**

Based on the ESG data provided and according to our methodology, Canadian Solar's ESG policy is rated neutral (score between 3 and 3.5). This score does not affect the financial profile score for the rating.

Financial Risk Profile

Sales and Profitability

- **2023 showed a timid increase of sales and better EBITDA margin.**

In 2023, despite higher shipment volumes (+12.7% year-on-year), explained by the additional production capacity, revenue increased by 1.9%. The lower purchase price of silicon (the main raw material) affected the final price, and the retention of higher ownership of projects rather than asset rotation in the Recurrent Energy division generated less revenues in the short-term.

The increase in the EBITDA margin is explained by the one-off capitalisation of costs in the Recurrent Energy division for c.0.4bn, corresponding to the investment in the solar project in which ownership has been retained. This is indeed a common practice within the solar industry to capitalise costs for projects. This accounting treatment alone offset the unit margin per module, which decreased by 16%.

Looking ahead to 2024, the company forecasts lower revenue (2Q24 presentation) and we expect a lower EBITDA margin to 10.9%.

Leverage and Coverage

- **Satisfactory level of NFD/EBITDA and EBITDA/Interest.**

The ratio NFD/EBITDA of 1.7x at the end of 2023 was exceptionally good given the IPO of the CSI Solar division. Cash raised is expected to be spent on capex. Consequently, we expect the ratio to increase again and stabilise in the range 3x-4x for the next 3 years, like has been the case in the past.

The EBITDA/Interest ratio slightly decreased from 8.9x to 7.9x. We expect this ratio to further decrease and stabilize around 6x for our forecast period (2024-2026).

Cash Flow Analysis

- **Stable cash flow generation and negative free cash flow.**

Canadian Solar has a track record of stable and recurring positive FFO generation. From 2023 onwards, the level of FFO will be boosted by the capitalisation of costs in the Recurrent Energy division. Consequently, the best indicator will remain free cash flow, which has turned negative from 2020 as a result of the expansion plan to increase production capacity.

Capitalisation

- **A satisfactory level of capitalization.**

The Equity/TFD jumped from 57.5% to 82.8% between 2022 and 2023 due to the combined effect of the conservation of the net income into retained earnings and the IPO of CSI Solar. We expect this level to decrease between 78% and 65% in the coming year explained by the capex plan.

Liquidity

- **An adequate liquidity profile.**

Canadian Solar has diversified funding sources (equity, bank debt and bonds), giving it good access to cash. At the end of 2023, the level of cash covers the 2024 debt maturities. In addition, short-term maturities can be rolled over and capex can be delayed or supported by financing, so we do not expect any cash strain in the short term.

However, the CSI Solar division generates approximately 95% of the group's revenue. This division is headquartered in China and appears to be a ring-fenced structure. Restrictions include cash collateral from Chinese banks, a prohibition on intercompany loans between the two divisions, withholding taxes on dividends paid by CSI Solar and potential Chinese regulatory oversight on issuing securities in foreign markets. We believe that management is aware of these restrictions and has taken steps to mitigate them. The capital injection from Blackrock in 2024 is one example. As a result, we do not expect liquidity issues for the Recurrent Energy division in the short term.

Modifiers

Controversies

- Canadian Solar is subject to 2 patent claim infringements and has received a warning letter. One claim is deemed to be insignificant in the 2023 consolidated financial statements. The other two occurred in 2024. Canadian Solar is not the only company in the PV industry facing similar claims. Canadian Solar is one of top 5 PV module producers in the world by shipments, such claims are part of competitive practices. The outcome is not yet known. Consequently, we have not penalised the rating based on this information but will continue to monitor the situation.

Country Risk

- Despite a challenging geopolitical context between China and the United States, the former being where

Canadian Solar has most of its manufacturing capacity and the latter where it generates 20% of its sales, Canadian Solar has managed its operations to mitigate this import restriction risk. The Uyghur Forced Labor Prevention Act is mitigated by diversification of supply and external certification of origin of components; the anti-dumping and countervailing duties on cells and modules are mitigated by the opening of factories in the US. We do not consider this to be a material factor that would penalise the rating based on country risk issues.

Main Financial Figures

Main financial figures. Millions of USD					
	2022	2023	2024E ⁽¹⁾	2025E ⁽¹⁾	2026E ⁽¹⁾
Turnover	7,469	7,614	7,005	8,196	9,015
EBITDA	660	895	764	893	983
EBITDA Margin	8.8%	11.8%	10.9%	10.9%	10.9%
EBIT	356	453	122	200	270
EBIT Margin	4.8%	5.9%	1.7%	2.4%	3.0%
EBT	372	424	28	95	150
Total Assets	9,038	11,896	13,333	14,134	14,989
Equity	2,307	3,705	4,227	4,303	4,423
Total Financial Debt	4,012	4,475	5,475	6,075	6,725
Net Financial Debt	2,043	1,528	2,290	3,075	3,817
Equity/TFD	57.5%	82.8%	77.2%	70.8%	65.8%
NFD/EBITDA	3.1x	1.7x	3.0x	3.4x	3.9x
Funds From Operations	680	918	664	770	833
FFO/NFD	33.3%	60.1%	29.0%	25.0%	21.8%
EBITDA/Interest	8.9x	7.9x	5.7x	6.2x	6.1x

⁽¹⁾ Forecasts designed by EthiFinance Ratings.

Credit Rating

Credit Rating	
Business Risk Profile	BBB+
Industry risk assessment	A-
Industry's ESG	Positive
Competitive Positioning	A-
Governance	BB+
Financial Risk Profile	BB+
Cash flow and leverage	BB+
Capitalisation	BB+
Company's ESG	Neutral
Anchor Rating	BBB
Modifiers	No
Rating	BBB

Rating Sensitivity

Factors that may (individually or collectively) impact the rating:

- **Long-term rating positive factors (↑)**

Increase in turnover; following ratios on a sustainable basis: NFD/EBITDA ratio <3x; FFO/NFD>40%; EBITDA/Interest>10x; Equity/TFD>80%.

- **Long-term rating negative factors (↓)**

Turnover below USD 5.5bn; negative impact from extra-territoriality regulation from China or the United States; additional presence of minority shareholders; NFD/EBITDA ratio above 4x; FFO/NFD<20%; EBITDA/Interest<5x; Equity/TFD<50%.

Sources of information

The credit rating assigned in this report has been requested by the rated entity, which has also taken part in the process. It is based on private information as well as public information. The main sources of information are:

1. Annual Audit Reports.
2. Corporate Website.
3. Information published in the Official Bulletins.
4. Rating book provided by the Company.

The information was thoroughly reviewed to ensure that it is valid and consistent, and is considered satisfactory. Nevertheless, EthiFinance Ratings assumes no responsibility for the accuracy of the information and the conclusions drawn from it.

Additional information

- The rating was carried out in accordance with Regulation (EC) N°1060/2009 of the European Parliament and the Council of 16 September 2009, on credit rating agencies. Principal methodology used in this research are :
 - Corporate Rating Methodology - General : <https://www.ethifinance.com/download/corporate-rating-methodology-general/?wpdmdl=35203>
- The rating scale used in this report is available at <https://www.ethifinance.com/en/ratings/ratingScale>.
- EthiFinance Ratings publishes data on the historical default rates of the rating categories, which are located in the central statistics repository CEREP, of the European Securities and Markets Authority (ESMA).
- In accordance with Article 6 (2), in conjunction with Annex I, section B (4) of the Regulation (EC) No 1060/2009 of the European Parliament and of the Council of 16 September 2009, it is reported that during the last 12 months EthiFinance Ratings has not provided ancillary services to the rated entity or its related third parties.
- The issued credit rating has been notified to the rated entity, and has not been modified since.

Conditions of Use for this document and its content:

For all types of Ratings that ETHIFINANCE RATINGS, S.L. (the "AGENCY") issues, the User may not, either by themselves or via third parties, transfer, sublease, sublicense, sell, extract, reuse, or dispose of in any other way the content of this Document to a third party, either for free or for consideration.

For the purpose of these Conditions of Use, any client who might have subscribed for a product and/or a service that allows him to be provided with the content of this Document as well as any privileged person who might access the content of this Document via www.ethifinance.com shall be considered as a User.

Nor may they alter, transform or distort the information provided in any way. In addition, the User will also not be permitted to copy and/or duplicate the information, nor create files which contain the information of the Document, either in its entirety or partially. The Document and its source code, regardless of the type, will be considered as the elaboration, creation, or work of the AGENCY and subject to the protection of intellectual property right regulation. For those uses of this Document which are permitted, the User is obliged to not allow the removal of the copyright of the AGENCY, the date of the Document's issuance, the business name as established by the AGENCY, as well as the logo, brands and any other distinctive symbol which is representative of the AGENCY and its rights over the Document. The User agrees to the conditions of Use of this Document and is subject to these provisions since the first time they are provided with this Document no matter how they are provided with the document. The Document and its content may not be used for any illicit purpose or any purpose other than those authorised by the AGENCY. The User will inform the AGENCY about any unauthorised use of the Document and/or its content that may become apparent. The User will be answerable to the AGENCY for itself and its employees and/or any other third party which has been given or has had access to the Document and/or its content in the case of damages which arise from the breach of obligations which the User declared to have read, accepted and understood upon receiving the Document, without prejudice to any other legal actions that the AGENCY may exercise in defence of its lawful rights and interests. The Document is provided on the acceptance that the AGENCY is not responsible for the interpretation that the User may make of the information contained. Credit analyses included in the Document, as well as the ratings and statements, are to be deemed as opinions valid on the date of issuance of the reports and not as statements of fact or recommendations to purchase, hold or sell any securities or to make any investment decision. The credit ratings and credit rating prospects issued by the AGENCY are consider to be its own opinion, so it is recommended that the User take it as a limited basis for any purpose that it intends to use the information for. The analyses do not address the suitability of any value. The AGENCY does not act as a fiduciary or an investment advisor, so the content of the Document should not be used as a substitute for knowledge, criteria, judgement or experience of the User, its Management, employees, advisors and/or clients in order to make investment decisions. The AGENCY will devote every effort to ensure that the information delivered is both accurate and reliable. Nonetheless, as the information is elaborated based on data supplied by sources which may be beyond the control of the AGENCY, and whose verification and comparison is not always possible, the AGENCY, its subsidiaries, and its directors, shareholders, employees, analysts and agents will not bare any responsibility whatsoever (including, without any limitations, loss of revenue or income and opportunity costs, loss of business or reputational damage or any other costs) for any inaccuracies, mistakes, noncorresponding information, incompleteness or omission of data and information used in the elaboration of the Document or in relation to any use of its content even should it have been warned of potential

damages. The AGENCY does not make audits nor assume the obligation of verifying independent sources of information upon which the ratings are elaborated. Information on natural persons that may appear in this document is solely and exclusively relevant to their business or business activities without reference to the sphere of their private life and should thus be considered. We would like to inform that the personal data that may appear in this document is treated in accordance with Regulation (EU) 679/2016, on the protection of natural persons with regard to the processing of personal data and the free movement of such data and other applicable legislation. Those interested parties who wish to exercise the rights that assist them can find more information in the link: <https://www.ethifinance.com/> in the Privacy Policy page or contact our Data Protection Officer in the mail dpo@ethifinance.com. Therefore the User agrees that information provided by the AGENCY may be another element to consider when making business decisions, but decisions will not be made based solely on it; that being the case the AGENCY will not be held responsible for the lack of suitability. In addition, the use of the information before courts and/or tribunals, public administrations, or any other public body or private third party for any reason shall be solely the User's responsibility and the AGENCY shall not be held responsible for any liabilities on the grounds of inappropriateness of the information's contents. Copyright © 2023 ETHIFINANCE RATINGS, S.L. All Rights Reserved. C/ Benjamín Franklin S/N, Edificio Camt, 1º Izquierda, 18100, Granada, España C/ Velázquez nº18, 3º derecha, 28001 - Madrid