

Second-Party Opinion

Canadian Solar Green Financing Framework



Evaluation Summary

Sustainalytics is of the opinion that the Canadian Solar Green Financing Framework is credible and impactful and aligns with the four core components of the Green Bond Principles 2021 and the Green Loan Principles 2021. This assessment is based on the following:



USE OF PROCEEDS The eligible category for the use of proceeds, Renewable Energy, is aligned with those recognized by the Green Bond Principles and the Green Loan Principles. Sustainalytics considers that Canadian Solar Inc.'s investments in the eligible category will lead to positive environmental impacts and advance the UN Sustainable Development Goals, specifically SDG 7.



PROJECT EVALUATION AND SELECTION Canadian Solar's Business Development Department will lead the processes for evaluation and selection of eligible projects. Canadian Solar's Risk and Investment Management Department and the Investment Committee will provide the final approval. Canadian Solar has a dedicated environmental and social risk management process that is applicable to all allocation decisions made under the Framework. Sustainalytics considers this process to be adequate and aligned with market practice.



MANAGEMENT OF PROCEEDS Canadian Solar's Project and Structure Finance Department will be responsible for the allocation of net proceeds. The Finance and Asset Management departments will oversee the process of managing proceeds. Canadian Solar intends to fully allocate the net proceeds raised within 36 months of the date of each issuance. Pending allocation, unallocated proceeds will be held or invested in cash or cash equivalents, including money market instruments, bank accounts or other liquid financial instruments according to its investment management policy.



REPORTING Canadian Solar intends to report on the allocation and the impact of proceeds to its investors on an annual basis until full allocation. The allocation reporting is expected to include project-wide details on the allocation of net proceeds, the balance of unallocated net proceeds and the share of proceeds used for financing and refinancing. In addition, Canadian Solar is committed to reporting on relevant impact metrics wherever feasible. Sustainalytics views Canadian Solar's allocation and impact reporting as aligned with market practice.

Evaluation Date December 8, 2022¹

Issuer Location Guelph, Canada

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¹ This document is an update to a second-party opinion originally provided by Sustainalytics on September 29, 2021.

Introduction

Canadian Solar Inc. (“Canadian Solar” or the “Company”) is a solar module manufacturer and utility-scale solar developer headquartered in Guelph, Canada, with operations in 25 countries.² Since its establishment in 2001, the Company’s solar photovoltaic (PV) modules have generated a cumulative 82 GW of renewable energy power. As of December 2021, the Company had 13,535 employees and reported approximately USD 5.3 billion in revenue.³⁴ The Company has subsidiaries that are mainly based in the United States, Canada, the United Kingdom, Japan, Hong Kong, the Netherlands, Singapore, Brazil, Australia, Argentina, China, Thailand, Vietnam and Germany.⁵

Canadian Solar has developed the Canadian Solar Green Financing Framework (the “Framework”), under which it and its subsidiaries⁶ intend to issue green bonds, green loans and other financial instruments⁷ (collectively the “Green Financing Instruments”) and use the proceeds to finance or refinance, in whole or in part, existing or future renewable energy generation and energy storage projects (the “Eligible Green Projects”) that are expected to create positive environmental impact. The Framework defines eligibility criteria in one area:

1. Renewable Energy

Canadian Solar engaged Sustainalytics to review the Canadian Solar Green Financing Framework, dated November 2022, and provide a Second-Party Opinion on the Framework’s environmental credentials and its alignment with the Green Bond Principles 2021 (GBP) and the Green Loan Principles 2021 (GLP).⁸ The Framework has been published in a separate document.⁹

Scope of work and limitations of Sustainalytics’ Second-Party Opinion

Sustainalytics’ Second-Party Opinion reflects Sustainalytics’ independent¹⁰ opinion on the alignment of the reviewed Framework with current market standards and the extent to which the eligible project categories are credible and impactful.

As part of the Second-Party Opinion, Sustainalytics assessed the following:

- The Framework’s alignment with the Green Bond Principles 2021, as administered by ICMA;
- The credibility and anticipated positive impacts of the use of proceeds; and
- The alignment of the issuer’s sustainability strategy and performance and sustainability risk management in relation to the use of proceeds

For the use of proceeds assessment, Sustainalytics relied on its internal taxonomy, version 1.12, which is informed by market practice and Sustainalytics’ expertise as an ESG research provider.

As part of this engagement, Sustainalytics held conversations with various members of Canadian Solar’s management team to understand the sustainability impact of their business processes and planned use of proceeds, as well as management of proceeds and reporting aspects of the Framework. Canadian Solar representatives have confirmed (1) they understand it is the sole responsibility of Canadian Solar to ensure that the information provided is complete, accurate or up to date; (2) that they have provided Sustainalytics with all relevant information and (3) that any provided material information has been duly disclosed in a timely manner. Sustainalytics also reviewed relevant public documents and non-public information.

² Canadian Solar, “2021 ESG Sustainability Report”, (2021), at: https://www.canadiansolar.com/wp-content/uploads/2022/07/Canadian-Solar_2021-ESG-Report_Final.pdf

³ Ibid.

⁴ Canadian Solar, “Investor Relations”, (2022), at: <https://investors.canadiansolar.com/news-releases/news-release-details/canadian-solar-reports-fourth-quarter-and-full-year-2021-results>

⁵ US Securities and Exchange Commission, “Form 20-F”, at: <https://investors.canadiansolar.com/static-files/808673f4-c99f-4345-a011-43ce03e0ffc4>

⁶ Canadian Solar has communicated that it owns or controls (more than 50% of shares) the subsidiaries issuing instruments under the Framework. The Company has further confirmed that it will be responsible for ensuring continual alignment of any issuances with the criteria defined in the Framework.

⁷ Sustainalytics has not reviewed the financial instruments that are not specified in the Framework.

⁸ The Green Bond Principles are administered by the International Capital Market Association and are available at: <https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/>.

⁹ The Canadian Solar Green Finance Framework is available on Canadian Solar’s website at: <https://www.csisolar.com/downloads/>

¹⁰ When operating multiple lines of business that serve a variety of client types, objective research is a cornerstone of Sustainalytics and ensuring analyst independence is paramount to producing objective, actionable research. Sustainalytics has therefore put in place a robust conflict management framework that specifically addresses the need for analyst independence, consistency of process, structural separation of commercial and research (and engagement) teams, data protection and systems separation. Last but not the least, analyst compensation is not directly tied to specific commercial outcomes. One of Sustainalytics’ hallmarks is integrity, another is transparency.

This document contains Sustainalytics' opinion of the Framework and should be read in conjunction with that Framework.

Any update of the present Second-Party Opinion will be conducted according to the agreed engagement conditions between Sustainalytics and Canadian Solar.

Sustainalytics' Second-Party Opinion, while reflecting on the alignment of the Framework with market standards, is no guarantee of alignment nor warrants any alignment with future versions of relevant market standards. Furthermore, Sustainalytics' Second-Party Opinion addresses the anticipated impacts of eligible projects expected to be financed with bond proceeds but does not measure the actual impact. The measurement and reporting of the impact achieved through projects financed under the Framework is the responsibility of the Framework owner. Upon twenty-four (24) months following the evaluation date set stated herein, Canadian Solar is encouraged to update the Framework, if necessary, and seek an update to the Second-Party Opinion to ensure ongoing alignment of the Framework with market standards and expectations.

In addition, the Second-Party Opinion opines on the potential allocation of proceeds but does not guarantee the realized allocation of the bond proceeds towards eligible activities.

No information provided by Sustainalytics under the present Second-Party Opinion shall be considered as being a statement, representation, warrant or argument, either in favour or against, the truthfulness, reliability or completeness of any facts or statements and related surrounding circumstances that Canadian Solar has made available to Sustainalytics for the purpose of this Second-Party Opinion.

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on the Canadian Solar Green Financing Framework

Sustainalytics is of the opinion that the Framework is credible and impactful and aligns with the four core components of the GBP and GLP. Sustainalytics highlights the following elements of Canadian Solar's Green Financing Framework:

- Use of Proceeds:
 - The eligible category, Renewable Energy, is aligned with those recognized by the GBP and GLP.
 - Canadian Solar has established a five-year look-back period for its refinancing activities. Sustainalytics notes that the average useful life for the refinanced solar PV assets may be 25 to 40 years¹¹ and, therefore, considers this to be in line with market expectations.
 - Under the Renewable Energy category, Canadian Solar intends to finance the acquisition, development, construction, operation and maintenance of electricity generation facilities that produce electricity from solar PV energy and battery storage projects that are connected to the financed solar projects. Sustainalytics considers investments under this category to be aligned with market practice.
 - Sustainalytics notes that Canadian Solar excludes the financing of projects associated with:
 - i) the acquisition or generation of electricity based on fossil fuel or coal and oil heating systems;
 - ii) activities involving the exploitation of human rights and modern slavery, such as forced labour and human trafficking or child labour; iii) the production or sale of any product or activity that may relate to importers and exporters with misconduct, such as illegal natural extraction; and
 - vi) any other activity that the Company determines as ineligible for allocation of proceeds at the time of allocation.
- Project Evaluation and Selection:
 - Canadian Solar's Business Development Department will lead the processes for evaluating and selecting eligible projects that are shortlisted by the Company's regional teams. Other departments and functions will provide support to the Business Development department in this process, including Legal, EPC, Project & Structured Finance, M&A, PPA & Energy Trading, and the Tax departments.

¹¹ US National Renewable Energy Laboratory, "Useful Life", at: <https://www.nrel.gov/analysis/tech-footprint.html>

- The Company's Risk and Investment Management Department and the Investment Committee, which comprises senior executives from various areas, will provide the final approval on Eligible Green Projects, following the criteria defined in the Framework.
- Canadian Solar has adopted a broad Environmental and Social Management and Monitoring (ESMM) plan to evaluate environmental and social risks, which applies to all allocation decisions made under the Framework. Sustainalytics considers this risk assessment and mitigation process to be adequate. For additional details, see Section 2.
- Based on the clear delineation of responsibility, Sustainalytics considers this process to be in line with market practice.
- Management of Proceeds:
 - Canadian Solar's Project and Structured Finance Department will be responsible for the allocation of net proceeds and ensuring compliance with all relevant financial, legal and governance obligations of the Company. The Company's Finance and Asset Management departments will oversee the management of net proceeds.
 - The Company intends to achieve full allocation of an amount equal to the net proceeds within 36 months of the date of each issuance. Unallocated proceeds may be held or invested in cash or cash equivalents, including money market instruments, bank accounts or any other liquid financial instruments according to the Company's investment management policy.
 - Based on the management of proceeds and the disclosure of the temporary use of unallocated proceeds, Sustainalytics considers this process to be in line with market practice.
- Reporting:
 - Canadian Solar intends to report on the allocation of the proceeds and, where feasible, the impact of financed Eligible Green Projects to the investors on an annual basis until full allocation. The Company's allocation reporting is expected to include project-wide details on the allocation of net proceeds, the balance of unallocated net proceeds and the share of proceeds used for financing and refinancing. Additionally, the impact reporting is expected to provide the project-level impact of the investment information against respective key performance indicators, including: i) total capacity of renewable energy production (measured in MW); ii) annual renewable energy generation (measured in MWh); and iii) estimated CO₂ emissions avoided (measured in tCO₂e).
 - Based on the Company's commitment to allocation and impact reporting where feasible, Sustainalytics considers this process to be in line with market practice.

Alignment with Green Bond Principles 2021

Sustainalytics has determined that the Canadian Solar Green Financing Framework aligns with the four core components of the GBP and GLP. For detailed information, please refer to Appendix 1: Green Bond/Green Bond Programme External Review Form.

Section 2: Sustainability Strategy of Canadian Solar

Contribution to Canadian Solar Inc.'s sustainability strategy

Sustainalytics is of the opinion that Canadian Solar demonstrates a commitment to sustainability with a focus on four key environmental areas: i) GHG emissions; ii) energy intensity in manufacturing; iii) water use in manufacturing; and iv) manufacturing waste.¹²

Canadian Solar has set the following five-year (2022-2026) targets, which it intends to update on a rolling basis:¹³

- GHG emissions – Canadian Solar has committed to achieving a 30% reduction (a decrease of 39 tCO₂e/MWp) in its GHG emission intensity by 2026 compared to 2020.¹⁴ The Company intends to achieve this target by procuring more renewable energy in its operations and powering its operations

¹² Canadian Solar, "2021 ESG Sustainability Report", (2021), at: https://www.canadiansolar.com/wp-content/uploads/2022/07/Canadian-Solar_2021-ESG-Report_Final.pdf

¹³ Ibid.

¹⁴ Ibid.

with 100% renewable energy by 2030, among other initiatives.¹⁵ The Company reported a 17% reduction in its GHG emission intensity between 2017 and 2021.¹⁶

- Energy intensity in manufacturing – Canadian Solar has committed to reducing energy intensity by 33% (a decrease of 61 MWh/MW) by 2026 compared to 2020.¹⁷ The Company aims to achieve this target by adopting more energy efficient processes for wafer, module and cell manufacturing.¹⁸ Between 2017 and 2021, the energy intensity of the Company’s manufacturing operations decreased by 18%.¹⁹
- Water use in manufacturing – Canadian Solar has committed to reducing its water-use intensity by 44% (a decrease of 463 t/MW) by 2026 from a 2020 baseline.²⁰ To achieve this target, the Company has adopted water conservation and recycling measures and a strategic approach to selecting locations for certain projects with the aim to reduce water withdrawals from high baseline water stress locations.²¹ The Company reported a 53% reduction in water-use intensity for its manufacturing operations between 2017 and 2021.²²
- Manufacturing waste – Canadian Solar has committed to achieving a 33% reduction (a decrease of 3.5 t/MW lower) from a 2020 baseline.²³ The Company intends to achieve this target through partnership-based recycling and waste reduction programmes. The Company reduced its manufacturing waste intensity by 36% between 2017 and 2021.²⁴

Sustainalytics is of the opinion that the Framework is aligned with the Company’s overall sustainability strategy and initiatives and will further the Company’s action on its key environmental priorities.

Approach to managing environmental and social risks associated with the projects

Sustainalytics recognizes that the net proceeds from the Green Financing Instruments issued under the Framework will be directed towards Eligible Green Projects that are expected to have positive environmental impact. However, Sustainalytics is aware that such eligible projects could lead to negative environmental and social outcomes. Some key environmental and social risks possibly associated with the eligible projects could include issues related to project development and construction, land use and biodiversity, stakeholder participation, occupational health and safety, water management and waste generated during manufacturing processes, and labour issues related to supply chain.

Sustainalytics is of the opinion that Canadian Solar is able to manage or mitigate potential risks through the implementation of the following:

- Canadian Solar has developed an ESMM plan for applicable regions to address the environmental and social risks associated with the financed projects, including issues related to land use and associated ecological impacts, stakeholder management and environmental health and safety.²⁵
- The Company has an Environment, Occupational Health and Safety Policy that includes the Company’s commitments to protecting the environment and providing a healthy and safe workplace for employees, contractors and customers in any region in which Canadian Solar conducts its business.²⁶
- The projects based in Europe must comply with the EU’s Environmental Impact Assessment Directive,²⁷ which aims to ensure that projects which are likely to have a significant impact on the environment are adequately assessed before approval.²⁸ With respect to biodiversity considerations under the directive, measures must avoid any deterioration in environmental quality and a net loss

¹⁵ Ibid.

¹⁶ Ibid.

¹⁷ Ibid.

¹⁸ Ibid.

¹⁹ Ibid.

²⁰ Ibid.

²¹ Ibid.

²² Ibid.

²³ Ibid.

²⁴ Ibid.

²⁵ Canadian Solar, “2020 ESG Sustainability Report”, (2020), at: https://csisolarweb.s3.ap-east-1.amazonaws.com/wp-content/uploads/2020/01/29180824/ESG-Report_July28e.pdf

²⁶ Canadian Solar, “Canadian Solar Environment, Occupational Health and Safety Policy”, at: <https://investors.canadiansolar.com/static-files/2c79f247-ad03-48aa-918b-d430b9385b42>

²⁷ European Commission, “Directive 2014/52/EU on the assessment of the effects of certain public and private projects on the environment”, (2014), at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014L0052>

²⁸ Ibid.

of biodiversity.²⁹ Concerning land use, the EIA Directive notes that the EIA must identify, describe and assess impacts related to land use.³⁰

- In China, the Environmental Impact Assessment Act requires all projects related to construction, reconstruction, expansion or refurbishing to undergo an environmental risk assessment during the initial phase of project design and feasibility analysis.³¹ The act stipulates that the assessment must include the identification of key risk factors related to environment and human health.³² According to Chinese law, all companies are required to undergo an assessment by an independent and certified environmental impact assessment agency to avoid any conflicts of interest, including the interest of local communities.³³
- To manage occupational health and safety-related risks, the Company has adopted an Occupational Health and Safety (OH&S) Policy^{34,35} and follows ISO 45001 standards,³⁶ which guide its operational strategy.³⁷ Furthermore, EU-based projects are expected to comply with the EU Directive on Worker Health and Safety, which requires employers to ensure the health and safety of workers by preventing occupational risks and providing information and training.³⁸ To ensure its key suppliers and contractors are also able to manage OH&S-related risks, the Company requires them to sign a Supplier's EHS Agreement before commencing deliveries and services.³⁹
- Given that the manufacturing of solar components is a water-intensive process, the Company has adopted a water risk management strategy that includes water recycling conservation measures aimed at optimizing water use in the manufacturing process.⁴⁰
- For waste management, Canadian Solar complies with the EU's REACH Regulation, the RoHS Directive, US Environmental Protection Agency standards and other regional regulations for managing chemical waste and electronic waste across the Company's product lines and for all manufactured solar PV modules.⁴¹
- Sustainalytics notes that financing may take place in countries that have been identified as high-risk regions, acknowledging the potential impact of planned investments in these regions especially. Sustainalytics notes that thorough risk management procedures should accompany such investments to ensure that any adverse effects are identified and addressed. To address human rights risks associated with investments, Canadian Solar has in place a Labour and Human Rights Policy and an Anti-Modern Slavery Policy.^{42,43}
- Sustainalytics has identified a specific allegation relating to forced labour surrounding some suppliers of Canadian Solar in China, Xinjiang region.^{44,45} Canadian Solar has committed to investigating the allegations and reporting the results,⁴⁶ and has communicated to Sustainalytics that it manages such supply chain risks by prioritizing responsible procurement of materials across the entire value chain of its business. The Company conducts on-site and desk audits to monitor its

²⁹ Ibid.

³⁰ Ibid.

³¹ Government of China, "Environmental Impact Assessment Law of the People's Republic of China", (2016) at:

<https://www.waizi.org.cn/law/11686.html>

³² Ibid.

³³ Ibid.

³⁴ Canadian Solar, "Canadian Solar Environment, Occupational Health and Safety Policy", at: <https://static.csisolar.com/wp-content/uploads/2020/01/28090633/Canadian-Solar-EHS-Policy.pdf>

³⁵ Canadian Solar, "2021 ESG Sustainability Report", (2021), at: https://www.canadiansolar.com/wp-content/uploads/2022/07/Canadian-Solar_2021-ESG-Report_Final.pdf

³⁶ ISO, "ISO 45000 Family – Occupational Health and Safety", at: <https://www.iso.org/iso-45001-occupational-health-and-safety.html>

³⁷ [Canadian-Solar_2021-ESG-Report_Final.pdf \(canadiansolar.com\)](https://www.canadiansolar.com/wp-content/uploads/2022/07/Canadian-Solar_2021-ESG-Report_Final.pdf)

³⁸ European Commission, "Directive 89/391/EEC on the introduction of measures to encourage improvements in the safety and health of workers at work", (1989), at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31989L0391&from=FR>

³⁹ Canadian Solar, "2021 ESG Sustainability Report", (2021), at: https://www.canadiansolar.com/wp-content/uploads/2022/07/Canadian-Solar_2021-ESG-Report_Final.pdf

⁴⁰ Ibid.

⁴¹ Ibid.

⁴² Canadian Solar, "Labor and Human Rights Policy", at: <https://static.csisolar.com/wp-content/uploads/2020/01/28090827/Labor-and-Human-Rights-Policy.pdf>

⁴³ Canadian Solar, "Anti-Modern Slavery Policy", at: <https://investors.canadiansolar.com/static-files/9933a290-df48-45ef-9738-c31154bf96d8>

⁴⁴ Whalen, J. (2021), "U.S. begins detaining solar panel imports over concerns about forced labor in China", The Washington Post, at: <https://www.washingtonpost.com/business/2021/08/27/customs-detains-chinese-solar-panels/>

⁴⁵ Canadian Solar, "Notice of Exempt Solicitation (Voluntary Submission)", (2022), at: <https://investors.canadiansolar.com/static-files/916becde-db76-4c6e-a7c0-5a42392b5a57>

⁴⁶ The Globe and Mail, "Canadian Solar vows probe into allegations it used forced labour in Xinjiang plant", at: <https://www.theglobeandmail.com/business/article-canadian-solar-promises-related-investigation-into-xinjiang-plant/>

suppliers.⁴⁷ In 2022, the Company committed to adopting a third-party audit procedure to ensure that all its operations comply with international standards, such as the UN Guiding Principles on Business and Human Rights, the ILO Declaration on Fundamental Principles and Rights at Work and the ILO Forced Labour Convention.⁴⁸ Furthermore, the Company implemented a Supplier Code of Conduct that includes the standards and requirements for its suppliers and their subsidiary entities.⁴⁹

Based on these policies, standards and assessments, Sustainalytics is of the opinion that Canadian Solar has implemented adequate measures and is well-positioned to manage and mitigate environmental and social risks commonly associated with the eligible categories.

Section 3: Impact of Use of Proceeds

The use of proceeds category is aligned with those recognized by the GBP and GLP. Sustainalytics has focused below on where the impact is specifically relevant.

Importance of financing renewable energy projects in EMEA and the Americas

Global energy-related CO₂ emissions rose to a record high 36.3 gigatonnes in 2021, an increase of 6% compared to 2020.⁵⁰ Emissions from the electricity and heat production sectors alone grew more than 900 megatonnes in 2021, reaching 14.6 gigatonnes⁵¹ and accounting for 46% of the global rise in emissions last year.⁵² To achieve the 1.5°C limit to global warming called for in the Paris Agreement, total GHG emissions need to be reduced by 45% by 2030 compared to 2010 and reach net zero by 2050, with electricity generation globally reaching net zero and supplying almost half of total energy consumption by 2040.^{53,54} Increasing the share of renewables in the world's energy mix and reducing energy consumption has the potential to contribute significantly to meeting the Paris Agreement's goals.⁵⁵ However, the global energy transition is "far from being on track", according to the International Renewable Energy Agency.^{56,57} Solar photovoltaic energy production alone is required to grow from a total of 1,000 TWh in 2021 to approximately 7,400 TWh by 2030 to meet the 2050 net zero target.⁵⁸

In the EU, the energy sector is the most significant contributor of GHG emissions, accounting for approximately 75% of the region's total emissions.⁵⁹ The EU has set a target to increase the proportion of renewable energy in the region's overall energy mix to 40% by 2030.⁶⁰ Spain and Italy together represent almost 20% of the EU's total GHG emissions.^{61,62} In line with the EU's target, Spain has launched the Integrated National Energy and Climate Plan, which aims to achieve 42% share of renewable energy in the country's final energy demand and 74% electricity generation from renewables by 2030.⁶³ Similarly, Italy has committed to increasing the share of renewable energy in its energy mix and achieve 42% share of renewable energy in the

⁴⁷ Ibid.

⁴⁸ Canadian Solar, "2021 ESG Sustainability Report", (2021), at: https://www.canadiansolar.com/wp-content/uploads/2022/07/Canadian-Solar-2021-ESG-Report_Final.pdf

⁴⁹ Canadian Solar, "Supplier Code of Conduct", at: <https://static.csisolar.com/wp-content/uploads/2020/01/28090721/Canadian-Solar-Supplier-Code-of-Conduct.pdf>

⁵⁰ IEA, "Global CO₂ emissions rebounded to their highest level in history in 2021", (2022), at: <https://www.iea.org/news/global-co2-emissions-rebounded-to-their-highest-level-in-history-in-2021>

⁵¹ IEA, "Global Energy Review: CO₂ Emissions in 2021", (2022), at: <https://www.iea.org/reports/global-energy-review-co2-emissions-in-2021-2>

⁵² Ibid.

⁵³ UN, "For a livable climate: Net-zero commitments must be backed by credible action", at: <https://www.un.org/en/climatechange/net-zero-coalition#:~:text=To%20keep%20global%20warming%20to,reach%20net%20zero%20by%202050>

⁵⁴ IEA, "Net Zero by 2050", (2021), at: <https://www.iea.org/reports/net-zero-by-2050>

⁵⁵ Ibid.

⁵⁶ IRENA, "World Energy Transitions Outlook: 1.5°C Pathway", (2022), at: <https://www.irena.org/publications/2022/Mar/World-Energy-Transitions-Outlook-2022>

⁵⁷ IRENA, "Renewable Energy: A Key Climate Solution", (2017), at: https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2017/Nov/IRENA_A_key_climate_solution_2017.pdf?la=en&hash=A9561C1518629886361D12EFA11A051E004C5C98

⁵⁸ IEA, "Solar PV", (2022), at: <https://www.iea.org/reports/solar-pv>

⁵⁹ European Commission, "Questions and Answers – Making our energy system fit for our climate targets", (2021), at: https://ec.europa.eu/commission/presscorner/detail/en/qanda_21_3544

⁶⁰ European Commission, "Stepping up Europe's 2030 climate ambition", (2020), at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0562>

⁶¹ European Parliament, "Climate action in Spain", at: [https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/690579/EPRS_BRI\(2021\)690579_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/690579/EPRS_BRI(2021)690579_EN.pdf)

⁶² European Parliament, "Climate action in Italy", at: [https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/690663/EPRS_BRI\(2021\)690663_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/690663/EPRS_BRI(2021)690663_EN.pdf)

⁶³ European Commission, "Integrated National Energy and Climate Plan 2021-2030", (2020), at: https://energy.ec.europa.eu/system/files/2020-06/es_final_necp_main_en_0.pdf

country's final energy consumption by 2030.⁶⁴ Moreover, the Italian government aims to generate approximately 55% of its electricity from renewable energy sources by 2030, primarily from solar and wind power.^{65,66} Other countries in the broader EMEA region have similar targets. For example, South Africa has set a target of achieving 41% of renewable energy in its energy mix by 2030,⁶⁷ with the ambition to become climate neutral by 2050. South Africa being only one of 53 countries in Africa that submitted NDCs up to May 2022, most of which cover the energy sector and have the potential to collectively mitigate 550 MtCO₂ by 2030 or 40% of Africa's 2021 emissions.⁶⁸

In Canada, approximately 81% of the country's GHG emissions came from energy sector in 2021, since Canada's total energy supply still highly relies on fossil fuels.⁶⁹ Specifically, the electricity sector contributed 8.4% of the country's total GHG emissions in 2019.⁷⁰ Canada has set a target to source 90% of its electricity from non-emitting sources by 2030.⁷¹ In 2021, the federal government announced a CAD 964 million (USD 721 million) investment in a renewable energy programme to increase the number of smart renewable energy and grid modernization projects to promote the use of clean energy sources, such as wind, solar and hydro.⁷² In the US, the energy sector contributed 73% of the country's total emissions specifically, the electricity sector was responsible for 25% of the country's total GHG emissions in 2020.^{73,74} The US government has set a target to reduce GHG emissions by 50-52% in comparison to 2005 and aims to generate 100% of its electricity by 2035.⁷⁵ Yet, despite growing significantly since 2008, renewable energy generation in the US accounted for only 12% of the country's total energy consumption and approximately 20% of electricity generation in 2021.⁷⁶

In Mexico, the largest GHG emitter in Latin America and the Caribbean, more than 70% of the country's total GHG emissions come from the energy sector,^{77,78} since fossil fuels still make up approximately 87% of country's energy mix.⁷⁹ Mexico has set a target to increase the proportion of renewable energy in the country's energy mix to 35%.⁸⁰ In another top GHG emitter in Latin America, Brazil, the agriculture sector contributed to almost half of the country's total GHG emissions, followed by the energy sector that accounted for almost 38% of the country's GHG emissions.⁸¹ Although 75% of Brazil's electricity is produced from clean energy sources, the electricity sector is still responsible for almost 9% of the country's total CO₂ emissions.⁸² In this scenario, Brazil has pledged to reduce its GHG emissions by 37% and 43% by 2025 and 2030, respectively, compared to 2005.⁸³

⁶⁴ European Commission, "Integrated National Energy and Climate Plan - Italy", at: https://energy.ec.europa.eu/system/files/2020-02/it_final_necp_main_en_0.pdf

⁶⁵ IEA, "Italy", (2021), at: <https://www.iea.org/countries/italy>

⁶⁶ Ibid.

⁶⁷ Owusu-Mante, S. (2020), "South Africa's 2019 IRP Renewable Energy Targets", Climate Policy Lab, at:

<https://www.climatepolicylab.org/communityvoices/2020/5/13/south-africas-2019-irp-renewable-energy-targets>

⁶⁸ IEA, "Africa Energy Outlook 2022", at: <https://iea.blob.core.windows.net/assets/6fa5a6c0-ca73-4a7f-a243-fb5e83ecfb94/AfricaEnergyOutlook2022.pdf>

⁶⁹ Natural Resources Canada, "Energy Fact Book 2021-2022", at: https://www.nrcan.gc.ca/sites/nrcan/files/energy/energy_fact/2021-2022/PDF/2021_Energy-factbook_december23_EN_accessible.pdf

⁷⁰ Environment and Climate Change Canada, "Canadian Environmental Sustainability Indicators: Greenhouse gas emissions", (2021), at:

<https://www.canada.ca/content/dam/eccc/documents/pdf/cesindicators/ghg-emissions/2021/greenhouse-gas-emissions-en.pdf>

⁷¹ Government of Canada, "Powering our future with clean electricity", at:

<https://www.canada.ca/en/services/environment/weather/climatechange/climate-action/powering-future-clean-energy.html>

⁷² Natural Resources Canada, "Canada Invests Over \$960-Million in Renewable Energy and Grid Modernization Projects", (2021), at:

<https://www.canada.ca/en/natural-resources-canada/news/2021/06/canada-invests-over-960-million-in-renewable-energy-and-grid-modernization-projects.html>

⁷³ EIA, "Energy and the environment explained, Where greenhouse gases come from", at: <https://www.eia.gov/energyexplained/energy-and-the-environment/where-greenhouse-gases-come-from.php>

⁷⁴ US Environmental Protection Agency, "Sources of Greenhouse Gas Emissions", at: <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions>

⁷⁵ The White House, "Fact Sheet: President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target Aimed at Creating Good-Paying Jobs and Securing U.S. Leadership on Clean Energy Technologies", (2021), at: <https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/22/fact-sheet-president-biden-sets-2030-greenhouse-gas-pollution-reduction-target-aimed-at-creating-good-paying-union-jobs-and-securing-u-s-leadership-on-clean-energy-technologies/>

⁷⁶ EIA, "How much of U.S. energy consumption and electricity generation comes from renewable energy sources?", at:

<https://www.eia.gov/tools/faqs/faq.php?id=92&t=4>

⁷⁷ The World Bank, "CO₂ emissions (kt) – Latin America & Caribbean", (2019), at: <https://data.worldbank.org/indicator/EN.ATM.CO2E.KT?locations=ZJ>

⁷⁸ United States Agency International Development, "Mexico: Climate Change Factsheet", at:

<https://www.usaid.gov/sites/default/files/documents/USAID-Climate-Change-Fact-Sheet-Mexico.pdf>

⁷⁹ Climate Transparency, "Mexico", (2020), at: <https://www.climate-transparency.org/wp-content/uploads/2020/11/Mexico-CT-2020-WEB2.pdf>

⁸⁰ WRI, "Mexico: Policymaking to Ensure Energy Justice in Renewables Development", at: <https://www.wri.org/update/mexico-policymaking-ensure-energy-justice-renewables-development>

⁸¹ Brazil's climate change policies (europa.eu)

⁸² Climate Transparency, "Brazil", (2020), at: <https://www.climate-transparency.org/wp-content/uploads/2020/11/Brazil-CT-2020-WEB2.pdf>

⁸³ Carbon Brief, "Analysis: Brazil's climate pledge represents slight increase on current emissions", at: <https://www.carbonbrief.org/analysis-brazils-climate-pledge-represents-slight-increase-on-current-emissions/>

Based on the above context, Sustainalytics is of the opinion that the renewable energy projects financed under the Framework in EMEA, and Americas are expected to have positive environmental impacts and may contribute to global efforts and help meet short- and long-term climate targets.

Alignment with contribution to SDGs

The Sustainable Development Goals were adopted in September 2015 by the United Nations General Assembly and form part of an agenda for achieving sustainable development by 2030. The Green Financing Instruments issued under the Framework are expected to advance the following SDG and target:

Use of Proceeds Category	SDG	SDG target
Renewable Energy	7. Affordable and clean energy	7.2 By 2030, increase substantially the share of renewable energy in the global energy mix

Conclusion

Canadian Solar has developed the Canadian Solar Green Financing Framework, under which it and its subsidiaries may issue Green Financing Instruments and use the proceeds to finance or refinance renewable energy generation and energy storage projects. Sustainalytics considers that the projects funded by the proceeds are expected to provide positive environmental impact.

The Canadian Solar Green Financing Framework outlines a process by which proceeds will be tracked, allocated and managed, and commitments have been made for reporting on the allocation and impact of the use of proceeds. Furthermore, Sustainalytics believes that the Canadian Solar Green Financing Framework is aligned with the overall sustainability strategy of the Company and that the green use of proceeds category will contribute to the advancement of the UN Sustainable Development Goal 7.

Sustainalytics is of the opinion that Canadian Solar has adequate measures to identify, manage and mitigate environmental and social risks commonly associated with the eligible projects.

Based on the above, Sustainalytics is confident that Canadian Solar Inc. is well positioned to issue green bonds and that the Framework is robust, transparent and in alignment with the four core components of the Green Bond Principles 2021.

Appendix

Appendix 1: Green Bond / Green Bond Programme - External Review Form

Section 1. Basic Information

Issuer name:	Canadian Solar Inc.
Green Bond ISIN or Issuer Green Bond Framework Name, if applicable:	Canadian Solar Green Financing Framework
Review provider's name:	Sustainalytics
Completion date of this form:	December 8, 2022
Publication date of review publication: Original publication date [please fill this out for updates]:	

Section 2. Review overview

SCOPE OF REVIEW

The following may be used or adapted, where appropriate, to summarise the scope of the review.

The review assessed the following elements and confirmed their alignment with the GBP:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Use of Proceeds | <input checked="" type="checkbox"/> Process for Project Evaluation and Selection |
| <input checked="" type="checkbox"/> Management of Proceeds | <input checked="" type="checkbox"/> Reporting |

ROLE(S) OF REVIEW PROVIDER

- | | |
|---|--|
| <input checked="" type="checkbox"/> Consultancy (incl. 2 nd opinion) | <input type="checkbox"/> Certification |
| <input type="checkbox"/> Verification | <input type="checkbox"/> Rating |
| <input type="checkbox"/> Other (please specify): | |

Note: In case of multiple reviews / different providers, please provide separate forms for each review.

EXECUTIVE SUMMARY OF REVIEW and/or LINK TO FULL REVIEW (if applicable)

Please refer to Evaluation Summary above.

Section 3. Detailed review

Reviewers are encouraged to provide the information below to the extent possible and use the comment section to explain the scope of their review.

1. USE OF PROCEEDS

Overall comment on section (*if applicable*):

The eligible category for the use of proceeds, Renewable Energy, is aligned with those recognized by the Green Bond Principles and the Green Loan Principles. Sustainalytics considers that Canadian Solar Inc.'s investments in the eligible category will lead to positive environmental impacts and advance the UN Sustainable Development Goals, specifically SDG 7.

Use of proceeds categories as per GBP:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Renewable energy | <input type="checkbox"/> Energy efficiency |
| <input type="checkbox"/> Pollution prevention and control | <input type="checkbox"/> Environmentally sustainable management of living natural resources and land use |
| <input type="checkbox"/> Terrestrial and aquatic biodiversity conservation | <input type="checkbox"/> Clean transportation |
| <input type="checkbox"/> Sustainable water and wastewater management | <input type="checkbox"/> Climate change adaptation |
| <input type="checkbox"/> Eco-efficient and/or circular economy adapted products, production technologies and processes | <input type="checkbox"/> Green buildings |
| <input type="checkbox"/> Unknown at issuance but currently expected to conform with GBP categories, or other eligible areas not yet stated in GBP | <input type="checkbox"/> Other (<i>please specify</i>): |

If applicable please specify the environmental taxonomy, if other than GBP:

2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Overall comment on section (*if applicable*):

Canadian Solar's Business Development Department will lead the processes for evaluation and selection of eligible projects. Canadian Solar's Risk and Investment Management Department and the Investment Committee will provide the final approval. Canadian Solar has a dedicated environmental and social risk management process that is applicable to all allocation decisions made under the Framework. Sustainalytics considers this process to be adequate and aligned with market practice.

Evaluation and selection

- | | |
|---|---|
| <input checked="" type="checkbox"/> Credentials on the issuer's environmental sustainability objectives | <input checked="" type="checkbox"/> Documented process to determine that projects fit within defined categories |
|---|---|

- | | |
|--|---|
| <input checked="" type="checkbox"/> Defined and transparent criteria for projects eligible for Green Bond proceeds | <input checked="" type="checkbox"/> Documented process to identify and manage potential ESG risks associated with the project |
| <input checked="" type="checkbox"/> Summary criteria for project evaluation and selection publicly available | <input type="checkbox"/> Other (<i>please specify</i>): |

Information on Responsibilities and Accountability

- | | |
|--|--|
| <input checked="" type="checkbox"/> Evaluation / Selection criteria subject to external advice or verification | <input type="checkbox"/> In-house assessment |
| <input type="checkbox"/> Other (<i>please specify</i>): | |

3. MANAGEMENT OF PROCEEDS

Overall comment on section (*if applicable*):

Canadian Solar's Project and Structure Finance Department will be responsible for the allocation of net proceeds. The Finance and Asset Management departments will oversee the process of managing proceeds. Canadian Solar intends to fully allocate the net proceeds raised within 36 months of the date of each issuance. Pending allocation, unallocated proceeds will be held or invested in cash or cash equivalents, including money market instruments, bank accounts or other liquid financial instruments according to its investment management policy.

Tracking of proceeds:

- | |
|---|
| <input checked="" type="checkbox"/> Green Bond proceeds segregated or tracked by the issuer in an appropriate manner |
| <input checked="" type="checkbox"/> Disclosure of intended types of temporary investment instruments for unallocated proceeds |
| <input type="checkbox"/> Other (<i>please specify</i>): |

Additional disclosure:

- | | |
|--|---|
| <input type="checkbox"/> Allocations to future investments only | <input checked="" type="checkbox"/> Allocations to both existing and future investments |
| <input checked="" type="checkbox"/> Allocation to individual disbursements | <input type="checkbox"/> Allocation to a portfolio of disbursements |
| <input type="checkbox"/> Disclosure of portfolio balance of unallocated proceeds | <input type="checkbox"/> Other (<i>please specify</i>): |

4. REPORTING

Overall comment on section (*if applicable*):

Canadian Solar intends to report on the allocation and the impact of proceeds to its investors on an annual basis until full allocation. The allocation reporting is expected to include project-wide details on the allocation of net proceeds, the balance of unallocated net proceeds and the share of proceeds used for financing and refinancing. In addition, Canadian Solar is committed to reporting on relevant impact metrics wherever

feasible. Sustainalytics views Canadian Solar's allocation and impact reporting as aligned with market practice.

Use of proceeds reporting:

- Project-by-project On a project portfolio basis
- Linkage to individual bond(s) Other (please specify):

Information reported:

- Allocated amounts Green Bond financed share of total investment
- Other (please specify):

Frequency:

- Annual Semi-annual
- Other (please specify):

Impact reporting:

- Project-by-project On a project portfolio basis
- Linkage to individual bond(s) Other (please specify): Installed renewable energy generation capacity; and total renewable energy production

Information reported (expected or ex-post):

- GHG Emissions / Savings Energy Savings
- Decrease in water use Other ESG indicators (please specify):

Frequency

- Annual Semi-annual
- Other (please specify):

Means of Disclosure

- Information published in financial report Information published in sustainability report
- Information published in ad hoc documents Other (please specify): Standalone reports made available to investors
- Reporting reviewed (if yes, please specify which parts of the reporting are subject to external review):

Where appropriate, please specify name and date of publication in the useful links section.

USEFUL LINKS (e.g. to review provider methodology or credentials, to issuer's documentation, etc.)

SPECIFY OTHER EXTERNAL REVIEWS AVAILABLE, IF APPROPRIATE

Type(s) of Review provided:

- | | |
|--|--|
| <input type="checkbox"/> Consultancy (incl. 2 nd opinion) | <input type="checkbox"/> Certification |
| <input type="checkbox"/> Verification / Audit | <input type="checkbox"/> Rating |
| <input type="checkbox"/> Other (<i>please specify</i>): | |

Review provider(s):

Date of publication:

ABOUT ROLE(S) OF INDEPENDENT REVIEW PROVIDERS AS DEFINED BY THE GBP

- i. **Second-Party Opinion:** An institution with environmental expertise, that is independent from the issuer may issue a Second-Party Opinion. The institution should be independent from the issuer's adviser for its Green Bond framework, or appropriate procedures, such as information barriers, will have been implemented within the institution to ensure the independence of the Second-Party Opinion. It normally entails an assessment of the alignment with the Green Bond Principles. In particular, it can include an assessment of the issuer's overarching objectives, strategy, policy and/or processes relating to environmental sustainability, and an evaluation of the environmental features of the type of projects intended for the Use of Proceeds.
- ii. **Verification:** An issuer can obtain independent verification against a designated set of criteria, typically pertaining to business processes and/or environmental criteria. Verification may focus on alignment with internal or external standards or claims made by the issuer. Also, evaluation of the environmentally sustainable features of underlying assets may be termed verification and may reference external criteria. Assurance or attestation regarding an issuer's internal tracking method for use of proceeds, allocation of funds from Green Bond proceeds, statement of environmental impact or alignment of reporting with the GBP, may also be termed verification.
- iii. **Certification:** An issuer can have its Green Bond or associated Green Bond framework or Use of Proceeds certified against a recognised external green standard or label. A standard or label defines specific criteria, and alignment with such criteria is normally tested by qualified, accredited third parties, which may verify consistency with the certification criteria.
- iv. **Green Bond Scoring/Rating:** An issuer can have its Green Bond, associated Green Bond framework or a key feature such as Use of Proceeds evaluated or assessed by qualified third parties, such as specialised research providers or rating agencies, according to an established scoring/rating methodology. The output may include a focus on environmental performance data, the process relative to the GBP, or another benchmark, such as a 2-degree climate change scenario. Such scoring/rating is distinct from credit ratings, which may nonetheless reflect material environmental risks.

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