



ISSUER RATING
LongTerm

OUTLOOK
Stable

Initiation date 03/12/2021
Rating Date 12/12/2025

Contacts

Lead analyst

Daniel Rivas
daniel.rivas@ethifinance.com

Committee chair

Antonio Madera Del Pozo
antonio.madera@ethifinance.com

Rating Action and Rationale

- EthiFinance Ratings downgrades Canadian Solar Inc's long-term rating from BBB to BBB-, changing the outlook from Negative to Stable.
- The downgrade is mainly driven by a gradual weakening in the company's financial profile over recent periods. It is critical to characterize the recent financial deterioration as cyclical rather than structural, primarily driven by a temporary global oversupply of modules. With price normalization and capacity rationalization in China already underway, and the company's strategic transition to an IPP model supported by proven capital recycling mechanisms, including asset rotation, non-recourse structures, and tax equity, the financial snapshot from 2023–2025 is not representative of the company's long-term risk profile. The gradual weakening has been materialized in higher leverage and tighter coverage ratios, with net debt-to-EBITDA and EBITDA-to-interest moving from historically solid levels (~2.4x and >8x, respectively) to current metrics that are expected to average around ~4x and ~5x going forward. This deterioration reflects both sector-specific headwinds in the electrical equipment / solar manufacturing segment (namely the steep decline in module pricing, oversupply across the value chain and higher cost pressures) which have compressed margins, and the company's strategic transition within Recurrent Energy from a predominantly "develop-to-sell" approach toward a long-term ownership model (a hybrid IPP strategy).
- However, as announced in its Q3 2025 earnings call, the company now plans to accelerate asset rotation to strengthen cash flow and deleverage its balance sheet. While the strategic transition is viewed positively from a qualitative standpoint (given the increased revenue stability and lower earnings volatility associated with contracted cash flows under PPAs) it requires significant upfront capital expenditure, largely financed through debt or non-recourse structures that nevertheless carry meaningful financial commitments. As a result, the company's consolidated leverage is expected to remain elevated, limiting deleveraging capacity in the near term. However, the company's asset rotation plan during 2026 progressively enhances cash flow and support balance sheet strengthening as its effect begin to materialize.
- In addition, the Stable Outlook reflects our expectation that, despite leverage remaining elevated in the coming periods, the company will be able to keep its credit metrics within the ranges outlined above. We do not anticipate a further deterioration in the short to medium term, as the current business and financial trajectory is deemed broadly predictable and consistent with the rating category.
- The investment grade rating is underpinned by i) a sector with solid fundamentals (medium levels of profitability, controlled volatility, high barriers to entry and favorable growth prospects) which is further supported by the positive impact of ESG on its assessment; ii) the company's strong competitive positioning based on its vertical integration, its appropriate size and an outstanding diversification, both by product and by geography, which significantly mitigates regulatory and market risk, and iii) a governance framework assessed positively, reflecting a high-quality management team and the transparency and discipline associated with a publicly listed ownership structure.
- On the other hand, the rating is constrained by i) a strategic shift by the Recurrent Energy segment that requires a significant amount of CapEx, mostly financed with debt, and therefore has led to a leverage increase and a coverage ratio deterioration; ii) the significant weighting of minority interests in the CSI Solar division (36%), which may dilute the cash transfer to the holding in the event of a dividend distribution to support the Recurrent Energy division, although these dividend policies are structured to maintain flexibility and support the group.
- According to our methodology, the renewable energy sector (capital goods – electrical equipment) is well aligned with ESG factors (heatmap score of between 1 and 2). This consideration results in a one-category upgrade (three notches) in the industry risk assessment. The group's ESG policies are considered neutral (ESG score between 1.5 and 3.5), resulting in a rating that is not affected by these factors.

Company Description

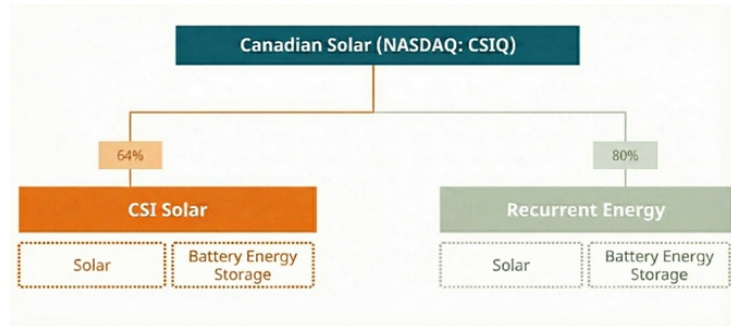
Canadian Solar is a global solar technology and renewable energy company, founded in 2001 in Ontario, Canada. The company is one of the world's largest operators in the sector, with a global presence across more than 160 countries and employing around 18,000 people.

The company is 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.

Canadian Solar has been listed on the Nasdaq since 2006. CSI Solar, the company's majority-owned subsidiary, which manufactures products in China, Southeast Asia, and the U.S., has been publicly listed on the Shanghai Stock Exchange (STAR Market) since 2023.

For 2024, the sales of Canadian Solar were \$5.9b with EBITDA of \$743.7m (EBITDA margin of 12.4%). The Adjusted NFD/ Adjusted EBITDA ratio stood at 4.9x at end 2024. Canadian Solar's current market capitalization is \$1.68b (at 26/11/2025).

The company functions as a holding company with its business operations divided into two main segments: CSI Solar and Recurrent Energy.

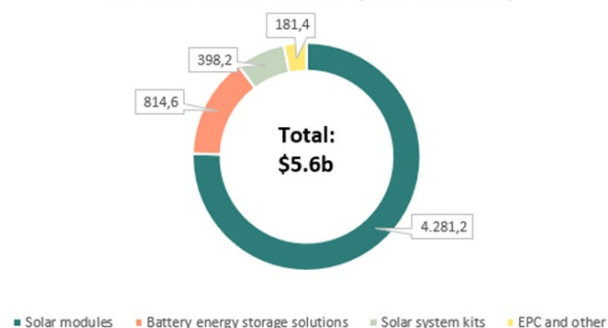


Source: Canadian Solar 2025Q3 Earnings Call Presentation. Formatted by EthiFinance.

The CSI Solar division is focused on the design, development and manufacturing of solar and battery energy storage products (94.6% of total sales in 2024; Canadian Solar holds 64%).

- **Manufacturing:** CSI Solar operates manufacturing facilities in China, Southeast Asia, and the United States. It employs a flexible, vertically integrated model, producing solar ingots, wafers, cells, and modules.
- **Solar Products:** It offers a comprehensive line of crystalline silicon solar modules, including advanced N-type TOPCon modules, for residential, commercial, and utility-scale applications.
- **Battery Energy Storage Solutions:** This segment includes the e-STORAGE brand, which provides integrated utility-scale, turnkey battery energy storage solutions.
- **System Solutions:** CSI Solar also provides other solutions, such as inverters, solar system kits and EPC services.

CSI Solar: lines of business (Revenue in \$m)



Source: Canadian Solar 2024 Annual Report. Formatted by EthiFinance.

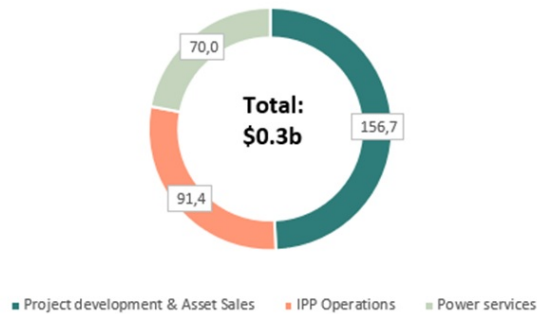
At the end of 2024, e-STORAGE's had 4.9 GWh of battery projects under long-term service agreements and contracted backlog, of approximately \$3.2 billion.

The Recurrent Energy division (formerly Global Energy) is the company's global project development and power services arm. This segment focuses on developing, building, selling and operating solar power and battery energy storage projects globally (5.4% of total sales in 2024; Canadian Solar holds 80%). It is involved in the following phases:

- **Project Development:** Recurrent Energy manages a large and geographically diversified pipeline of solar and battery storage projects at various stages of development.
- **Asset Sales:** The company monetizes projects in various stages of development to third-party buyers, such as utilities, independent power producers, and energy investors.
- **IPP Operations (Power Sales):** As part of a strategic transition, Recurrent Energy is shifting from a purely "develop-to-sell" model to a "hybrid model". It is retaining a greater ownership stake in selected projects, particularly in markets like the U.S. and Europe, to operate them as an Independent Power Producer (IPP). This strategy is designed to increase long-term, recurring revenues from the sale of electricity.
- **Power Services:** The segment also provides long-term power services, including O&M (Operation & Maintenance) and asset management for operational projects, both for its own portfolio and for third-party

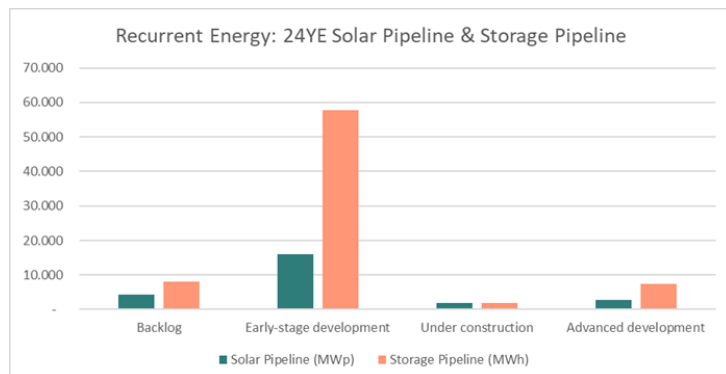
owners.

Recurrent Energy: lines of business (Revenue in \$m)



Source: Canadian Solar 2024 Annual Report. Formatted by EthiFinance.

As of year-end 2024, Recurrent Energy's pipeline demonstrated a significant strategic focus on energy storage. The Recurrent Energy pipeline includes approximately 57 GWh of "Early-stage development" storage projects and 16 GWp of solar PV pipeline, as base of company's future growth potential.



Source: Canadian Solar 2024 Annual Report. Formatted by EthiFinance.

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.

Canadian Solar's main activity is manufacturing, placing it within the "capital goods" sector for 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.

Complementing its manufacturing base, Canadian Solar has vertically integrated downstream into the development, ownership, and operation of solar power projects, positioning this segment within the 'Utilities' sector. The Utilities sector is characterised by low to medium volatility, high barriers to entry due to complex regulatory approval, grid interconnection rights, high capital intensity and a stable, often recurring level of profitability (EBIT margin ~15-25%). Canadian Solar's global presence and use of long-term contracted or hedged structures help mitigate regional regulatory risks inherent to this sector.

Unlike the manufacturing sector, the global Utility sector is fragmented and regional rather than dominated by a single country's output. However, players could be affected by regulatory changes, interest rate fluctuations, and grid capacity constraints, leading to curtailments. Consequently, the market is multi-local and regulation-dependent. In this context, Canadian Solar's geographic and business-model diversification provides an additional layer of resilience relative to more regionally concentrated peers.

The long-term growth prospects for the solar and battery storage sector are exceptionally strong, driven by a global consensus on decarbonization and energy security. The industry is still in its early stages; in 2024, solar power accounted for only 7% of global electricity generation. To meet the 1.5°C Paris Agreement goal, global installed solar PV capacity is projected to grow from approximately 2.8 TW in 2025 to 18 TW by 2050, with storage expected to grow even faster due to increasing flexibility needs across major grids.

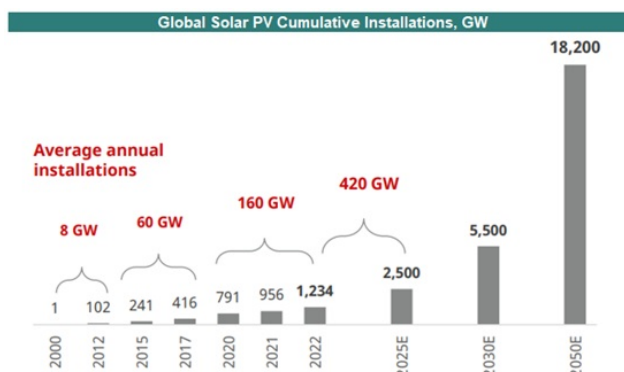
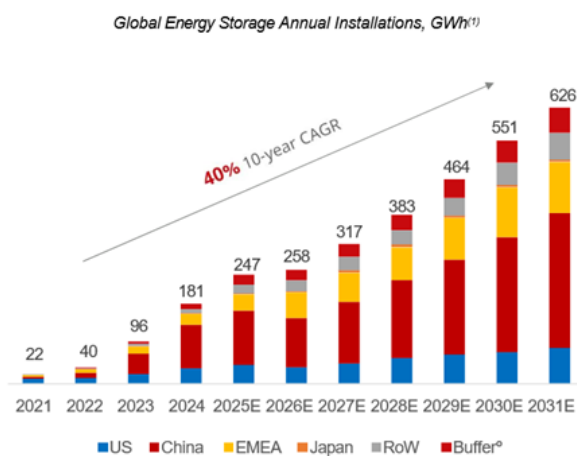


Chart retrieved from Canadian Solar inc investor presentation.
Source: International Energy Agency (IEA), IRENA World Energy Transitions Outlook 2024.



(1) Source: BNEF.

Chart retrieved from Canadian Solar 2025Q3 Earnings Call Presentation.

Beyond traditional utility and residential adoption, growth is being impulsed by new, large-scale electricity consumers. These include the massive energy needs for data centers powering artificial intelligence (AI) and the widespread electrification, including electric vehicles (EVs).

The industry's growth is increasingly tied to the hybrid "Solar + Energy Storage" model. Whereas solar's key weakness is its intermittency, battery energy storage systems (BESS) solve this by storing excess energy and dispatching it when demand is high or the sun is not shining.

Despite strong growth, the sector is characterized by medium volatility, which directly impacts profitability. The industry frequently experiences periods of oversupply of polysilicon, solar wafers, cells and modules. This oversupply creates substantial downward pressure on the prices for solar modules.

The sector's financial health also depends largely on the availability and size of government subsidy programs and economic incentives. Furthermore, the industry is highly exposed to geopolitical tensions and trade barriers, such as antidumping and countervailing duties and tariffs in key markets like the U.S. and Europe, which add significant costs

and uncertainty. As a capital-intensive industry, the sector is also sensitive to interest rates. Higher rates increase financing costs for project development, which in turn can exert downward pressure on the prices of solar systems as developers seek to maintain their internal rates of return.

The solar and battery storage sector has significant barriers to entry for new companies, particularly in manufacturing and large-scale project development. The most significant barrier is the high capital intensity. Manufacturing requires significant capital investments in manufacturing technology, facilities and capital equipment. The industry is also characterized by significant technological changes and frequent new product introductions, pressing companies to heavily invest in R&D to remain competitive.

- An industry that benefits from positive ESG impacts.

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) in 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

- Canadian Solar has a strong competitive positioning among PV manufacturing companies, with two-segment business models, a globally diversified portfolio, significant vertical integration and leadership in next-generation technology.

Canadian Solar has established a strong competitive position as one of the world's largest and most established "Tier 1" solar technology companies.

A key advantage is the company's diversified two-segment business model, which consists of CSI Solar and Recurrent Energy. The Recurrent Energy segment provides a stable channel for the company's own modules and battery storage solutions, securing demand even during market downturns. Conversely, the manufacturing expertise of CSI Solar gives the project development arm vertical integration with upstream manufacturing, allowing for better cost control and a reliable supply of high-quality components. This integrated approach allows the company to capture value across the solar energy chain.

Canadian Solar. Annual capacity production (in GW)				
Product	2022(A)	2023(A)	2024(A)	2025(E)
Solar Module	32	57	60	51
Solar Cell	20	50	48	32
Solar Wafer	20	21	31	37
Solar ingot	20	20	25	31
Total	92	148	165	151

Source: Annual report 2024

Canadian Solar. Annual capacity production (in GWh)				
Product	2022(A)	2023(A)	2024(A)	2025(E)
BESS	3	10	20	15
Battery cell	0	0	0	3
Total	3	10	20	18

Source: Canadian Solar Annual report 2024

This synergy is built on a foundation of massive manufacturing scale and vertical integration. Canadian Solar's flexible vertically integrated business model includes in-house capacity for solar ingots, wafers, cells, and modules, as well as battery energy storage systems. This integration provides significant flexibility to respond to short-term demand changes and allows for better control over manufacturing costs, which is a critical advantage in a market with volatile raw material prices like polysilicon. The company is also actively diversifying its manufacturing footprint globally, with new facilities in the U.S. (Texas, Indiana, Kentucky) to meet local content requirements under the U.S. IRA and mitigate geopolitical trade risks.

Canadian Solar operates as a globally diversified company, competing against a range of highly specialized and large-scale rivals.

Peers comparison @ 3Q2025

Company	Mkt Cap (\$m)	EV (\$m)	Sales FY25 (\$m)	Gross margin (%)	EBITDA Margin NTM (%)
Sungrow Power	54.411,0	54.021,5	13.058,7	19,0%	19,7%
First Solar	27.728,2	26.027,7	5.050,6	40,3%	50,9%
LONGi Green energy	20.212,5	15.084,5	10.372,9	9,4%	8,9%
Tongwei	15.683,0	26.390,7	12.244,2	11,6%	13,1%
JA Solar Technology	6.539,9	10.748,0	7.274,4	7,0%	9,6%
Trina Solar A	6.250,7	10.814,3	9.292,3	9,9%	7,7%
Canadian Solar	1.413,8	7.007,8	5.919,4	17,2%	11,5%
Jinkosolar Holding	1.297,0	5.391,3	11.515,4	8,4%	4,8%

Source: Factset

Sungrow Power Supply Co is a primary competitor in the battery energy storage and power electronics space. It does not compete in the solar module market, instead it is a highly specialized technology provider and a global leader in photovoltaic inverters, with overseas production capacity of 50GW as of 1H25. It is a direct competitor to Canadian Solar's e-STORAGE business, with a planned advanced energy storage of 20GWh.

First Solar is a major US-based manufacturer. Its primary differentiator is its technology. First Solar produces solar modules based on alternative solar technologies, such as thin-film PV materials. This technology does not use silicon, making the company less susceptible to increases in the cost of this material. The company has set a target for annual US capacity in 2027 of 17.7GW in thin-fil modules, although thin film technology has very limited market share outside the U.S.

LONGi Green energy Technology Co. is one of the largest "China-based" companies in the solar industry and an intense competitor in the module manufacturing segment. It is a vertically integrated manufacturer, similar to Canadian Solar's CSI Solar arm, and competes directly in the production and sale of crystalline silicon solar modules. The production capacity is expected to reach 200GW, 100GW and 150GW respectively by 2026.

Canadian Solar's strategy appears to be built on three core pillars designed to navigate the sector's challenges: technological leadership, solid geographic positioning (especially in the U.S.), and well-built vertical-chain diversification, which together strengthen the company's competitive resilience.

First, the company is focused on limiting technological obsolescence. After relying on PERC cell technology, Canadian Solar began a significant upgrade to N-type and TOPCon technology, starting mass production of TOPCon modules in early 2023. This move aligns with the industry's upgrade to this new technology, which offers higher conversion efficiency, better performance in hot temperatures, and less power degradation over the module's lifespan.

Second, the company is executing a major strategic pivot to the U.S. market. The Americas accounted for 51.8% of its revenue in 2024, making it its largest market. Historically, the company's manufacturing has been concentrated in China and Southeast Asia, which are subject to U.S. tariffs and antidumping/countervailing duties (AD/CVD). To mitigate these trade risks and capitalize on favorable "Made in USA" incentives under the Inflation Reduction Act (IRA), Canadian Solar is investing heavily in a U.S. manufacturing footprint, which should meaningfully enhance its access to the U.S. utility-scale market and improve margin visibility through IRA tax credits.

Upcoming US Pipeline

Product / Factory	Location	Capacity	Production Status
Solar Cell Factory	Jeffersonville, Indiana	6 GWh	Planned start in Q1 2026
Battery Cell & BESS Factory	Kentucky	6 GWh	Planned start in Q4 2026

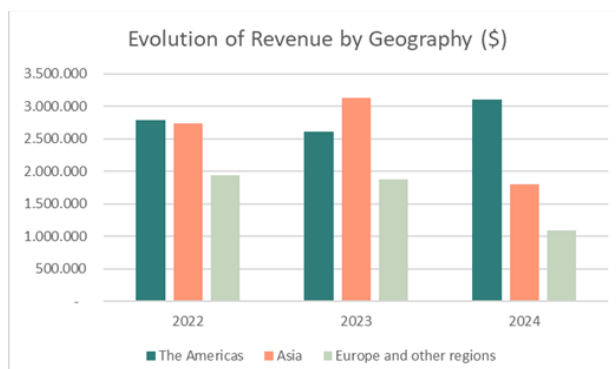
Source: Canadian Solar 2024 Annual Report. Formatted by EthiFinance.

Third, the company is executing a diversification strategy both vertically and into recurring revenue streams. It has aggressively expanded its e-STORAGE (BESS) business and is now vertically integrating further into BESS and battery cell manufacturing, targeting capacities 15 GWh and 3 GWh, respectively, by year-end 2025. Simultaneously, its Recurrent Energy segment is transitioning from a "develop-to-sell" model to a "hybrid model", retaining ownership of key projects in the U.S. and Europe to generate stable and predictable revenues as an Independent Power Producer (IPP).

- **Globally distributed diversification, with a major impulse of US manufacturing during 2024. Moderate concentration of the customer base and notably clustered supply chain.**

Canadian Solar maintains a high degree of geographical diversification across its sales, manufacturing, and project development operations. This global footprint is a core strategy to mitigate regional market volatility and complex geopolitical trade risks.

The company's geographical revenue has changed its balance during the last three years. In 2024, the Americas were the largest market, accounting for 51.8% of net revenues (a significant increase from 34.4% in 2023), followed by Asia at 30.0% (down from 41.0%), and Europe and other regions at 18.2% (down from 24.6%).



Source: Canadian Solar 2024 Annual Report. Formatted by EthiFinance.

Historically concentrated in China and Southeast Asia (Thailand and Vietnam), the company is executing a major strategic diversification of its manufacturing base into the United States, as a direct response to U.S. trade policies and to capitalize on domestic content incentives provided by the Inflation Reduction Act (IRA).

Region/Country	2022	2023	2024	Region/Country	2022	2023	2024	Region/Country	2022	2023	2024
The Americas:				Asia:				Europe and other regions:			
United States	1,963,956	1,485,919	2,776,124	China	1,904,862	2,151,243	1,220,446	Spain	434,841	445,321	221,788
Brazil	623,331	846,387	190,925	Pakistan	73,531	78,203	266,082	Germany	322,189	291,385	198,227
Mexico	31,912	50,884	42,431	Japan	325,344	597,188	150,727	United Kingdom	106,662	144,994	185,24
Others	174,452	232,955	94,295	India	197,772	91,02	50,241	Others	393,959	128,247	115,118
Total Americas	2,793,651	2,616,145	3,103,775	United Arab Emirates	15,974	22,915	23,546	Italy	14,465	79,041	81,007
% Region over Total	37%	34%	52%	Taiwan	67,411	19,369	21,155	South Africa	118,458	218,596	75,467
Total Revenues (\$)	7,468,610	7,613,626	5,993,409	Philippines	26,578	40,612	18,623	Poland	26,135	12,667	27,975
				Others	128,307	124,946	50,742	Czech	79,414	62,079	23,67
				Total Asia	2,739,779	3,125,496	1,801,562	Romania	31,804	24,911	23,54
				% Region over Total	37%	41%	30%	Netherlands	136,375	81,82	21,607
				Total Revenues (\$)	7,468,610	7,613,626	5,993,409	Others	270,877	383,344	114,433
								Total Europe and other regions	1,935,180	1,871,985	1,088,072
								% Region over Total	26%	25%	18%
								Total Revenues (\$)	7,468,610	7,613,626	5,993,409

Source: Canadian Solar 2024 Annual Report. Formatted by EthiFinance.

The Recurrent Energy segment's project pipeline is globally distributed, with major projects under development in North America, Europe, Latin America, Japan, and Australia, among others.

Pipeline	Backlog	Early-stage development	Under construction	Advanced development	Total
Solar (in MWp)	3,408	17,560	2,032	2,110	25,110
North America	556	4,341	276	427	5,600
EMEA	1,687	4,616	1,108	785	8,196
LATAM	374	5,866	128	352	6,720
Asia Pacific (excl. China and Japan)	-	1,164	171	466	1,801
China	735	1,470	300	-	2,505
Japan	56	103	49	80	288
Storage (in MWh)	5,430	66,077	1,091	7,980	80,578
North America	200	22,932	600	600	24,332
EMEA	2,590	30,590	43	3,829	37,052
LATAM	-	1,825	-	1,320	3,145
Asia Pacific (excl. China and Japan)	240	2,580	440	500	3,760
China	1,260	6,500	-	-	7,760
Japan	1,140	1,650	8	1,731	4,529
Total Pipeline	8,838	83,637	3,123	10,090	105,688

Source: Canadian Solar 3Q2025 Earnings Presentation. Formatted by EthiFinance.

Canadian Solar's customer base is moderately diversified. In 2024, the company's top five customers accounted for only 17.8% of its total net revenues. Furthermore, its single largest customer represented 5.4% of total net revenues in 2024.

In contrast to its customer base, Canadian Solar faces a notable concentration risk in its supply chain. This dependency is most significant for high-purity polysilicon and lithium iron phosphate (LFP) battery cells for its e-STORAGE business, which are sourced from third parties.

Shareholder Structure and Governance

- Listed company with a complex subsidiary structure and high proportion of minority shareholders, which may complicate governance.

Dr. Shawn (Xiaohua) Qu is Canadian Solar's largest shareholder with a 20.9% stake as of January 31, 2025. He founded Canadian Solar in 2001 and currently serves as CEO, President, and Chairman of the Board. As of the 2024 annual

report, the board of directors consists of 7 members, 4 of whom are independent.

We note that the company's dual listing (CSIQ on NASDAQ and the subsidiary CSI Solar on Shanghai's STAR Market) facilitates access to diverse equity capital markets. However, this structure adds complexity. First, new PRC regulations require both CSI Solar and the parent company, Canadian Solar Inc., to complete filing procedures with the CSRC for future securities offerings. Second, the existence of minority shareholders in the ~64%-owned CSI Solar subsidiary means its board and executive officers have fiduciary duties to all shareholders, which may complicate governance and future capital-raising decisions.

- **Aggressive financial policy to sustain the transition to the hybrid model.**

In terms of financial policy, Canadian Solar has been investing heavily in production capacity and energy generation. In 2023, the IPO of the CSI Solar division brought in \$927.9m in net proceeds, which helped finance the 2023 capital expenditures of \$1.5b. During 2024, the company accelerated its capital deployment to support its transition to an IPP model, with CapEx of \$1.8b in 2024. Moreover, the strategic shift towards more energy generation required significant financing. To support this, BlackRock invested \$500m in 2024 representing 20% of the outstanding fully diluted shares of Recurrent Energy on an as-converted basis, providing additional equity for these projects. The company has significantly revised its 2025 expansion plans. Module shipment guidance for 2025 (24.5-24.7 GW) is significantly lower than the 31.1 GW shipped in 2024, since the company has been trying to focus on margin rather than in volume. Furthermore, BESS capacity targets for year-end 2025 were revised down from 30 GWh to 15 GWh.

Regarding distribution, Canadian Solar has never paid a dividend on its common shares, retaining earnings to fund growth.

- **Neutral ESG Policy**

Canadian Solar has a neutral ESG assessment. Based on the ESG data provided and according to our methodology, Canadian Solar's ESG policy is rated neutral (score between 1.5 and 3.5). This score does not affect the financial profile score for the rating.

Financial Risk Profile

Sales and Profitability

- **The strategic shift reduced turnover in 2024 as the company deferred revenue while deploying substantial capital expenditure.**

The comparison between 2023 and 2024 reveals certain market pressure and strategic cost management. While net sales declined significantly, the company managed to maintain its gross margin.

Profitability. millions of USD					
	FY22	FY23	FY24	23vs22	24vs23
Turnover	7,469,0	7,614,0	5,993,4	1,9%	-21,3%
Gross Mg	16,9%	16,8%	16,7%	-0,1pp	-0,1pp
Adj. EBITDA	660,0	895,0	743,7	35,6%	-16,9%
Adj. EBITDA Mg	8,8%	11,8%	12,4%	2,9pp	0,7pp
EBIT	356,0	453,0	30,1	27,2%	-106,6%
EBIT Mg	4,8%	5,9%	-0,5%	1,2pp	-6,5pp
Financial expenses	-	74,0	-	137,5	-54,1%
EBT	372,0	424,0	94,4	14,0%	-122,3%

Source: Canadian Solar 2024 Annual Report. Formatted by EthiFinance.

Net revenues fell 21.3%, from \$7.6b in 2023 to \$5.9b in 2024. This decline was not driven by a decrease in sales volume (module shipments were stable, rising slightly from 30.7 GW to 31.1 GW). The revenue drop was almost entirely due to a decline in solar modules ASPs (Average Selling Prices), which fell from \$0.23 per watt in 2023 to \$0.16 per watt in 2024 amid severe industry-wide oversupply and price pressure. According to management, this trend is not expected to continue in the foreseeable future.

Despite this price crash, the company's Gross Margin remained stable, moving from 16.8% to 16.7%. This was possible because the cost of raw materials, particularly polysilicon and wafers, also declined significantly. Canadian Solar's average module manufacturing cost in China fell from \$0.169 per watt in 2023 to \$0.106 per watt in 2024. In addition, the company strategically shifted module volumes from less profitable markets and promote the growth of its e-STORAGE business (6.6 GWh delivered, representing an annual increase of over 500%).

Asset Structure

The 2023-2024 asset structure reflects a fundamental strategic transformation at Canadian Solar. The company is actively moving from its historical "develop-to-sell" model to a "hybrid model". This shift means that instead of selling

completed projects, the company is now holding and reclassifying them in the balance sheet as long-term assets (Non Current Assets increased 30,9% YoY). In addition, IPP capex is financed at the project level, with limited or non-recourse to the holding. However, the company recently announced a strategic adjustment towards a more balance approach between project ownership and project sales, to better manage cash flow and leverage.

Asset structure and financing. millions of USD					
	2022	2023	2024	23vs22	24vs23
Total Assets	9.038,0	11.896,0	13.511,6	31,6%	13,6%
Non Current Assets	3.704,0	5.800,6	7.594,5	56,6%	30,9%
Current Assets	5.334,0	6.095,5	5.917,1	14,3%	-2,9%
Working Capital	1.689,0	1.271,0	1.262,5	-24,7%	-0,7%
Equity	2.307,0	3.705,0	3.902,0	60,6%	5,3%
Adj. Total Financial Debt (aTFD)	4.012,0	4.475,0	5.911,0	11,5%	32,1%
Adj. Net Financial Debt (aNFD)	2.043,0	1.528,0	3.647,0	-25,2%	138,7%
Adj. Net Financial Debt (excl. Non-Recourse)	1.441,2	856,8	2.760,3	-40,6%	222,2%
Equity/aTFD	57,5%	82,8%	66,0%	25,3pp	-16,8pp
Adj NFD/Adj. EBITDA	3,1x	1,7x	4,9x	-1,4x	3,2x
Adj NFD (excl. NR)/Adj EBITDA	2,2x	1,0x	3,7x	-1,2x	2,8x
Adj. EBITDA/Adj. Interest	8,9x	7,9x	5,4x	-1,1x	-2,4x

Source: Canadian Solar 2024 Annual Report. Formatted by EthiFinance.

Working Capital. millions of USD			
	2022	2023	2024
(+) Inventories	1.524,0	1.180,0	1.206,6
(+) Receivables	971,0	905,0	1.118,8
(-) Payables	806,0	814,0	1.062,9
	1.689,0	1.271,0	1.262,5

Source: Canadian Solar 2024 Annual Report. Formatted by EthiFinance.

Project assets, the company's pipeline of projects that are currently under development, construction or operations, increased by +49.8% (from \$857.6m in 2023 to \$1,284.3m in 2024), mainly driven by a \$500m investment from BlackRock into the Recurrent Energy segment.

Leverage and Coverage

- Canadian Solar is leveraging a massive shift toward long-term debt and strategic equity to fund its pivot to an asset-holding Independent Power Producer and manufacturing expansion.

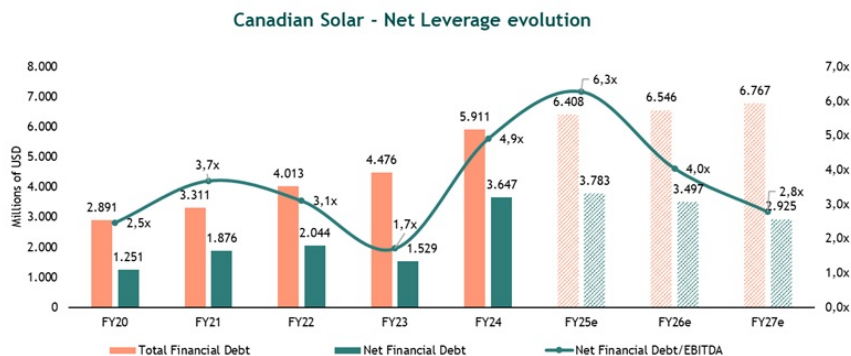
DFN/EBITDA. millions of USD.			
	FY22	FY23	FY24
Borrowings	2.257,0	3.071,0	4.604,8
Short-term notes payable	1.493,0	878,0	637,5
Operating lease liabilities	36,0	137,0	293,2
Green bonds and convertible notes	226,0	389,0	375,5
Reported TFD	4.012,0	4.475,0	5.911,0
Employee benefits	0,7	1,0	0,5
Adjusted TFD	4.012,7	4.476,0	5.911,5
Cash	1.969,0	2.947,0	2.264,0
Cash Equivalents	-	-	-
Adjusted NFD	2.043,7	1.529,0	3.647,5
EBITDA	660,0	895,0	743,7
NFD/EBITDA	3,1x	1,7x	4,9x

Source: Canadian Solar 2024 Annual Report. Formatted by EthiFinance.

The 2023-2024 liability structure clearly illustrates how Canadian Solar is financing its major strategic transformation. The company is funding its shift to an Independent Power Producer (IPP) model through an increase in long-term debt to build projects.

The \$1.4b increase was intentionally raised to fund the company's massive capital expenditure and its new IPP strategy. Instead of selling projects, the company is now building and holding them, which requires significant upfront project financing. The 2024 financial report details numerous new credit facilities to support this, including over

\$1.04b in financing for U.S. projects, \$212.9m for Brazilian projects, and a \$731.2m syndicated revolver specifically for its European portfolio.



Source: Canadian Solar 2024 Annual Report. Formatted by EthiFinance.

Operating lease liabilities increased by 114% (from \$137m in 2023 to \$293m). This increase is a direct result of the company's global manufacturing expansion, particularly in the US, as the company entered into major new leases for its factories, including the 5 GW module manufacturing facility in Mesquite, Texas, as well as other large leased facilities in China.

The reported TFD is finally adjusted by employee benefits which total amount accounts for \$0,7m in 2022, \$1m in 2023 and \$0,5m in 2024.

Cash Flow Analysis

- Negative cash generation as a result of the significant CF mobilization towards high capital-demanding operations.

Cash flow, millions of USD				
	2022	2023	2024	24vs23
EBT	372,0	424,0	94,4	-122,3%
+/- adjustments in results	235,0	554,0	827,4	49,4%
+/- other operation cash flow	73,0	60,0	596,9	894,8%
Funds From Operations	680,0	918,0	136,1	-85,2%
+/- WK changes	-	437,0	1,021,8	-395,3%
Operational Cash Flow	243,0	1,264,0	885,8	-170,1%
Net Investment Cash Flow	- 631,0	- 1,661,0	- 1,962,3	18,1%
IFRS 16 lease	-	19,2	39,8	72,2
Free Cash Flow	- 407,2	- 436,8	- 2,920,2	568,6%
+/- changes in capital	30,0	977,0	936,0	-4,2%
- Dividends	-	-	4,0	-100,0%
Cash flow Generated Internally	- 377,2	- 536,2	- 1,984,2	-470,0%
+/- debt variation	1,120,0	534,0	1,622,7	203,9%
+/- changes in exchange rates	- 180,0	- 89,0	154,6	73,7%
+/- other	- 26,8	- 4,2	166,8	3871,3%
Cash Variation	536,0	977,0	- 682,9	-169,9%
Cash at the start of the period	1,435,0	1,969,0	2,947,0	49,7%
Cash at the end of the period	1,969,0	2,947,0	2,264,0	-23,2%

Source: Canadian Solar 2024 Annual Report. Formatted by EthiFinance.

During 2024 the company experienced a \$1.6b negative swing in operating cash flow (-170% YoY), moving from a strong source of cash in 2023 to a major cash drain in 2024. This was caused by the combination of a net loss and a significant investment in working capital.

To fund this operating cash drain, plus nearly \$2b in investment activities to fund new factories and power plants, the company brought in \$2.3b in financing. Unlike 2023, where cash needs were funded by the CSI Solar IPO, 2024 needs were funded by a mix of new debt, the \$500m BlackRock investment into Recurrent Energy, and tax equity financing for its new U.S. projects.

In 2023, the massive cash inflow from the IPO more than covered all investments, leading to a \$1.07b increase in cash. In 2024, the combined cash drain from operations and investing was larger than the new financing, resulting in a net cash burn of \$682.9m for the year.

Capitalisation

- Equity to TFD ratio below 80% due to higher equity offset by a larger increase in debt.

The company's total equity increased by 5.3% to \$3,902m in 2024. This follows a substantial increase from 2022 to 2023. The primary drivers of this 2024 growth were not operational profits, in fact, the "Profit for the year attributed to the parent company" decreased by 86.8%. Instead, growth was fueled by significant balance sheet movements, most notably a 101.6% surge in the share premium and a 17.1% increase in reserves.

Equity, millions of USD	2022	2023	2024	24vs23
Capital	836,0	836,0	835,5	-0,1%
Share premium	1,0	293,0	590,6	101,6%
Reserves	865,0	1.156,0	1.353,4	17,1%
Profit for the year attributed to the parent company	240,0	274,0	36,1	-86,8%
External partners	365,0	1.146,0	1.086,5	-5,2%
Equity, millions de USD	2.307,0	3.705,0	3.902,0	5,3%
TFD	4.012,7	4.476,0	5.911,5	32,1%
Equity/TFD	57,5%	82,8%	66,0%	-16,8pp

Source: Canadian Solar 2024 Annual Report. Formatted by EthiFinance.

The Equity/TFD ratio, nevertheless, decreased from 82.8% to 66% in 2024. This 16,8pp drop is explained by growth of TFD of 32,1%.

Liquidity

- Adequate liquidity profile to meet debt service under stressed scenarios.

Under a stress scenario assuming no refinancing, the company demonstrates sufficient liquidity resilience to cover all obligations through 2027. The company begins with a robust starting position of \$4,421.3m in available liquidity at the end of 2024 (\$2,264m in Cash and \$2,157m in undrawn credit lines). While this buffer is significantly utilized over the forecast period due to heavy scheduled debt repayments, the company successfully avoids a deficit and maintains a surplus of over \$1.5b throughout the timeline.

The most significant stress test occurs in FY25, where the company faces a massive "repayment wall." The forecast projects a negative Adjusted Free Cash Flow of -\$308m alongside a substantial bank debt repayment of \$1,873.3m. While these combined outflows result in a reduction of available liquidity by approximately 51%, the starting buffer is deep enough to absorb the impact. Consequently, the company is projected to close FY25 with a healthy remaining balance of \$2,159.9m, comfortably avoiding any immediate liquidity shortfall and demonstrating adequate contingency capacity under stressed assumptions.



Source: Canadian Solar 2024 Annual Report. Formatted by EthiFinance.

Crucially, the financial profile improves in FY26 and FY27 as operational performance turns positive. Unlike previous projections of persistent cash burn, the updated forecast shows positive Adjusted Free Cash Flow of \$104m in FY26 and growing to \$443m in FY27. This internal cash generation partially offsets the ongoing debt repayments of \$812.8m and \$569.2m respectively. As a result, the rapid consumption of the liquidity buffer halts, stabilizing at \$1,585.9m in 2026 and slightly increasing to \$1,608.8m by the end of 2027, suggesting a gradual shift toward a more self-sustaining liquidity profile.

Modifiers

Controversies

- Canadian Solar is subject to 4 patent claim infringements. One is deemed to be insignificant in the 2023 consolidated financial statements. The other two occurred in 2024. Simultaneously, a parallel lawsuit in China filed in February 2025, sees Trina seeking over a billion RMB (approximately \$145m) in damages. Canadian Solar is not the only company in the PV industry facing similar claims and the outcome is not yet known. Consequently, we have not penalized 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, Canadian Solar has managed its operations to mitigate this import restriction risk. Recently, Canadian Solar announced to set up a joint venture with its majority-owned Chinese unit, CSI Solar Co, to hold a controlling direct stake (75.1%) in the US-based manufacturing energy storage systems and solar panels, to remain compliant with US restrictions, including direct tariffs on Chinese solar panels and batteries, as well as prohibitions on tax incentives for Chinese companies investing in the manufacturing of renewable power equipment in the US. The Uyghur Forced Labor Prevention Act is mitigated by the diversification of supply and the external certification of the 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.

Financial Projections

EthiFinance Ratings has prepared the financial projections following its internal assumptions, the public and private information provided by the company itself, and the agency's own estimates.

Among the main assumptions underpinning the projections, the following elements stand out:

- The projections assume that 2025 will be the low point for the company's performance. A gradual recovery is then forecast for FY26 and FY27, with sales and margins improving each year due to the realization of the current IPP strategic shift.
- The Adj. Total Financial Debt is projected to increase over the period. This suggests the company will likely incur additional gross financial obligations or capitalize interest during the forecast period, consistent with the ongoing capex cycle and project pipeline build-out.
- As a direct consequence of the projected unprofitability during FY25e and FY26e, the company's Equity base is expected to erode steadily.
- The model assumes Adj. Funds From Operations (FFO) will be positive and growing, supported by improving margins and higher recurring cash flows from operating assets.
- The leverage profile is expected to improve significantly after peaking in FY25e, declining rapidly in FY26e and in FY27e as EBITDA recovers and cash generation strengthens.
- The Equity/TFD ratio is projected to decline consistently over our forecast period, reflecting the simultaneous erosion of the equity base and the increasing level of total financial debt.

Main Financial Figures

Main financial figures. millions of USD							
	FY23	FY24	FY25e	FY26e	FY27e	23vs22	24vs23
Turnover	7.614,0	5.993,4	5.850,0	7.389,1	8.350,9	1,9%	-21,3%
Adj EBITDA	895,0	743,7	603,1	866,5	1.054,8	35,6%	-16,9%
Adj EBITDA Margin	11,8%	12,4%	10,3%	11,7%	12,6%	2,9pp	0,7pp
Total Assets	11.896,0	13.511,6	13.371,3	13.573,9	13.966,5	31,6%	13,6%
Equity	3.705,0	3.902,0	3.563,5	3.370,3	3.321,4	60,6%	5,3%
Adj Total Financial Debt	4.476,0	5.910,6	6.407,1	6.545,4	6.766,5	11,5%	32,1%
Adj Net Financial Debt	1.529,0	3.646,6	3.782,2	3.495,9	2.924,0	-25,2%	138,5%
Equity/TFD	82,8%	66,0%	55,6%	51,5%	49,1%	25,3pp	-16,8pp
Adj NFD/Adj EBITDA	1,7x	4,9x	6,3x	4,0x	2,8x	-1,4x	3,2x
Adj Funds From Operations	918,0	136,1	828,6	1.233,5	1.514,7	35,0%	-85,2%
Adj FFO/Adj NFD	60,0%	3,7%	21,9%	35,3%	51,8%	26,8pp	-56,3pp
Adj EBITDA/Adj Interest	7,9x	5,4x	3,7x	5,1x	6,0x	-1,1x	-2,4x

Credit Rating

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

Rating Sensitivity

• Long-term rating positive factors (↑)

Canadian Solar's rating could be positively impacted by its alignment and strategic exposure to the sector's structural trends. Future improvement relies on materializing the financial benefits of its recent shift, particularly through the realization of deferred revenue.

From a more analytical perspective, an improvement in interest coverage above 7x, a leverage ratio below 2,5x, as well as an increase in the EBITDA margin above 18% could lead to a rating upgrade.

• Long-term rating negative factors (↓)

Canadian Solar's rating could be negatively impacted by its exposure to the sector's inherent volatility and intense competition, especially in the global module manufacturing segment, which could difficult a proper control of the company's leverage and debt service.

Should a deterioration in general economic conditions occur, which could lead to the leverage ratio exceeding 3,5x and interest coverage falling below 5x, a rating downgrade could occur.

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