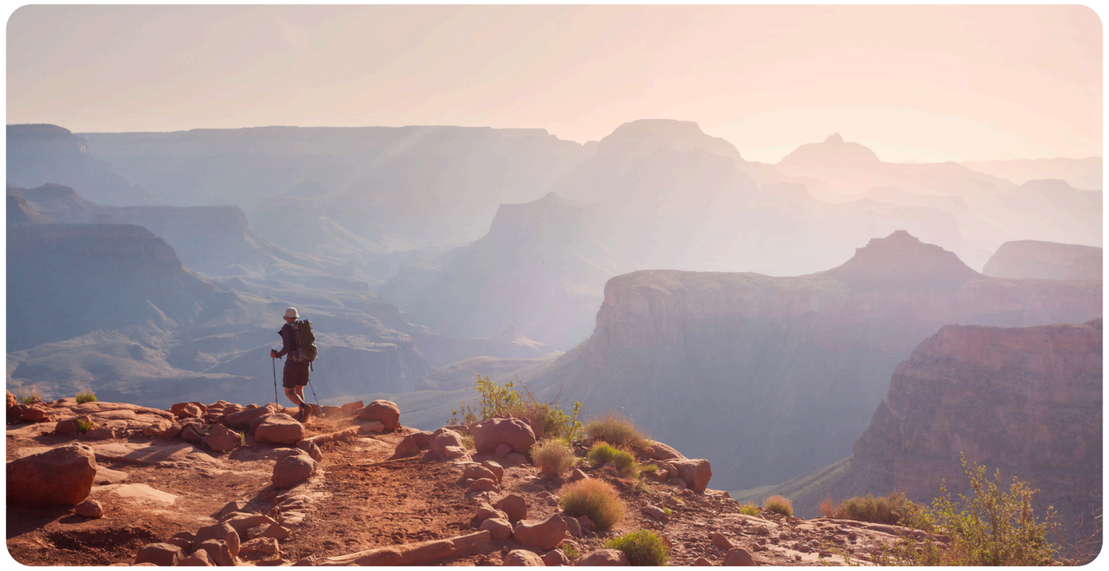
CanadianSolar

2023 Sustainability Report

Forward-Looking Statements

This report has been prepared by Canadian Solar Inc. (the "Company" or "Canadian Solar") to facilitate a better understanding of the Company's sustainability strategy and performance. The information contained in this report has not been independently verified. The Company, its affiliates, advisers, directors, and representatives will not be held liable (whether in negligence or otherwise) for any losses resulting in the use of this report, its contents, or any other associated issues.

Certain statements in this report are forward-looking statements that involve a number of risks and uncertainties that could cause actual results to differ materially. These statements are made under the "Safe Harbor" provisions of the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking statements may be marked by such terms as "believes," "expects," "anticipates," "intends," "estimates," or other comparable terminology. Though the Company considers its expectations expressed in such forward-looking statements reasonable, it cannot guarantee their realization. The Company refers readers to a more detailed discussion of the risks and uncertainties contained in the Company's annual report on Form 20-F, as well as other documents filed with the Securities and Exchange Commission. Furthermore, all information provided in this report, including forward-looking statements, is as of the date of this report's release on the Company's website unless otherwise stated. The Company undertakes no duty to update such information except as required under applicable law.



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Message from the Chief Executive Officer

We are delighted to share Canadian Solar's annual Sustainability Report, which showcases the incredible progress we have made as a clean energy company committed to sustainable practices. We continue to embed sustainability deeply within the fabric of our operations and remain unwavering in our commitment to ambitious ESG goals. This report provides a comprehensive overview of our progress and achievements, demonstrating the substantial impacts we have achieved for the environment, our employees, the communities we support, and our stakeholders broadly. We would like to highlight three key areas of focus in this report:

1. We have made significant progress in reducing the environmental impact of our own operations and through technological and operational advancements, continue to help our customers and partners reduce their environmental impact. In 2023, we reduced GHG emissions, energy, water, and waste intensity by 37%, 37%, 72%, and 54%, respectively. We have diligently reported our GHG emissions since 2021. With metrics that now encompass total emissions across scopes 1 and 2, we have also broadened our scope 3 categories to include category 9 (Downstream Transportation and Distribution) and category 13 (Downstream Leased Assets) emissions. We remain firmly on course to power all our operations with 100% renewable energy by 2030.

This year marked significant advancements in both our solar and battery energy storage solutions. We began mass production of our N-type TOPCon solar modules, achieving industry-leading efficiency rates and power ratings. These advancements not only reduce Levelized Cost of Energy (LCOE), but also minimize the environmental impact of solar projects using Canadian Solar's TOPCon modules. In the realm of battery energy storage, we launched a new iteration of our utility-scale product SolBank, enhancing both cost-efficiency and environmental impact.

Furthermore, we advocate for a circular economy, maximizing resource efficiency through the principles of reducing, reusing, and recycling. Both CSI Solar and Recurrent Energy are integrating the recycling of solar modules and battery energy storage components into our operations, collaborating with global third-party partners. For instance, in the U.S., we are negotiating an agreement with a new partner to recycle our solar modules at the end of their life cycle. Additionally, Recurrent Energy is standardizing its decommissioning processes, drawing on the exemplary model from its 98-megawatt Bayou Galion project.

2. We remain firmly committed to a responsible supply chain and have made meaningful progress in ethical labor practices across our own operations and within our supply chain. In 2023, we conducted 129 supplier ESG audits, which included 29 on-site evaluations, an increase from the 122 audits and 17 on-site audits conducted in 2022. Following thorough consultations and the implementation of necessary corrective action plans, all suppliers have met our ESG standards.

Moreover, in 2023, we commenced and successfully completed an RBA VAP audit at our module manufacturing facility in Thailand, where we achieved a silver-level recognition, confirming our adherence to the "Freely Chosen Employment" standards – that is, no forced labor in our operations. In 2024, we began another RBA VAP audit at our cell factory in Suqian, Jiangsu Province, China, and are planning to initiate an additional audit at our ingot factory in Qinghai Province, China, within the year. Additionally, one of our key polysilicon suppliers in Qinghai Province, China initiated an RBA VAP audit upon our recommendation.

3. We have enhanced our disclosures to accurately reflect the ongoing evolution of our business and to improve the transparency of our ESG progress. This year, we have added key environmental metrics for e-STORAGE, recognizing the critical role battery energy storage plays in integrating solar and other renewable energy sources into the power grid, thus increasing the adoption of clean energy globally.

With BlackRock's investment, Recurrent Energy has also intensified its focus on establishing and achieving its ESG targets. In 2024, we are dedicated to enhancing our climate risk program to align with stakeholder expectations. We have initiated a standalone ESG strategy for Recurrent Energy, underpinned by a double materiality assessment conducted in partnership with a third-party sustainability firm, adhering to the European Union's Corporate Sustainability Reporting Directive (CSRD).

As we move forward, our focus remains on intensifying our ESG initiatives, leveraging innovative technologies, and enhancing stakeholder engagement. We thank you for your continued trust and support in Canadian Solar, as we work together to foster a more sustainable future.

Shawn Qu

Chairman and Chief Executive Officer

Highlights

23 Years

- Global tier 1 player in solar and battery storage
- 100% revenues related to renewable energy

> 22,000

Employees worldwide, 32% is female

125 GW

Solar modules delivered

350 million

Tons of CO_2 emissions displaced

> 32 million

Households powered

> 10 GWp

Solar project developed and connected

> 3 GWh

Battery energy storage projects energized

1 Year

Solar modules greenhouse gas payback time

World Class Brand

- Tier 1 Solar Company, BloombergNEF (2017-2023)
- Tier 1 Energy Storage Manufacturer, BloombergNEF (2Q 2024)
- Top Brand PV USA, EUPD Research (2024)

Low Carbon Foorprint

From French ECS, Italian EPD and South Korean KNREC lifecycle certifications for solar modules

ISO Certifications

- ISO9001 Quality management system
- ISO14001 Environmental management system
- ISO45001 Occupational health and safety system
- ISO50001 Energy management system

Highlights

Circular Economy

- Product R&D
- 2017–2023 energy conservation and emission reductions
  - 37% decrease in GHG emissions intensity
  - 37% decrease in energy intensity
  - 72% decrease in water intensity
  - 54% decrease in waste intensity
- Packing materials 100% recycled or reused in 2023
- Product end-of-life management plan in place

ESG Goals

- From 2023 to 2028, targeting:
  - 22% decrease in GHG emissions intensity
  - 22% decrease in energy intensity
  - 15% decrease in water intensity
  - 20% decrease in waste intensity
- Powering global operations with 100% renewable energy before 2030

International ESG Initiatives and Recognitions

Contributor to United Nations Sustainable Development Goals (UN SDGs)

Highlights

International ESG Initiatives and Recognitions

ISS ESG

ISS ESG
Prime Rating
Industry Top 5% (2024)

SILVER | Top 15% ecovadis Sustainability Rating MAR 2024 68/100 90th percentile

EcoVadis Silver Sustainability Rating
Industry Top 5% (2024)

Achilles

Achilles ESG Assessment
Excellent Rating

Environmental Finance Sustainable Debt Awards 2024 Winner Green project bond of the year

Environmental Finance
Green Project Bond of the Year (2024)

UNEF Unión Española Fotovoltaica

UNEF
Seal of Excellence for Sustainability (2024)

WE SUPPORT UN GLOBAL COMPACT

United Nations Global Compact (UNGC)
Active Participant

SOLAR STEWARDSHIP INITIATIVE

Solar Stewardship Initiative
Membership (2024)

Environmental Finance COMPANY Awards 2023 Winner Sustainability reporting of the year – Global

Environmental Finance
Sustainability Reporting of the Year (2023)

SCIENCE BASED TARGETS DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Science-Based Targets initiatives
Near-term and Net Zero Targets committed

Responsible Business Alliance Advancing Sustainability Globally

RBA VAP Audits
In Progress (2024)

CDP DISCLOSURE INSIGHT ACTION

CDP Climate Change Disclosure

About Canadian Solar

Canadian Solar Inc. (the "Company" or "Canadian Solar") was founded in 2001 in Canada and is one of the world's largest solar technology and renewable energy companies. It is a leading manufacturer of solar photovoltaic modules, provider of solar energy and battery energy storage solutions, and developer of utility-scale solar power and battery energy storage projects with a geographically diversified pipeline in various stages of development. Over the past 23 years, Canadian Solar has successfully delivered over 125 GW of premium-quality, solar photovoltaic modules to customers across the world. Likewise, since entering the project development business in 2010, Canadian Solar has developed, built, and connected over 10 GWp of solar power projects and 3.3 GWh of battery energy storage projects across the world. Currently, the Company has over 1.2 GWp of solar power projects in operation, 6.5 GWp of projects under construction or in backlog (late-stage), and an additional 19.8 GWp of projects in advanced and early-stage pipeline. In addition, the Company has 600 MWh of battery energy storage projects in operation and a total battery energy storage project development pipeline of around 56 GWh, including approximately 4.3 GWh under construction or in backlog, and an additional 51.6 GWh at advanced and early-stage development. Canadian Solar is one of the most bankable companies in the solar and renewable energy industry, having been publicly listed on the NASDAQ since 2006.

In this Section 7

The Company has two business segments: CSI Solar and Recurrent Energy.

CSI Solar consists of solar module and battery energy storage manufacturing, and delivery of total system solutions, including inverters, solar system kits, and EPC (engineering, procurement, and construction) services. CSI Solar's e-STORAGE branded battery energy storage business includes its utility-scale turnkey battery energy system solutions. These systems solutions are complemented by long-term service agreements, including future battery capacity augmentation services.

Recurrent Energy is one of the world's largest clean energy project development platforms with 15 years of experience, having delivered over 10 GWp of solar power projects and 3.3 GWh of battery energy storage projects. It is vertically integrated and has strong expertise in greenfield origination, development, financing, execution, operations and maintenance, and asset management.

North America

Canada
Guelph: Global HQ

U.S.
Austin: North America HQ
Mesquite, Texas
Jeffersonville, Indiana
Walnut Creek
San Francisco
New York City

Europe

Germany
Munich: EMEA CSIS HQ
Frankfurt

U.K.
London
Colchester

Poland
Warsaw

Spain
Madrid: EMEA RE HQ
Servilla
Barcelona
Badajoz

Italy
Milan

France
Biarritz

Netherlands
Amsterdam

Asia Pacific

P.R. China
Suzhou: China HQ
Yancheng
Yangzhou
Funing
Suqian
Luoyang
Baotou
Hohhot
Jiaxing
Xining
Beijing
Jinan
Guangzhou
Kunming
Wuhan
Wuhu
Hong Kong, SAR

Taiwan, China
Hsinchu

Japan
Tokyo
Osaka

South Korea
Seoul
Gwangju

India
New Delhi

Thailand
Chonburi

Vietnam
Hai Phong

Malaysia
Kuala Lumpur

Singapore
Singapore

Australia
Melborne
Sydney

Latin America

Brazil
São Paulo

Mexico
Mexico City

Colombia
Bogotá

Chile
Santiago

Middle East and Africa

U.A.E.
Dubai

South Africa
Cape Town

Manufacturing operations

Sustainability at Canadian Solar

As a global leader in the renewable energy industry, Canadian Solar derives 100% of our revenues from renewable energy. Canadian Solar is committed to powering the world with solar energy and creating a cleaner earth for future generations. At Canadian Solar, we are committed to improving our practices to ensure long-term sustainability by integrating Environmental, Social, and Governance (ESG) considerations into our business and strategic decisions.

Environmental

Working sustainably within our planetary boundaries

- GHG emissions and manufacturing energy intensity
- Commitment to 100% renewable energy before 2030
- Solar PV system carbon payback time of 1 year
- Water intensity management
- Material use, waste, and circularity
- Environmental stewardship in project development
- Assessing climate risks and opportunities

Social

Committing to socially responsible and equitable outcomes

- Human rights
- Equal opportunity employer
- Equity, diversity, and inclusion
- Talent strategy, training, and development
- Freedom of association and collective bargaining
- Occupational health and safety
- Community commitments and partnerships

Governance

Demonstrating responsible conduct

- Policies and procedures
- Board level oversight
- Appropriate due diligence processes
- Responsible supply chain management
- Robust ESG reporting
- Transparency and risk management

The following corporate policies provide a framework for Canadian Solar's sustainability commitments:

Environmental

- Environment, Occupational Health, and Safety Policy (link)

Social

- Labor and Human Rights Policy (link)
- Equal Employment Opportunity Policy (link)
- Anti-Modern Slavery Policy (link)
- Diversity Policy (link)
- Supplier Code of Conduct (link)
- Conflict Minerals Policy (link)

Governance

- Code of Business Conduct and Ethics (link)
- Whistleblower Policy (link)
- Insider Trading Policy (link)
- Related-Party Transactions (link)
- Prohibition against Giving Bribes (link)
- Prohibition against Accepting Bribes (link)

Sustainability at Canadian Solar

At **CSI Solar**, we are firmly committed to minimizing the environmental footprint of our operations and products. From product R&D to manufacturing and end-of-life management, we proactively strive to prevent pollution, optimize energy use, responsibly manage waste, all of which contribute to a more sustainable future. The total electricity generated by 125 GW of our cumulative solar modules shipped over the past 23 years is equivalent to displacing approximately 350 million tons of CO_2 emissions or powering over 32 million households.

Recurrent Energy shares this commitment to sustainable practices across our operations. In addition to developing, owning, and operating energy projects that reduce carbon emissions, we prioritize sustainability in our day-to-day operations. We have developed and connected over 10 GW of solar power projects and more than 3 GWh of battery energy storage projects worldwide. The energy generated by these facilities amounts to approximately 78,000 GWh, equivalent to offsetting 41 million tons of CO_2 emissions or supplying power to around 2.5 million households.

Canadian Solar Green Financing Framework

As part of our long-standing commitment to sustainability, we have updated our Green Financing Framework (link) in 2024. This comprehensive update extends beyond project development to encompass the entire spectrum of our operations, including both solar and battery energy storage project development, as well as product manufacturing. Both the previous and current versions of our framework have received a second-party opinion (link) from Sustainalytics, a leading firm in ESG and corporate governance research and analytics.

The new framework is aligned to the International Capital Market Association (ICMA) Green Bond Principles (GBP) 2021, amended in June 2022, aiming to encompass future issuances in the capital markets, and the Green Loan Principles (GLP) updated in February 2023 published by the Loan Market Association (LMA), Loan Syndications and Trading Association (LSTA) and the Asia Pacific Loan Market Association (APLMA), aiming to encompass bilateral or syndicated loans with financial institutions and/or multilateral agencies.

144 MWac Pflugerville Solar Project, U.S.

Recurrent Energy Standalone ESG Program

As a responsible steward of environmental and social resources, Recurrent Energy is currently developing a standalone ESG strategy and program, with the vision of fully integrating ESG considerations throughout our business operations. Recurrent Energy is committed to advancing our mission to deliver clean, reliable, and affordable power to the world.

As part of our strategy development process, Recurrent Energy has conducted an ESG topic materiality assessment following the methodology outlined by the European Union's Corporate Sustainability Reporting Directive (CSRD) (link) Double Materiality Assessment. This assessment is designed to identify ESG topics that may impact the business financially, including both risks and opportunities, as well as those topics that may be affected by our operations. The assessment leverages a robust stakeholder engagement process, including key internal and external stakeholders, to determine priority focus areas for business implementation and to meet important regulatory reporting requirements. We anticipate completion of the CSRD-aligned double materiality by mid-2024.

Recurrent Energy's final set of material topics and related impacts, risks, and opportunities (IROs) will demonstrate both financial and impact materiality and be supported by comprehensive evidence as prescribed by the CSRD's rigorous methodology. Recurrent Energy's ESG program implementation and future ESG reporting will be based on the results of this analysis and will be supported by topic-specific goals, strategies, and initiatives.

Recurrent Energy will commence reporting as an independent subsidiary in 2025, providing both financial and ESG information based on 2024 data, including the materiality results mentioned above. Our future activities include determining appropriate key performance indicators (KPIs) and setting thoughtful ESG targets, measuring GHG emissions across Recurrent Energy's global operations, and enhancing ESG management practices throughout our operations.

"Sustainability is a fundamental part of our DNA. For this reason, we commit to Sustainability, not only out of the need to comply with increasingly demanding requirements, but because we are convinced of the opportunity it represents to maintain our level of excellence, to meet the needs of our stakeholders, and to continue to positively contribute to our environment and society."

– Inés Arrimadas - Chief Communications and ESG Officer of Recurrent Energy

BlackRock Investment in Recurrent Energy

In January 2024, Recurrent Energy secured a $500 million[1] investment commitment from BlackRock through a fund managed by its Climate Infrastructure business. The investment will facilitate Recurrent Energy's strategy to transition from a pure developer of solar and battery energy storage projects to a developer plus long-term owner and operator. As Recurrent Energy transitions into long-term project ownership, new and exciting challenges will emerge for us to demonstrate excellence in project management on ESG topics.

"We are delighted to have the support of BlackRock, one of the largest and most sophisticated renewable energy investors in the world, as we scale Recurrent Energy in response to massive global demand for renewable energy and energy storage solutions. This investment will support our growth and continued ambition to make a difference by leading the renewable energy transition across the world. Our mission is to deliver clean, reliable and affordable power to the world, today and tomorrow, and this milestone will help us continue to achieve this goal."

– Ismael Guerrero, CEO of Recurrent Energy

"We are excited to partner on behalf of our clients with Recurrent Energy. We believe this partnership will help unlock the full potential of Recurrent Energy's impressive renewable energy project development platform. Recurrent Energy is emblematic of our strategy of investing in leading renewable power generation assets and transition-enabling infrastructure, and we are pleased to make this first investment commitment from the fourth vintage of BlackRock's Climate Infrastructure fund franchise."

- David Giordano, Global Head of Climate Infrastructure and Chief Investment Officer of Transition Capital, BlackRock

1 The $500 million investment will represent 20% of the outstanding fully diluted shares of Recurrent Energy on an as-converted basis. Canadian Solar will continue to own the remaining majority shares of Recurrent Energy after the closing of this investment.

Approach to Environment, Health, and Safety (EHS)

Canadian Solar is committed to maintaining a safe work environment for our employees, contractors, and visitors. We strictly comply with all relevant laws and regulations in every jurisdiction where we operate. We are dedicated to minimizing the environmental impact of our business operations and demonstrating respect for nature and biodiversity.

At **CSI Solar**, we place a strong emphasis on environmental excellence, health, and safety. We follow advanced standards and systems, and our operations are certified under ISO14001 (environmental management system), ISO45001 (occupational health and safety management), ISO50001 (energy management system), and ISO9001 (quality management system).

At **Recurrent Energy**, we prioritize and ensure environmental protection and occupational health and safety through preventative measures and continuous improvement initiatives. Recurrent Energy is making significant progress towards compliance with ISO9001 (quality management system) and ISO45001 (occupational health and safety management system), aiming to obtain these two certifications by the end of 2025.

Compliance with Environmental Regulations

100% of Canadian Solar's revenues are derived from renewable energy. Our businesses help our customers achieve their clean energy goals. We follow all relevant environmental laws and regulations, and have obtained all necessary environmental permits, including those related to air emissions, water discharge, and the management and disposal of solid and hazardous wastes and chemicals.

We closely monitor changes in environmental regulations to ensure continual compliance with local laws and regulations. When developing new projects, we perform thorough Environmental, Health, and Safety (EHS) studies to pinpoint and mitigate potential environmental impacts and worker safety concerns.

At **CSI Solar**, our solar products are designed to comply with the environmental regulations applicable to the jurisdictions in which they are installed. We strive to ensure that our products comply with Regulation (EC) No. 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH). Our solar system solutions product lines, including string inverters, also comply with the European Union's (EU's) RoHS (Restriction of Hazardous Substances) Directive 2011/65/EU and its subsequent amendments. As per article 2 of the RoHS, solar photovoltaic (PV) modules are exempt from this legislation, in accordance with the European Commission's decision to ensure the achievement of energy renewable targets.

Moreover, we also strictly adhere to Toxicity Characteristic Leaching Procedure (TCLP) testing for our PV module portfolio to monitor the presence of any toxic metal substances (arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver) according to TCLP Standard EPA Test Method 1311, as issued by the United States (U.S.) Environmental Protection Agency (EPA) under the Toxic Substances Control Act (TSCA) for landfill disposal of solar modules.


Declaration of Conformity
REACH regulation (EC) No. 1907/2006
CanadianSolar

Our battery energy storage products have been designed to meet all applicable environmental regulations, and we impose strict requirements on our suppliers to meet corresponding regulations as well. For example, the key components of our products, such as battery cells and air conditioning units, comply with RoHS and REACH. In July 2023, the EU published Regulation 2023/1542 regarding batteries and waste batteries. We are working closely with third party experts to actively evaluate and ensure that our products meet the latest requirements at every stage of their product lifecycle.

We conduct ESG audits to inspect the ESG performance of our suppliers. One of the major purposes of the audits is to ensure our suppliers comply with our environmental management requirements, including carbon footprint and GHG emissions, as well as applicable laws and regulations, such as REACH for both the EU and the United Kingdom (U.K.), the RoHS, the U.S. Environmental Protection Agency Toxic Substances Contract Act (TCSA) with specific reference to Polybutylene Terephthalate (PBT) and the Toxic Characteristic Leaching Procedure (TCLP).

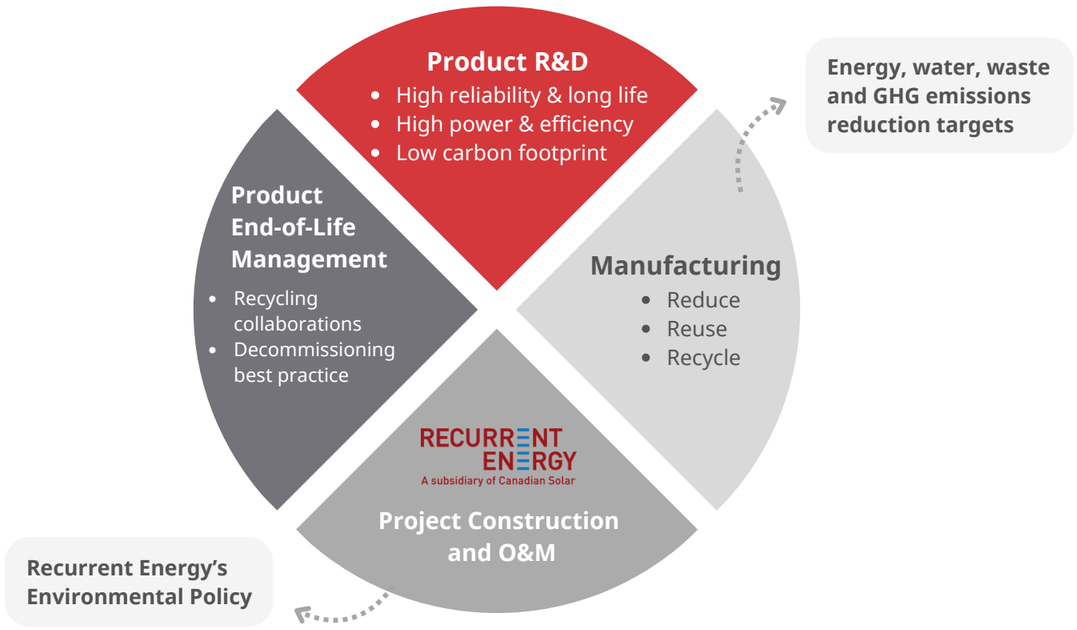
At **Recurrent Energy**, we are committed to proactively minimizing any potential adverse environmental and ecological impacts resulting from our project development activities. Throughout the project lifecycle, we integrate and prioritize the evaluation of environmental and ecological impacts, along with community engagement into our internal approval process at the early stages in the project development process for each solar and battery energy storage project we develop. By considering these factors during the project planning phase, we effectively minimize project delays related to environmental and ecological concerns or community engagement issues. This proactive approach not only ensures compliance with regulatory requirements but also displays our commitment to responsible project development and environmental stewardship.

Circular Economy

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

At Canadian Solar, we promote a circular economy philosophy directed at maximizing material resources through the 3R principles of reduce, reuse, and recycle. These principles are woven into all aspects of our operations and businesses from smart product design and responsible manufacturing to sustainable project development and effective product end-of-life management.

As a responsible provider of solar and battery energy storage products, CSI Solar aims to minimize waste and promote the sustainable use of resources through product design, manufacturing, and product-end-of-life management.



Product Research and Development (R&D)

R&D has played a critical role in driving reductions in resource usage across manufacturing, transportation, and utilization of our module products, thereby lowering the environmental impact of solar power projects using Canadian Solar's modules.

Increasing solar module lifetime through enhanced product reliability has "the biggest effect" on reducing product life-cycle waste.[2] To achieve this, we have developed and deployed inhouse testing standards that are two to three times more rigorous than those prescribed by the International Electrotechnical Commission (IEC), which serves as the benchmark for the solar industry. For example, our TOPCon (Tunnel Oxide Passivated Contact) bifacial solar modules demonstrated less than 1% power degradation after undergoing a damp heat test lasting 2,000 hours, well below the 5% threshold required by the IEC for a 1,000-hour test. Therefore, given our products' reliability, our regular TOPCon modules come with a 30-year power warranty and low power degradation. We have also developed solar modules with an extended lifetime, lasting up to 40 years.

Our newly developed PV technologies have elevated solar module efficiency to 23.0% in 2023, a substantial increase from 13.9% in 2010. With higher module efficiency, we can produce modules of the same power using fewer materials, reducing the overall cost of the balance of system (BOS) and Levelized Cost of Energy (LCOE) for solar power projects.

A key focus of our R&D efforts is to develop products that are easy to recycle and suitable for reuse, such as fluoride-free modules. Additionally, we aim to minimize our carbon footprint in transportation by optimizing the dimensions of our module products to maximize the quantity loaded per container. Beyond product design, we are also currently developing cost-efficient and environmentally responsible recycling solutions.

2 Ovaitt, S., Mirletz, H., Seetharaman, S. and Barnes, T. (2022). PV in the circular economy, a dynamic framework analyzing technology evolution and reliability impacts. iScience, 25(1), p.103488. doi: https://doi.org/10.1016/j.isci.2021.103488.

Manufacturing

To minimize our environmental impact and lower the costs of our manufacturing operations, we adhere to the 3R principle: reduce, reuse, and recycle.

To reduce, we decrease material use and waste by continuously improving our production yield rate and decreasing material consumption per unit of production, as well as reducing our energy and water intensity. These objectives have been included in the Key Performance Indicators (KPIs) of our production teams.

To bolster reuse, we have developed and adopted protocols and tools that facilitate the reuse of packaging materials, liquid bottles, and tanks by collaborating with partners across our supply chain. As a result, in 2023, 100% of our packing materials were either reused or recycled.

To enhance recycling, we have implemented projects aimed at maximizing the reuse of energy, water, and waste, to minimize disposal. For example, all cooling water from our manufacturing operations is recycled. In critical manufacturing processes such as solar cell processing, which involves chemicals, we recycle and treat the process water to meet production standards and then reuse it to maximize water utilization. Furthermore, we separate and collect recyclables from solid waste before disposal.

Project Construction and O&M

Recurrent Energy carefully undertakes the construction and operations of our solar and battery projects to minimize waste generation and to reuse or recycle materials where possible. Recurrent Energy's Environmental Policy establishes a clear mandate for conserving natural resources, preventing pollution, and minimizing environmental impact of waste generation by encouraging team members, suppliers, and customers to reduce, reuse, and recycle.

Product End-of-Life Management

The rapid expansion of solar PV installations highlights the increasing importance of end-of-life management for decommissioned modules. To further reduce our environmental footprint throughout the product lifecycle, it is crucial to continue developing sustainable solutions for product end-of-life management.

As a responsible solar module provider, CSI Solar collaborates with qualified local service suppliers to recycle and reuse end-of-life products. For example, we are currently negotiating an agreement with a partner in the U.S. to recycle Canadian Solar modules that are damaged or have reached the end of their lifespan. In Europe, we continue to cooperate with recycling service providers to ensure we maintain full compliance with all Waste of Electric and Electronic Equipment (WEEE) obligations.

Recurrent Energy shares a commitment to the proper recycling and reuse of solar modules and battery equipment. We work in tandem with the local communities surrounding our project sites to plan proper end-of-life decommissioning. In 2024, Recurrent Energy will release a global waste management policy and plan, which will further outline our 3R objectives while minimizing waste generation during the construction, operations, and decommissioning phases of our projects.

International ESG Initiatives

Institutional Shareholder Services (ISS) ESG Corporate Rating, Prime Status

Canadian Solar once again attained a “Prime” ESG status, and “B” rating from ISS ESG in early 2024. This accomplishment places Canadian Solar among the top 5% of the semiconductor industry and solidifies its position as an industry leader in ESG performance. The "Prime" status signifies the highest level of ESG performance, recognizing companies that demonstrate exceptional dedication to sustainability.

The ISS ESG Corporate Rating serves as a vital resource for investors, offering an in-depth, industry-specific evaluation of a company’s ESG performance. ISS ESG is the responsible investment arm of ISS (Institutional Shareholder Services Inc.). ISS, founded in 1985 and headquartered in Maryland, the U.S., is the world’s leading provider of ESG solutions for asset owners, asset managers, investors, and asset servicing providers.

Environmental Finance, Green Project Bond of the Year Award

Canadian Solar won Environmental Finance’s Green Project Bond of the Year Award (link) in April 2024, recognizing our JPY 18.5 billion Green Samurai private placement completed in 2023. Canadian Solar’s three-year green project bond tapped into a vast network of Japanese financial institution investors to open access to a wider pool of investors. The innovative bond enhances liquidity and flexibility, empowering Canadian Solar’s global development business, Recurrent Energy, to grow solar and battery energy storage projects under development, as well as its asset management business.

This is the second Green Project Bond of the Year Award Canadian Solar has received from Environmental Finance, following the one awarded in 2018 for Canadian Solar’s JPY 5.4 billion ($47 million) Gunma Aramaki project bond placement with Goldman Sachs Japan.

Environmental Finance’s annual Sustainable Debt Awards celebrate leading green, social, sustainable, and sustainability-linked bond and loan deals and recognize market innovations.

EcoVadis, Silver Sustainability Rating

In April 2024, Canadian Solar received a silver rating from EcoVadis, one of the world’s largest and most trusted providers of business sustainability ratings, headquartered in Paris, France. This rating places Canadian Solar in the top 5% of companies rated by EcoVadis within the company’s industry.

EcoVadis’ sustainability assessments evaluate a company’s performance in terms of environment, labor and human rights, ethics, and sustainable procurement. Canadian Solar ranked among the top 3% and top 4% for environmental and sustainable procurement practices, respectively. This achievement underscores our dedication to sustainable practices while advancing cutting-edge energy solutions.

Achilles ESG Score, Excellent Rating

Following 2022, Canadian Solar once again received the highest possible rating of 'Excellent' from Achilles (link) in 2024. Through a series of extensive questionnaires, the Achilles ESG score helps companies identify potential ESG issues within their supply chains. Achilles pre-qualifies and scores suppliers according to ESG, financial, and health and safety standards. Established in the 1990s and headquartered in the U.K., Achilles serves a network of over 550 buyers and 100,000 suppliers across various industries.

Seal of Excellence for Sustainability, UNEF (2024)

Recurrent Energy received the Seal of Excellence for sustainability from the Unión Española Fotovoltaica (UNEF) at the Spanish Congress of Deputies in early 2024. This honor recognizes our commitment to sustainability in our Villameca I and Villameca II solar power projects in Spain.

The Seal of Excellence in Sustainability was created by UNEF in 2020 to disseminate the best practices of companies operating within the Spanish PV sector, reinforcing the commitment of the country to sustainable energy transition. The Seal evaluates the socio-economic impact, governance criteria, environmental integration, biodiversity protection, material recycling and waste management of projects within the sector.

Environmental Finance, Sustainability Reporting of the Year Award

Canadian Solar received the Sustainability Reporting of the Year – Global Award (link) as part of Environmental Finance's 2023 Sustainable Company Awards in September 2023. This award recognizes Canadian Solar's efforts in providing transparent, comparable, and comprehensive sustainability reporting which enables our stakeholders to better understand Canadian Solar's strategy, commitments, and progress towards achieving our sustainability goals. Environmental Finance, headquartered in the U.K. and established in 1999, is a leading global publication in the industry.

Ernst & Young (EY), Sustainability Excellence Awards - Excellent Individuals

Dr. Shawn Qu, Chairman and CEO of Canadian Solar, was honored as the Excellent Individual at the EY Sustainable Excellence Awards (link) in November 2023. This award recognized Dr. Qu's innovative leadership and significant contribution to sustainability in the renewable energy sector. EY is a global leader in assurance, tax, transaction, and advisory services. The EY awards celebrate exceptional sustainable development initiatives among listed companies, spanning green growth, rural development, innovation, and industry leadership.

United Nations Global Compact (UNGC)

In June 2023, Canadian Solar became a participant of United Nations Global Compact, the world's largest voluntary corporate sustainability initiative (link). By joining the UNGC, we have committed to adhering to the UNGC's Ten Principles covering human rights, labor, environment, and anti-corruption, while also contributing to the United Nations Sustainable Development Goals (SDGs).

We plan to continue our participation in UNGC in 2024 and are currently in the process of preparing a Communication on Progress report, which is scheduled for submission to UNGC by the end of July 2024. This report will detail our progress towards the Ten Principles and UN SDGs.

Solar Stewardship Initiative (SSI)

In May 2024, Canadian Solar joined the Solar Stewardship Initiative (link), a European initiative set up by SolarPower Europe and Solar Energy UK. The SSI's mission is to work collaboratively with manufacturers, developers, installers, and purchasers across the global solar value chain to foster responsible production, sourcing, and stewardship of materials. Over 40 organizations active in the solar industry and/or supply chain responsibility are members of the SSI, which is also endorsed by the International Finance Corporation (a member of the World Bank Group) and the European Investment Bank.

The Science Based Targets initiatives (SBTi)

Following the submission of our commitment letter in July 2023, we are currently developing our near-term and net-zero science-based climate targets for submission to the SBTi for validation by July 2025.

Founded in 2015, the SBTi is a joint effort of Carbon Disclosure Project (CDP), the UNGC, World Resources Institute (WRI), and World Wildlife Fund (WWF) under the We Mean Business Coalition. The SBTi establishes best practices for target setting and assesses corporate targets according to current climate research.

CDP Climate Change Disclosure

Canadian Solar participated in the CDP's 2023 Climate Change disclosure (link), addressing issues relating to climate risks and opportunities amidst the shift towards a low-carbon economy. We received a C score, which is average among companies in the North American, global, and renewable energy equipment sectors. We will continue to improve our practices and will participate in the CDP's 2024 Climate Change disclosure (link). The CDP's online response system is scheduled to open in June and close in September 2024.

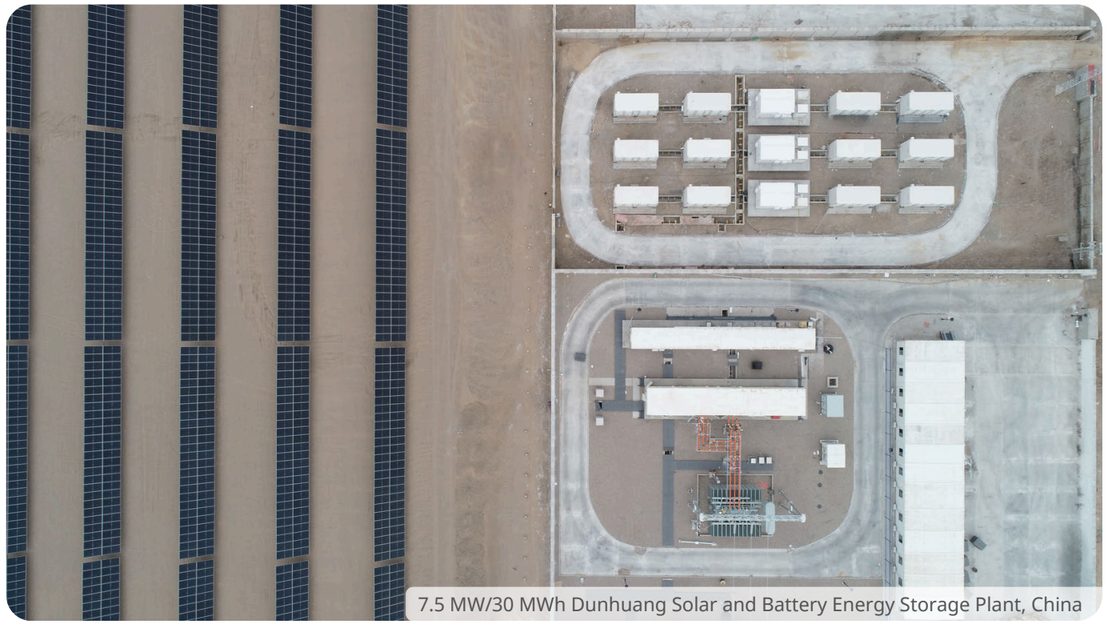
The CDP operates as an international non-profit organization, providing environmental disclosure systems for stakeholders to effectively manage their environmental footprint.

RBA Validated Assessment Program

The Responsible Business Alliance (RBA) Validated Assessment Program (VAP) (link) is the leading standard for on-site compliance verification conducted by RBA-accredited independent, third-party firms. The on-site audit assesses labor practices (including ensuring there is no forced labor), health and safety, environment, ethics, and management systems.

An RBA VAP audit was conducted at Canadian Solar's solar module factory in Thailand in 2023 by TUV Rheinland. Our factory was recognized by RBA and earned a silver-level recognition for the VAP audit, fully in compliance with Freely Chosen Employment rules, indicating **no presence of forced labor.**

In 2024, we have initiated an RBA VAP audit at our solar cell factory in Suqian, Jiangsu Province, China. The auditing agreement has been signed and we are working with RBA to schedule the onsite audit date. Additionally, we plan to do another RBA VAP audit at one of our ingot factories in Qinghai Province, China this year. Concurrently, one of our polysilicon suppliers, located in Qinghai Province, China, has initiated an RBA VAP audit at our request. It is worth noting that the RBA VAP auditing process is lengthy and may take several months to complete.



7.5 MW/30 MWh Dunhuang Solar and Battery Energy Storage Plant, China

Environmental Metrics and Targets

Canadian Solar is a pioneer in delivering innovative renewable energy solutions, propelling solar PV and battery energy storage as the premier choice for achieving global decarbonization goals. There is widespread consensus that solar PV has become both the cleanest and most affordable source of electricity in most markets. Meanwhile, energy storage plays a crucial role in integrating solar and other intermittent renewables into the power grid, further expanding the penetration of clean energy sources across global power grids.

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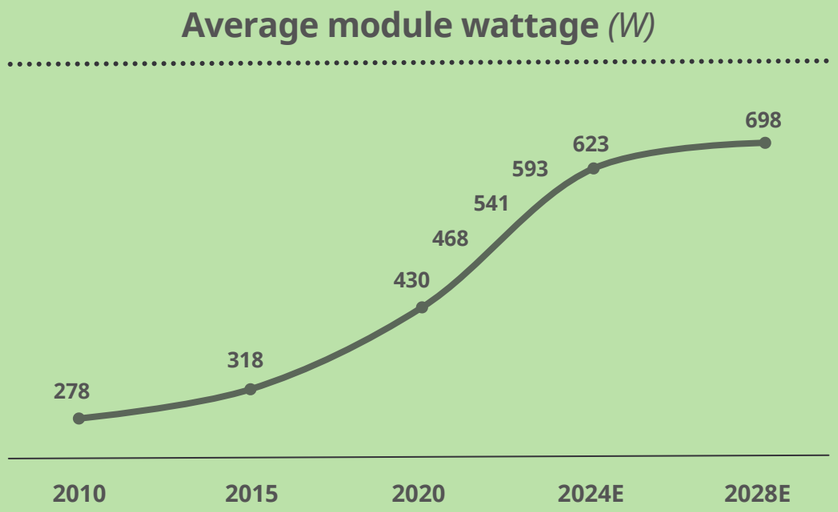
Environmental Metrics and Targets

One of our breakthroughs in solar PV technology was the increase of wafer size from 158.75 mm to 166 mm in 2016. Combined with our innovative half-cell technology, this larger wafer allowed us to introduce the first crystal-silicon PV module to exceed 400 watts. This not only reduced the costs of module manufacturing, transportation, and installation, but also, more importantly, significantly reduced the cost of Balance of System (BOS) expenses. At that time, solar PV projects equipped with our 400+ watts modules had the lowest LCOE. Our move to increase wafer size spurred the development of even larger wafers, measuring 182 mm and 210 mm, which have further reduced the LCOE of solar power projects using Canadian Solar modules.

In 2023, we initiated mass production of our N-type TOPCon solar modules and increased our TOPCon solar cell capacity to 30 GW. Our TOPCon modules have an industry leading module efficiency rate of 23% and a power rating of up to 715 W. They also offer higher bifaciality and a lower temperature coefficient and degradation rate compared to Passivated Emitter Rear Contact (PERC) solar modules. Together, these features further reduce the LCOE and environmental impact of solar power projects using Canadian Solar TOPCon modules.

Technological innovations have also enabled us to reduce the environmental footprint of our productions with decreased GHG intensity, energy intensity, water intensity, and waste intensity. This provides not only better economic viability but also shortened energy and GHG payback time for solar power plants using our solar modules.

Regarding battery energy storage, we released our utility-scale product SolBank 3.0 in 2023, increasing the usable energy capacity to 5.0 MWh. This advancement surpassed the 3.7 MWh capacity of SolBank 2.0 and the 3.0 MWh capacity of SolBank 1.0 introduced in 2022. The enhancement not only reduces manufacturing costs but also minimizes our environmental footprint through a more compact and efficient use of space during installation.



Our SolBank products feature a Battery Management System (BMS), equipped with active balancing and a smart Thermal Management System (TMS), which includes liquid cooling. Active balancing improves consistency in characteristics and performance, while liquid cooling mitigates temperature fluctuations across the battery cells. Together, these technologies enhance safety, reduce capacity degradation and safety hazards, and extend the lifespan of SolBank products, thus lowering their Levelized Cost of Storage (LCOS).

Environmental Impacts of Manufacturing

We evaluate the environmental impacts of our manufacturing operations using the following framework:

Production scale and process efficiency. We are increasing our manufacturing capacity to meet the growing demand for our solar PV and energy storage products. While increasing capacity will consume more materials, energy, and water, and produce more waste and GHG emissions, in the long-term, a more efficient manufacturing line will decrease energy and water consumption, waste and GHG emissions per unit produced. When designing our manufacturing processes and selecting our manufacturing equipment, efficiency in material, energy and water use is an important consideration.

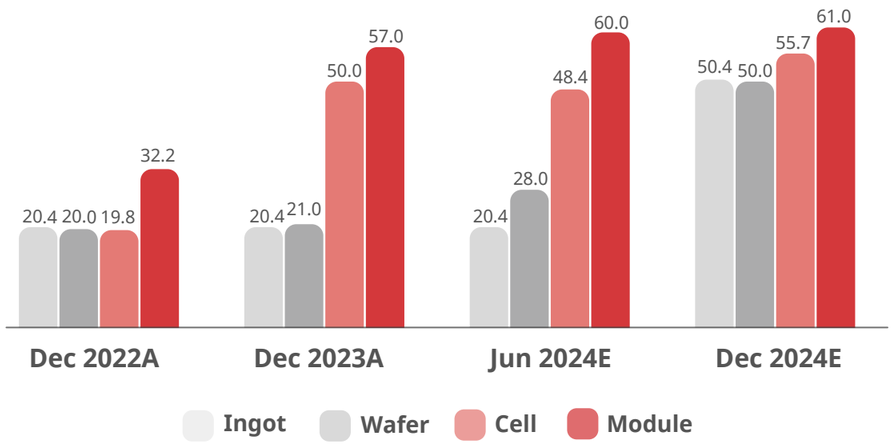
Level of vertical integration. Crystalline silicon PV manufacturing includes the production of ingots, wafers, cells, and modules. The extent to which we perform these processes inhouse directly correlates with our level of vertical integration. Although we strive to continuously reduce the environmental footprint of each manufacturing process, ·the expansion in scale and vertical integration of our PV manufacturing and battery energy storage businesses means that our total environmental footprint will inevitably increase. Nonetheless, we have established 5-year rolling targets to reduce our impact on an intensity basis.

Product technologies. Product technologies define our manufacturing processes and, consequently, environmental footprint. In line with industry trends, we are expediting our shift from P-type PERC to N-type TOPCon technologies. While the latter involves more complex and resource-intensive manufacturing processes, the long-term benefits are substantial. Higher module efficiency and bifaciality, along with an extended usable lifespan and reduced performance degradation, shortens the energy and GHG payback timeline, and ensures more power is generated during the modules' lifetime.

Manufacturing Capacity Expansion Roadmap

Increasing our solar PV manufacturing capacity and level of vertical integration over the past few years has raised our total energy consumption, GHG emissions, water withdrawal, and waste generation. However, ongoing improvements in technology, manufacturing processes, and energy conservation initiatives will continue to reduce the environmental impact of our manufacturing operations on a per-watt basis.

Manufacturing Capacity *(GW)*



Well on track to achieve the goal of powering all our operations with 100% renewable energy before 2030

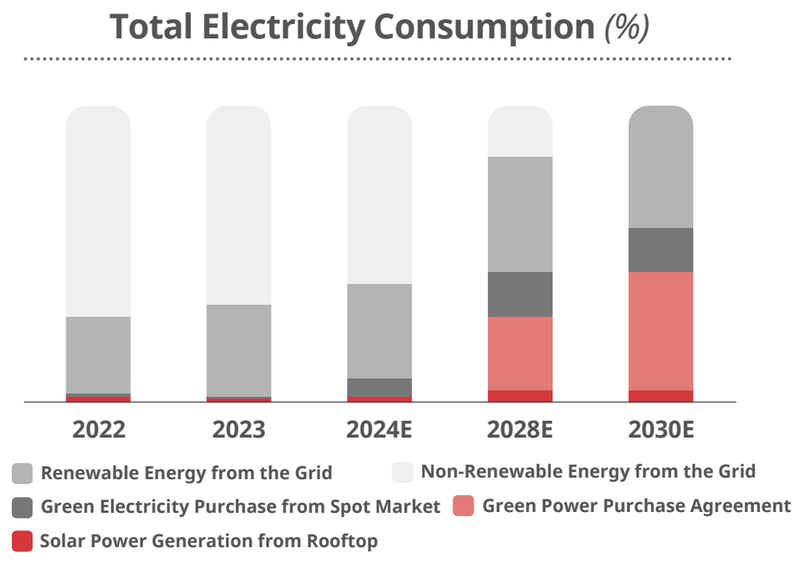
	2021	2022	2023	2028	2030
Renewable energy %	23%	29%	33%	83%	100%
Total Electricity Consumption (MWh)	1,434,000	1,825,598	3,377,548		

We are committed to powering our global operations with 100% renewable energy by 2030, with an interim target of achieving 83% by 2028. To realize this, our focus lies on reducing electricity consumption while increasing the use of renewables across our operations.

A significant portion of our scope 1 and scope 2 carbon emissions (see the subsequent section for definitions) stem from the electricity consumed during our manufacturing operations. Therefore, our top priority is to reduce our carbon footprint, using more renewable energy.

Many of our manufacturing facilities are located in China, where solar PV energy has reached grid parity. In 2021, regulations in China endorsed green electricity trading and Purchase Power Agreements (PPAs) signed directly between renewable energy producers and consumers (link). However, the extent of such trading varies across provincial electricity markets due to differences in market mechanisms and development. We have been actively pursuing opportunities to buy green electricity in the provinces of Jiangsu and Zhejiang since 2022, where our manufacturing operations are predominately located. We remain committed to exploring opportunities to source additional green electricity across all regions where we operate.

Renewable PPAs, renewable purchases in the spot markets, and our own rooftop PV generation are the main strategies we are employing to achieve our goal of 100% renewable energy usage. Moreover, the penetration of renewable energy has been consistently increasing, taking a greater share of the power grid. This trend is supplemented by Renewable Energy Certificates (RECs), which, when necessary, assist in accelerating our progress towards our decarbonization goals.



Key Environmental Achievements over 2017 - 2023

37%↓ GHG Emissions Intensity

37%↓ Manufacturing Energy Intensity

72%↓ Manufacturing Water Intensity

54%↓ Manufacturing Waste Intensity

The following sections detail the environmental intensity measurements for our global manufacturing operations, including solar ingot, wafer, cell, module, auxiliary materials, inverter, and battery energy storage product production. These metrics are determined by averaging the intensity of each manufacturing process and aligning it with the actual production output at each facility.

Greenhouse Gas Emissions

We have been actively disclosing our greenhouse gas (GHG) emissions since 2021. In 2023, we adopted the GHG Protocol Corporate Accounting and Reporting Standard (link), transitioning from ISO14064-1:2018, to enhance the quality of our GHG emissions measurement and reporting. This strategic shift aligns with our commitment to meet the requirements set by the International Sustainability Standards Board (ISSB), Carbon Disclosure Project (CDP), and Science Based Targets initiative (SBTi).

Our GHG emissions metrics are comprehensive, covering total emissions across scopes 1 and 2, and key categories of scope 3. We also measure the intensity of scopes 1 and 2 emissions related to our manufacturing operations. We provide carbon emissions at the product level using the Life Cycle Assessment (LCA) and standards provided by the French Energy Regulatory Commission (CRE), South Korea Guidelines for Solar Module Carbon Emission Assessment and Verification and Italian Environmental Product Declaration (EPD).

Methodology

In 2023, we further refined the comprehensiveness of our GHG inventory reporting through the following initiatives.

1. Organizational boundaries. We expanded the scope of our inventory to include our newly added facilities, such as solar cell, module auxiliary material, and battery energy storage facilities. Moreover, we have integrated Recurrent Energy into our reporting coverage.

2. Reporting boundaries. To align with the Corporate Value Chain (Scope 3) Accounting and Reporting Standard (link) and Technical Guidance for Calculating Scope 3 Emissions (link), we broadened our reporting categories within scope 3 to include category 9 (Downstream Transportation and Distribution), and category 13 (Downstream Leased Assets) emissions.

3. Emission factors. We have updated the emission factors used in our calculations to incorporate the most up-to-date data and guidelines. Specifically, we have adjusted the fuel emission factors for our operations in Thailand and Vietnam, and for our water supply and transportation according to the 2023 U.K. Environmental Agency's updated data.[3] We have also adjusted the electricity emission factor for our operations in Thailand based on the 2023 Thai Government Ministry of Energy's updated data.[4] As a result of these changes, we also recalculated the carbon emissions of our Thailand facilities for the year 2022.

4. Calculation methods. In line with the GHG Protocol Scope 2 Guidance (link), we calculated our scope 2 emissions using both location-based and market-based methods. The latter reflects our purchases of green electricity in spot markets.

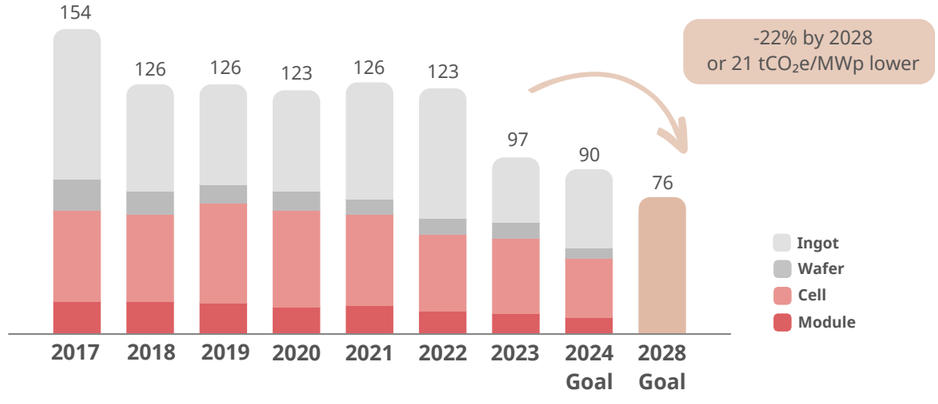
GHG Emissions Covered and Definition of Scopes

We report emissions for all seven kinds of greenhouse gases, i.e. carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3). The emissions of different GHGs have been converted to their CO_2 equivalent according to Intergovernmental Panel on Climate Change (IPCC) Global Warming Potential (GWP)100a. In 2023, carbon dioxide was the primary contributing greenhouse gas, accounting for approximately 98% of our total GHG emissions.

To ensure comparability of data across different years, we used the GHG emissions intensity or carbon intensity (emissions per MWp) as our main reporting dimension. Both scope 1 and scope 2 emissions are covered in the GHG emissions intensity section below.

According to the GHG Protocol, scope 1 emissions are the direct GHG emissions that originate from sources owned or controlled by a company. Scope 2 emissions are indirect and result from the consumption of purchased electricity, steam, heating, and cooling services. Scope 3 emissions cover a broader range of indirect emissions, extending to both upstream and downstream activities within the company's value chain, such as business travel and employee commuting.

GHG Emissions Intensity *(tCO_2eq/MW)*



3 UK Government (2023). Greenhouse gas reporting: conversion factors 2023. [online] GOV.UK. Available at: https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2023.
4 www.eppo.go.th. (n.d.). CO_2 Statistic. [online] Available at: https://www.eppo.go.th/index.php/en/en-energystatistics/CO_2-statistic.

In 2023, our GHG emissions intensity was reduced to 97 tCO_2e /MWp, which is a significant improvement over our target of 115 tCO_2e /MWp. This accomplishment reflects a reduction from 2022's level of 123 tCO_2e/MWp and was primarily driven by a 29% and 21% decrease in carbon intensity from ingot and wafer production processes respectively compared to 2023. These reductions were a result of the optimization of our production processes, leveraging technological advancements that facilitated the production of thinner wafers, and our ongoing energy conservation efforts, such as the introduction of a new heat recovery system for air compressors.

Following the GHG Protocol, we reported our 2023 scope 2 emissions data using market-based and location-based approaches.

The location-based approach reflects the average emissions intensity of grids where energy consumption occurs (primarily using grid-average emission factor data). The market-based approach uses emission factors from contractual instruments, which include any contract between two parties for the sale and purchase of energy. This includes contracts with bundled attribute claims related to energy generation, and unbundled attribute claims, such as power purchase agreements.

In 2023, our total scope 1 direct GHG emissions were 54,982 tCO_2e. Our scope 2 emissions calculated using both location-based and market-based approaches were 2,274,291 tCO_2e and 2,260,125 tCO_2e respectively. For a detailed breakdown of these emissions, please refer to the charts below.

Scope	Category	2023		2022	
		GHG emissions (tCO_2e)	% of total	GHG emissions (tCO_2e)	% of total
Scope 1	Stationary Combustion	1,365	2%	8,483	11%
	Mobile Combustion	611	1%	538	1%
	Process emissions	85	0%	29	0%
	Fugitive emissions	52,921	96%	66,597	88%
Total		**54,982**	**100%**	**75,647**	**100%**
Scope 2 (Location-based)	Imported electricity	2,262,211	99%	1,204,016	99%
	Imported stream	12,080	1%	11,591	1%
Total		**2,274,291**	**100%**	**1,215,607**	**100%**
Scope 2 (Market-based)	Imported electricity	2,248,045	99%	1,201,782	99%
	Imported stream	12,080	1%	11,591	1%
Total		**2,260,125**	**100%**	**1,213,373**	**100%**

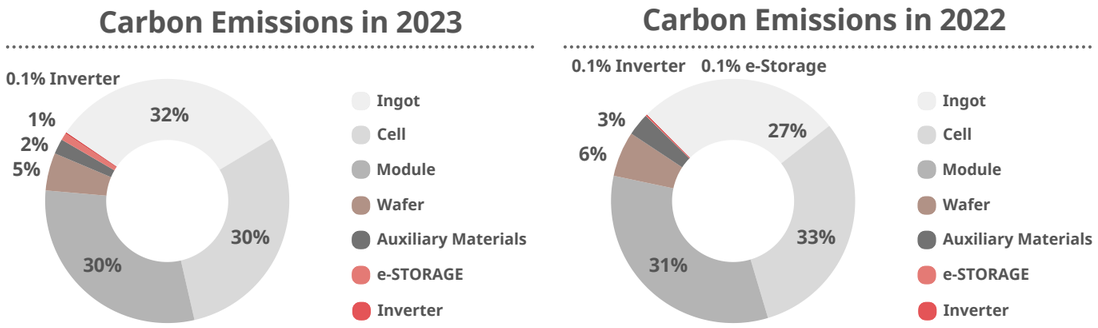
GHG emissions from stationary combustion decreased to 1,365 tCO_2e in 2023 from 8,843 tCO_2e in 2022 due to lower natural gas consumption in our solar cell manufacturing facilities.

The following table presents our scope 3 emissions in 2023 and 2022:

Scope 3		2023		2022	
Category	**Description**	**GHG emissions (tCO_2e)**	**% of total**	**GHG emissions (tCO_2e)**	**% of total**
Category 1. Purchased goods and services	GHG emissions from tap water purchased and the use of services, such as construction and catering.	6,661	1%	4,264	2%
Category 4. Upstream transportation and distribution	GHG emissions from two parts, one is the transportation of raw materials to produce ingot, wafer, cell, and module, including trucks, planes, and ships, the other is the transportation of sold products (i.e. modules, inverters and storage tanks), including the part we are responsible for according to freight terms (e.g. DDP, DAP, FOB, CIF.)	604,718	75%	251,913	98%
Category 9. Downstream transportation and distribution	GHG emissions from transporting modules to our customers, including the part we are not responsible for according to freight terms (e.g. DDP, DAP, FOB, CIF.)	111,649	14%	Not counted	Not counted
Category 13: Downstream leased assets	GHG emissions from the scope 1 and scope 2 emissions of lessees.	80,334	10%	Not counted	Not counted
Total		**803,362**	**100%**	**256,177**	**100%**

In 2023, our aggregate GHG emissions including scope 1, 2, and 3, were 3,132,635 tCO_2e, calculated using the location-based approach, and 3,118,469 tCO_2e, using the market-based approach. This represents a 102% increase from our 2022 emission levels. The main drivers behind this increase were the addition of new solar cell production sites and a significant increase in production output from our existing factories, particularly those engaged in producing solar ingots, cells, and modules. Nonetheless, the increase was partially offset by our energy conservation measures, which led to a reduction of our scope 1 emissions in 2023 relative to 2022. GHG emissions from stationary combustion decreased to 1,365 tCO_2e in 2023 from 8,843 tCO_2e in 2022, due to the decrease in natural gas consumption in our cell facilities.

A comprehensive comparison between our 2022 and 2023 GHG emissions, categorized by their respective sub-scopes, can be found in the following charts:



Combined, the charts provide a detailed breakdown of our GHG emissions by manufacturing process and scope. Notably, our ingot manufacturing activities contributed more to our overall carbon emissions in 2023 than in 2022, primarily due to increased production of monocrystalline ingots. Furthermore, in 2023, the total GHG emissions from our **e-STORAGE** manufacturing operations increased to 32,290 tCO_2e from 2,207 tCO_2e in 2022, raising their share of emissions from 0.1% to 1%, due to the expansion of our battery energy storage product production.

Case Study: PV System's GHG Payback Time with N-type Technology

PV power generation is a renewable energy technology, known for its low-carbon nature. Unlike fossil fuel-based power plants, PV systems generate electricity without combustion or GHG emissions. This makes PV power an environmentally friendly option, contributing to the reduction of carbon emissions and the mitigation of climate change. To demonstrate this, we calculated net GHG emission avoidance and the GHG payback time for two utility scale solar projects in the U.S. and France.

- Net GHG emission avoidance is a comprehensive metric used to gauge the potential of technology in mitigating global warming. This calculation considers the GHG emissions from the entire life cycle of the system, including manufacturing solar modules, transportation, construction, operation, and decommissioning.
- The GHG payback time represents the duration required for the surplus GHG emissions linked to the system to be neutralized by its net GHG emission avoidance.

We factored the following in our analysis:

- Solar power plants were equipped with either Canadian Solar's CS7N-660MB-AG or CS7N-715TB-AG.
- The installed capacity of each plant was 200 MWp.
- Single axis trackers were used.
- The projects are expected to produce electricity for 30 years before decommissioning.

Solar System Life Cycle Analysis				
Project location	**Texas, US**	**Cote d'Azur, France**		**Unit**
Module type	CS7N-660MB-AG	CS7N-660MB-AG	CS7N-715TB-AG	
Carbon footprint - PV	1,217	1,217	1,112	tCO_2/MW
	243,400	243,400	222,462	tCO_2
Project lifetime		30		Years
Total production	12,554,054	10,139,812	10,522,810	MWh
GHG Potential Emissions Avoided				
Gross emissions avoided	222,272	22,361	23,206	tCO_2/year
Net avoided emissions	214,159	14,248	15,791	tCO_2/year
Net avoided emissions (lifetime)	6,424,768	427,441	473,730	tCO_2
GHG payback time	**1.1**	**10.9**	**9.6**	Years

The Texas solar plant achieves net avoided emissions of 214,159 tCO_2e per year, amounting to a total of 6,424,768 tCO_2e over its operational lifetime. With a GHG payback time of approximately 1.1 years, this performance is representative of many global markets. This suggests that solar power plants equipped with Canadian Solar modules will generate emission-free electricity in most markets for the remaining 28.9 years of their operational lifespan.

In France, the GHG payback period is 9.6 years for our TOPBiHiKu7 modules and 10.9 years for BiHiKu7 modules. Compared to Texas, this extension is primarily due to France's significantly lower grid carbon emission rate of 77 $kgCO_2e/MWh$ (as per PVsyst 7.4, link) compared to Texas' 542 $kgCO_2e/MWh$ (the U.S. Environmental Protection Agency (EPA), link) and France's higher reliance on alternative energy sources, especially nuclear power. That said, using our TOPBiHiKu7 modules instead of the BiHiKu7 modules increases the annual net emissions avoided by 11%, reducing the GHG payback time by over a year, from 10.9 years to 9.6 years.

Module Carbon Footprint Improvement

We offer competitive, low-carbon solar products to our customers. Since 2015, we have maintained the Evaluation Carbone Simplifiée (ECS) certification, adhering to the requirements set by the French Energy Regulation Committee (CRE) solar tender, as well as ISO14040 and ISO14044 Life Cycle Assessment standards. In 2023, we updated our certificate in line with the newest Multiannual Energy Programming method (link). The carbon emissions of our mono-PERC solar modules, which are manufactured using 182 mm and 210 mm silicon wafers, are rated at 400 $kgCO_2e/kWp$, while our N-type TOPCon solar modules are rated at 450 $kgCO_2e/kWp$. In both cases, the carbon emissions of our solar modules are lower than industry averages.

In 2023, our 210 mm solar module became the first from outside of South Korea to earn the photovoltaic module carbon emission verification certificate, issued by the South Korea New & Renewable Energy Center (KNREC) (link). This assessment aligns with the Guidelines for Solar Module Carbon Emission Assessment and Verification under Article 27(1) of the Act on the Promotion of the Development, Use and Diffusion of New and Renewable Energy and Article 27(3) of the Enforcement Decree of the Act. Furthermore, we have obtained the Italian Environmental Product Declaration (EPD) certification (link). Through assessing the climate change, ozone depletion, water acidification, and eutrophication, photochemical ozone formation, and the consumption of abiotic resources and water associated with a solar system, the EPD certification serves as a vital tool for evaluating solar power plants' Return on Energy. This assessment aligns with the ISO14040 and ISO14044 Life Cycle Assessment standards, and ISO14025 and EN15804.

GHG Emissions at Recurrent Energy

Recurrent Energy plays a critical role in climate risk mitigation and provides climate-related opportunities for our customers, business, and the communities where we operate. Our mission is to deliver clean, reliable, and affordable power to the world. We also take our own responsibility for climate risk mitigation, which includes addressing GHG emissions in our operations and supply chain.

Recurrent Energy is currently developing a comprehensive inventory framework for our scopes 1, 2, and 3 emissions, with an anticipated completion date set for 2024. This initiative is a strategic component of our efforts to manage operational emissions more effectively and to further our commitment to driving the energy transition.

In 2023, Recurrent Energy's total GHG emissions were approximately 2,270 tCO_2e, encompassing our global offices and operations and maintenance (O&M) teams. The primary sources of emissions include the consumption of fuels (i.e. diesel, ethanol, and gasoline), electricity and water and business travel. Combustible mobile travel stands out as the main source of direct emissions for our O&M teams, accounting for 86% of Recurrent Energy's total emissions.

We will continue to explore opportunities to reduce our operational emissions through various initiatives, including procuring clean electricity, implementing energy efficiency measures such as LED lighting retrofits, and optimizing our shipping routes. Additionally, we plan to engage with leading industry groups and frameworks that provide comprehensive guidance on managing and reducing GHG emissions, especially for scope 3 emissions.

Air Emissions

We strictly comply with the environmental laws and regulations in each jurisdiction where we operate. Our commitment extends beyond mere compliance; we proactively work to minimize the environmental impact of air emissions from our manufacturing processes. To achieve this, we regularly monitor and assess all relevant emissions. We employ a range of emission control techniques, including exhaust management, filtration systems, adsorption processes, and catalytic oxidation, to effectively manage our emissions. A detailed account of our air emissions is provided below.

Air emissions[5] (global, metric tons)	2017	2018	2019	2020	2021	2022	2023
Nitrogen oxides (NO_x)	28.1	37.4	38.2	33.9	13.6	18.0	16.7
Sulfur oxides (SO_x)	0.1	0.2	0.1	0.1	0.1	0.1	0.4
Fine dust (PM10)	3.7	7.4	9.1	14.8	15.7	15.5	19.7
Hazardous air pollutants (HAP)	0.2	0.9	0.6	6.6	10.1	12.4	18.3
Volatile organic compounds (VOCs)	12.2	4.1	16.4	13.7	17.5	30.6	29.9
Persistent organic pollutants (POP)	0	0	0	0	0	0	0
Other standard air emissions[6]	3.4	23.2	16.2	23.3	30.2	39.2	20.2

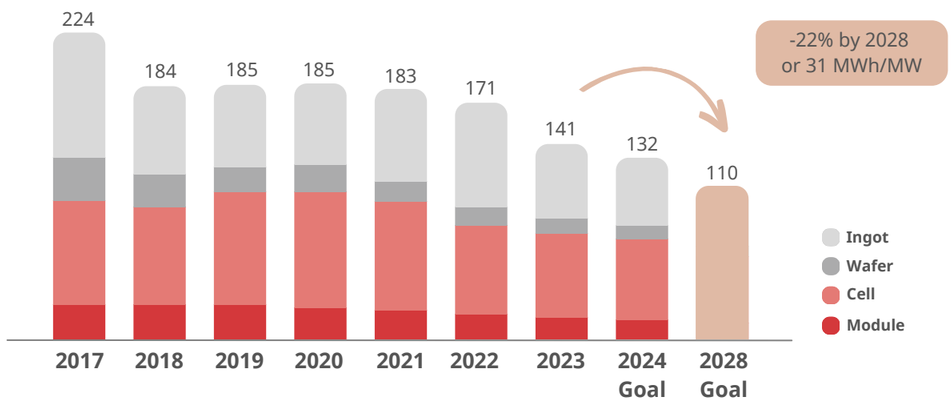
Increases in production capacity have resulted in an increase in particulate matter of 10 μm or less in diameter (PM10) and hazardous air pollutants (HAP), among other air emissions. However, over the past few years, we have adopted various initiatives to counteract these effects. First, our transition from producing polycrystalline to monocrystalline solar modules has decreased the demand for nitric acid in our cell production processes. Additionally, beginning in the second half of 2023, we introduced a mixed solvent as an alternative to both nitric and hydrofluoric acids. These strategic changes have significantly reduced NO_x emissions at our cell and ingot facilities in 2023, despite the increase in our production capacity. Furthermore, because ammonia makes up the majority of standard air emissions, increasing the proportion of sulfuric acid in our water tanks has improved the absorption of ammonia, thereby decreasing other standard air emissions.

5 Certain historical figures contain measurement anomalies that we cannot revise given the amount of time that has elapsed. Consider our 2020-2023 figures as the most accurate and reflective measurements of our actual air emissions. While the Company's emissions already comply fully with local regulations, the Company is making significant efforts to further treat and reduce air emissions.
6 From 2020, ammonia NH_3 emissions have been included in "other standard air emissions", and we began monitoring HAP emissions in our cell manufacturing operations

Energy Intensity

To track energy intensity across our solar ingot, wafer, cell, and module manufacturing operations, we employ production-weighted average calculations across all our production sites. This method provides a representative overview of the energy intensity across our global manufacturing operations.

Energy Intensity *(MWh/MW)*



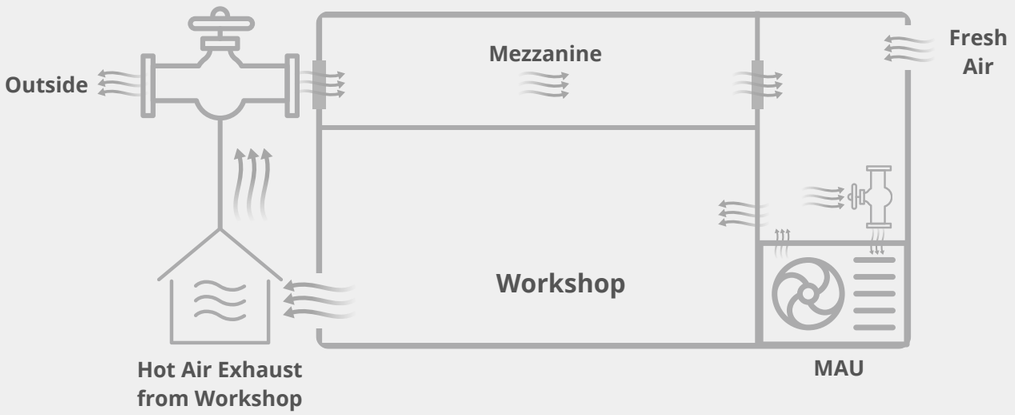
We achieved an 18% or 30 MWh/MW year-over-year (yoy) reduction in energy intensity in 2023 compared to 2022. Our actual energy intensity for 2023 was 141 MWh/MW, representing a significant improvement over our initial target of 156 MWh/MW. Energy efficiency has improved due to four main factors. Firstly, there was a 13% yoy reduction in energy intensity at our ingot manufacturing process – a result of significant process improvements. Secondly, technological advancements, particularly the adoption of thinner wafers reduced the silicon content per watt. Thirdly, enhancements to our production line's output efficiency have reduced energy consumption per watt. Finally, the execution of energy savings projects played a significant role. In 2023, we implemented 69 energy-saving projects, including a new heat recovery system for air compressors, production equipment, and an intelligent lighting control system. These projects contributed to a total energy savings of 52 GWh in 2023, including 40 GWh of electricity, 10,650 tons of steam, and 280,000 nm^3 of gas.

Case Study: Cell Sites

Heat recovering system to reduce steam and electricity consumption

Steam/electricity saving measures:

- Saving steam in winter and electricity in summer and autumn by connecting the hot exhaust system from our production workshop to the air-conditioning system Make-up Air Unit (MAU) to reuse the heat from the main heat generators in the production area.



Project achievements:

- Saving up to 2.82 GWh of electricity and 5,360 tons of steam in 2023

To further lower our energy intensity and achieve our 2028 goal, we plan to continue enhancing product output and efficiency, implementing energy conservation initiatives, promoting the circular use of energy, and refining our energy management systems. As of 2023, six of our manufacturing sites in China have received the Green Factory Award from local government authorities and seven sites have obtained ISO50001 energy management certification. We plan to have two more sites certified under ISO50001 in 2024.

e-STORAGE, our utility-scale battery energy storage product subsidiary which provides customers with competitive turnkey, integrated, utility-scale battery energy storage solutions, consumed a total of 9,434 MWh of energy at its production sites in 2023. e-STORAGE's total energy consumption accounted for less than 1% of Canadian Solar's total energy consumption in 2023. Nevertheless, we remain committed to driving energy conservation through energy saving projects at e-STORAGE, such as reducing the volume of charged electricity during the testing process, using recovered energy, and improving the efficiency of chillers and air compressors.

300 MW /561 MWh, Slate Solar and Battery Energy Storage Plant, U.S.

Energy Consumption Breakdown

Energy Consumption Breakdown by Manufacturing Process (GJ)		2022	2023
Solar	Ingot	1,153,399	4,268,095
	Wafer	555,127	837,425
	Cell	3,024,054	5,074,866
	Module	1,345,103	1,759,742
	Auxiliary Materials	148,096	251,001
e-STORAGE	SolBank battery energy storage products	/	33,961
	Total	**6,225,779**	**12,225,091**

Total absolute energy consumption increased in each production process due to the significant increase in our production output by 417% for ingots, 82% for wafers, 53% for cells and 48% for modules in 2023 compared to 2022.

In 2023, the energy consumption of our **e-STORAGE** business was 33,961 GJ, which accounted for less than 1% of our total manufacturing energy consumption.

The total energy consumption for 2023 also includes 14,805 GJ of energy used by our **IT infrastructures** across 19 manufacturing sites. To reduce the energy consumption of our IT infrastructures, we have consolidated our data storage rooms and transitioned to a more intelligent management of our ventilation systems. Our air conditioning systems can now adjust their output according to external temperatures, thereby preventing energy waste. We have implemented two significant energy-saving projects, which have resulted in a total energy savings of 2,943 GJ for 2023.

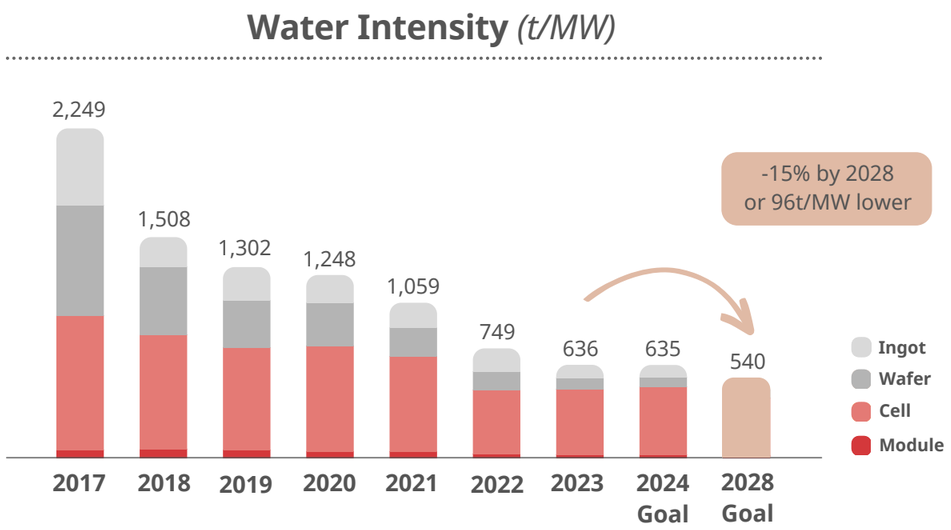
Energy Consumption Breakdown by Resources[7]

Global	2017	2018	2019	2020	2021	2022	2023
Total energy consumption (GJ)	2,002,393	2,701,707	3,757,188	4,286,130	5,473,504	6,225,779	12,225,091
of which:							
Gas	11,295	24,020	40,249	59,001	192,332	178,836	24,057
Diesel	2,536	2,455	2,162	3,164	4,321	3,890	4,287
Gasoline	3,737	700	857	2,535	1,786	2,580	3,109
Steam	133,523	136,874	166,942	165,157	112,433	91,820	113,323
Grid electricity	1,800,956	2,474,601	3,484,479	3,972,449	5,078,445	5,816,234	11,926,271
Self-generated solar PV electricity	50,346	63,056	62,500	83,824	84,187	132,419	154,044

Total energy consumption increased in 2023 compared to 2022, primarily due to the rise in electricity consumption resulting from a significant increase in production output. Despite this increase, we remain well on track to meet our 5-year rolling target for reducing the energy intensity of our manufacturing processes. Furthermore, we achieved an 87% decrease in gas consumption due to the implementation of an improved wastewater treatment process at our solar cell factory in Thailand.

7 The numbers reported in this table may differ slightly from previous sustainability report editions. We have revised historical calculations for accuracy. Prior report estimations should no longer be considered. Self-generated PV electricity share has been revised in accordance with the Sustainability Accounting Standard Board (SASB).

Water Intensity



We achieved a yoy reduction of 113 t/MW or 15% in water intensity in 2023 compared to 2022, successfully meeting our 2023 target of 14%. The reduction was primarily driven by the continued deployment of thinner wafers. Efforts to increase product efficiency and the promotion of water-saving initiatives have also contributed to this decrease.

In absolute terms, we saved **443,000 tons of water** in 2023. Through our water conservation and recycling programs, in conjunction with improvements in module efficiency and production yield, we successfully achieved a **72% reduction** in manufacturing water intensity between 2017 and 2023. Moving forward, from 2024 to 2028, we plan to further reduce water consumption intensity by increasing our manufacturing and product efficiency, as well as implementing additional water-saving measures, including recycling wastewater with a small amount of chemicals from our TOPCon solar cell manufacturing process.

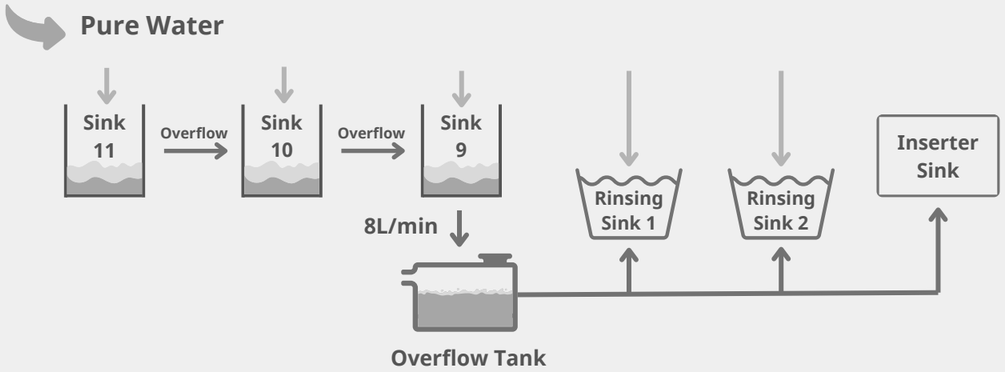
e-STORAGE production sites consumed approximately 26,000 tons of water in 2023. Approximately 700 tons of this water were fully recycled for use in the containerized energy storage sprinkler system testing.

Case Study: Wafer Workshops

Improvements in the wafer process parameter setting to reduce water consumption

Water conservation measures:

- Continually optimizing the parameters of our wafer cleaning machines by standardizing the water overflow rate of each equipment.



Project achievements:

- Save up to 90,000 tons water per year.

Did you know?

According to the U.S. Environmental Protection Agency, an average American family uses more than 300 gallons of water per day at home (approximately 1.25 tons). The average U.S. residential solar system is around 7 kW. By these metrics, it takes the same amount of water as an American family uses in five days to manufacture the solar modules in an average residential system in the U.S. The amount of water used is lower for most other regions, although residential solar systems are also smaller outside of North America (3-5 kW).

Water Risk Management Strategy

Water conservation remains a top priority within our sustainability initiatives. We aim to continuously improve our production utilization rates while reducing water withdrawal from our manufacturing operations. We collaborate with water-saving experts to integrate water-saving technologies into the design of our production processes from the outset. Our goal is to maximize water utilization rates by considering the water quality requirements for each process and efficiently recycling water to maximize its use.

Consistent with previous years, in 2023, 100% of our water withdrawals were sourced from municipal freshwater supplies. Whereas the data on water withdrawals and discharges presented in the table below are based on invoices from water and wastewater utilities, the quantities of recycled water are determined through direct meter readings at our facilities.

	2020	2021	2022	2023
Total water withdrawals (thousand m³)	8,418	9,027	8,550	14,857
Withdrawals within high baseline water stress areas (%)	45%	34%	28%	34%
Total water consumption (thousand m³)	3,634	2,653	2,170	5,544
Consumptions within high baseline water stress areas (%)	58%	32%	34%	42%
Total water recycling (thousand m³)	2,480	1,930	1,972	4,884
Water recycling rate (%)	30%	21%	23%	33%

In 2023, we experienced an increase in total water withdrawals, primarily due to the substantial growth in our production output at our ingot and cell manufacturing facilities. However, despite this increase, water intensity decreased by 113 t/MW in 2023 compared to 2022.

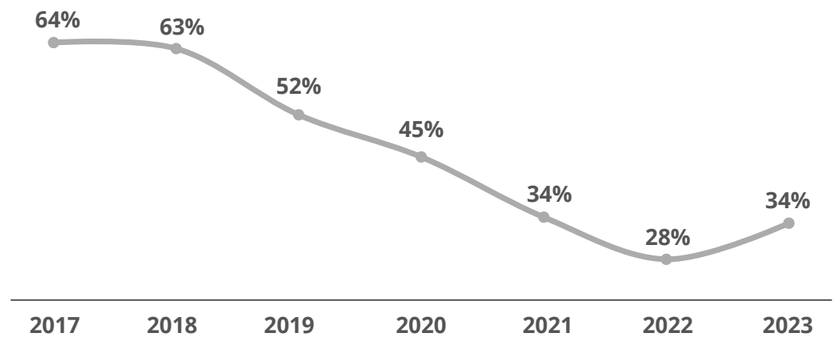
Our total water recycling rate improved to 33% in 2023 from 23% in 2022 thanks to the implementation of water recycling projects at our solar cell and ingot manufacturing facilities. For 2024, we expect that our total water recycling rate will exceed 35%. We remain committed to executing our 5-year rolling targets, which involve reducing manufacturing water intensities through the implementation of additional water recycling projects and conservation measures.

In recent years, we have strategically relocated our manufacturing operations to areas with lower Baseline Water Stress (BWS), as categorized by the World Resources Institute (WRI) Water Risk Atlas tool, Aqueduct. This move has significantly mitigated our water access risk. Our strategy involves transitioning our manufacturing sites from regions with high BWS to those with moderate or lower BWS levels. A detailed breakdown of our operations' water withdrawals from high BWS areas is shown below.

Water withdrawals in high or extremely high baseline water stress locations (thousands m³)		2017	2021	2022	2023
Solar	Module	337 (6%)	457 (5%)	649 (7%)	787 (5%)
	Cell	1,578 (28%)	554 (6%)	0	2,273 (15%)
	Wafer	1,429 (26%)	1,181 (13%)	975 (11%)	936 6%)
	Ingot	217 (4%)	790 (9%)	667 (8%)	981 (6%)
	Auxiliary materials	-	118 (1%)	103 (1%)	104 (1%)
e-STORAGE	SolBank battery energy storage products	-	-	-	30 (0.2%)
	Total	**64%**	**34%**	**27%**	**34%**

Overall, the proportion of our total water withdrawal from areas categorized as extremely high or high BWS decreased to 34% in 2023 from 64% in 2017. Between 2022 and 2023, the share of production in regions with high or extremely high BWS increased due to a newly established solar cell manufacturing site in an area with high BWS. Moving forward, to reduce potential water supply risks, we will continue to conduct Environmental Impact Assessments (EIAs) for all new manufacturing sites prior to construction. This includes developing a detailed water balance chart and conducting an in-depth review of water stress and freshwater resources.

Share of production in regions with high or extremely high baseline water stress (BWS) *(%)*



Water Pollutants and Effluents

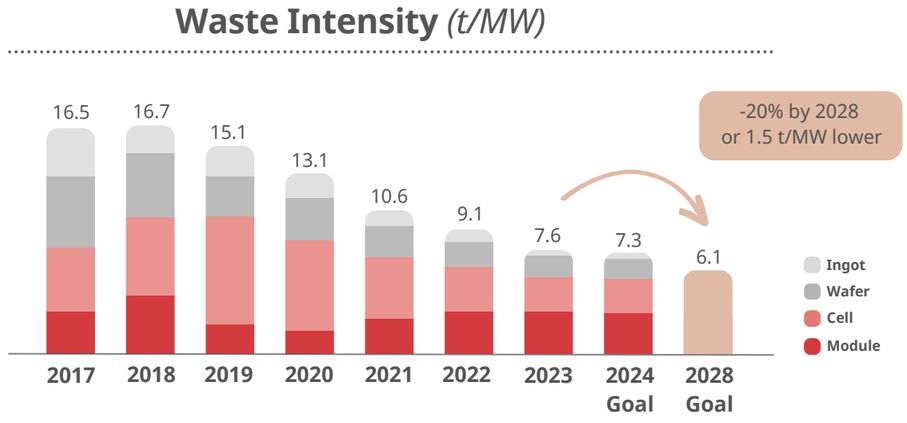
Our goal is to ensure a secure, reliable, and environmentally responsible water supply for both our operations and the local communities impacted by our activities. We strictly adhere to all relevant local and international laws and regulations concerning wastewater pollutants. By conducing comprehensive assessments of our potential impact on local water resources, we develop strategies to minimize our influence on these resources.

We treat wastewater from our production processes according to our internal control criteria before sending it to local wastewater treatment facilities for additional filtering. This process continues until final water discharge requirements are met. The table below provides a detailed breakdown of the wastewater pollutants and effluents generated during our production processes, along with the Chemical Oxygen Demand (COD), which is a key measure for assessing wastewater quality.

Wastewater pollutants / measure (global, metric tons)	2021	2022	2023
Fluoride	21.1	21.0	33.7
Suspended Solids (SS)	186.6	146.9	214.1
Ammonia Nitrogen	23.6	25.1	39.5
Total Nitrogen	65.2	57.6	91.7
Chemical Oxygen Demand (COD)	288.3	283.8	380.3

Between 2022 and 2023, the increased generation of the pollutants mentioned above resulted from the significant rise in our production output, as discussed earlier.

Waste Intensity



In 2023, our waste intensity decreased by 16% to 7.6 t/MW, down from 9.1 t/MW in 2022, beating our 2023 target of 8.7 t/MW. This reduction was primarily driven by the deployment of new, more efficient manufacturing equipment, and the implementation of ambitious recycling and waste reduction management programs.

Our **e-STORAGE** business generated approximately 1,200 tons of waste in 2023, over 95% of which was successfully recycled. Our key strategies involve reusing chemical containers and enhancing our manufacturing processes to minimize the use of cleaning solvents. In 2024, we plan to substitute wooden pallets with plastic alternatives to ensure that all packaging materials from our e-STORAGE operations can be either recycled or reused. This initiative aligns with our 100% recycling and reuse target.

Case Study: Thailand Cell Manufacturing Site

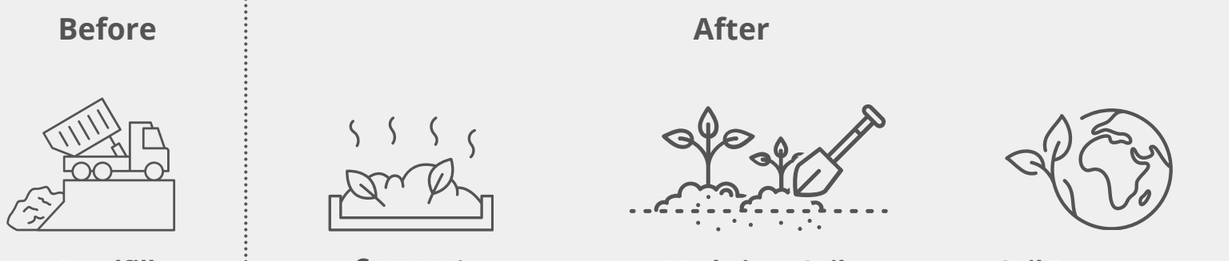
Sludge reuse to divert from landfill in our Thailand cell

Sludge reuse measures:

- Collaborated with local regulatory bodies to assess and test the composition of sludge for potential reuse. We successfully partnered with a vendor to utilize sludge as a component that can be mixed with soil to enhance soil quality.

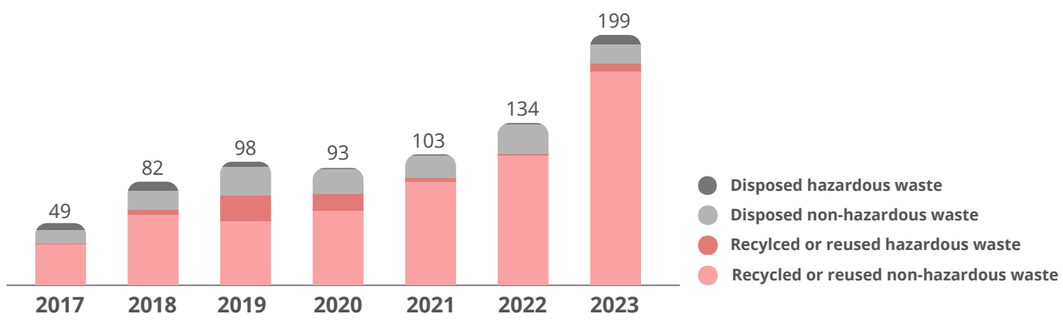
Project achievements:

- Reduce the volume of our sludge landfill to 3,595 tons in 2023 from 19,076 tons in 2022 – an 81% reduction.



Waste Types and Disposal

Waste by Type and Disposal *(kt)*



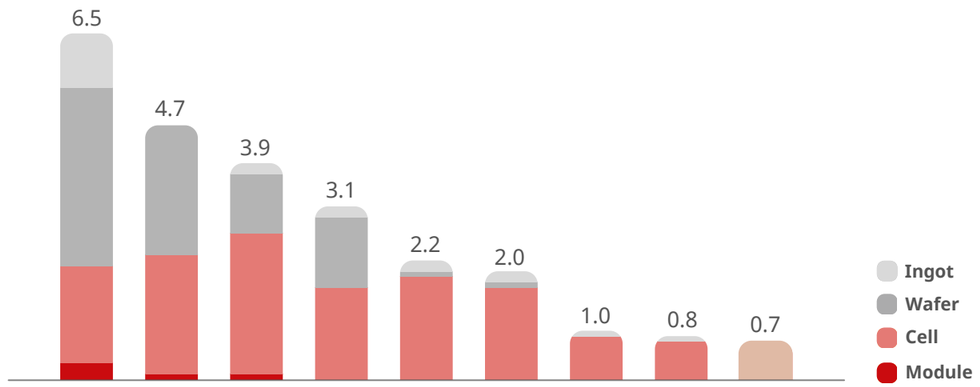
The total percentage of recycled or reused waste increased to over 88% in 2023 from 81% in 2022. This improvement was mainly due to a change in the waste treatment method at our Thailand factory, where we reused approximately 78% of sludge, replacing the previous landfill treatment. Despite an increase in our total waste generation in 2023 due to higher production output, we successfully reduced both our waste intensity and total disposed waste to 23,400 tons from 27,100 tons in 2022.

In 2023, we achieved 100% recycling of our packing materials, totaling 39,950 tons. This success can be attributed to the packing materials recycling projects at our manufacturing sites such as replacing wooden pallets with steel to ensure reuse, and our partnership with vendors to reuse raw material containers.

Disposed Waste Intensity

Compared to total waste intensity, disposed waste intensity, which includes landfill and incinerated waste, provides a more insightful measure of our progress towards more sustainable solar manufacturing. In 2023, we achieved an 85% reduction in disposed waste intensity as compared to 2017. Our disposed non-hazardous waste decreased to 15,000 tons in 2023 from 24,000 tons in 2022. Of the waste disposed in 2023, 88% was landfilled and 12% was incinerated.

Disposed Waste Intensity (t/MW)



Product End-of-Life Management and Recycling

Canadian Solar actively promotes the recycling and reuse of end-of-life products.

Recurrent Energy develops and builds energy projects that are designed to have a functional lifespan of 30 to 40 years. When a project reaches the end of its operational life, it will be decommissioned, and we expect the equipment to be recycled where possible. Recycling of PV panels and battery energy storage components is complex, and while new innovations are being developed, the technology remains difficult and expensive to test. We prioritize quality in our material selection process; however, occasionally there are PV panels and equipment modules that need to be replaced due to wear or damage. After we replace the necessary components, we utilize the replaced units to test recycling options before any of our large-scale projects undergo decommissioning.

As a solar module provider, **CSI Solar** collaborates with qualified local service suppliers to recycle and reuse end-of-life products.

In the **U.S.**, we began collaborating with a certified recycling service provider in 2023, successfully recycling 5,915 pieces or 1.65 MW of solar modules. Currently, we are negotiating an agreement with another partner to recycle solar modules at the end of their life cycle.

In **Europe**, since 2014, our solar PV modules fully complied with the Waste of Electric and Electronic Equipment (WEEE) European Directive, which governs the proper disposal of solar modules in the EU. We closely collaborate with recycling service providers, including PV CYCLE in Italy (link), Take-e-way in Germany (link) and Ecoasimelec in Spain (link), to ensure strict adherence to all WEEE obligations and that appropriate market import actions are followed. In 2023, our qualified partners repaired approximately 22,980 pieces or 4.56 MW of Canadian Solar modules for reuse, and 710 pieces or 0.14 MW for recycling.

In **Australia**, we engage the services of local recycling companies to recycle solar modules. In 2023, these efforts helped recycle 1,353 pieces or 0.4 MW of solar modules.

To summarize, in 2023, 22,980 pieces or 5 MW of our modules were repaired and 7,978 pieces or 2.2 MW were recycled across Europe, the U.S., and Australia.

Did you know?

Typically, there are 5 layers in a crystalline silicon PV module: a front cover of tempered glass, the electrical circuit (solar cells matrix) in between two encapsulant layers (front/back), and a back cover (back sheet or tempered glass). Aluminum frames are used to improve mechanical resistance and facilitate installation. Approximately 75% of a solar module's weight is tempered glass, 10% plastic parts, 8% aluminum, 5% silicon, and 1% other materials. Thus, 95% of the materials used in a typical silicon solar module can be disassembled, sorted, processed, and recycled.

Case Study: Planning for the Future: Bayou Galion Waste Management and Decommissioning

Bayou Galion is a 127 MWdc PV solar generation facility in Morehouse Parish, Louisiana, that began construction in 2023. Spanning approximately 987 acres of agricultural land, the project requires a comprehensive strategy for lifecycle waste management, decommissioning, and site restoration. To address this, Recurrent Energy developed a Recycling Plan and Decommissioning and Site Restoration Plan for Bayou Galion. By integrating end-of-life considerations for the side during the development phase, this plan reflects Recurrent Energy's commitment to responsible renewable energy development.

The plan outlines Recurrent Energy's approach to waste management during both the construction and operational phases of the project. The plan focuses on reducing, reusing, and recycling waste materials and segregating waste materials to the greatest extent possible. If waste materials cannot be reduced, reused, or recycled, Recurrent Energy is committed to ensuring their proper disposal in line with local regulations.

With a projected lifespan of at least 40 years, the Bayou Galion project may undergo repowering or full decommissioning upon reaching the end-of-life stage. Therefore, our Decommissioning and Site Restoration Plan delineates two key processes: decommissioning and site restoration. Decommissioning involves the removal of all facility components, both above and below ground, as well as management of excess materials and waste. To ensure maximum environmental sustainability, we will collaborate closely with manufacturers, contractors, third-party waste firms, and other entities to maximize the reuse, recycling, and salvaging of materials.

Site restoration aims to restore the land to its pre-construction condition. Approximately 494 acres of land will require grading, decompaction, and re-seeding with native vegetation. Recurrent Energy is committed to restoring the local ecosystem and ensuring the long-term sustainability of the area.

Moving forward, Recurrent Energy intends to adopt the Bayou Galion's recycling, decommissioning, and site restoration plans as a model for standardizing waste management processes across all projects. This systematic approach ensures consistent adherence to environmental standards and reinforces our commitment to responsible energy development and community protection.

Research & Development Roadmap

We invest in technological innovations to maintain our competitive edge and decarbonize our operations.

Innovation
Collaboration
Responsibility

- **High Efficiency and Wattage Products**
- **Long Life and Low Degradation Products**
- **Specialty Products**
- **Green and Low Carbon Footprint Products**
- **Open Research and Cooperation**

Our solar technology roadmap and its expected contributions to our environmental metrics are outlined below.

1. We initiated mass production of N-type TOPCon modules in 2023. Through anticipated enhancements in solar cell efficiency, we project a rise in the power output of our TOPCon modules to 745 W by 2028, up from 715 W in 2023. Increases in cell efficiency and module power output, coupled with our production scale will likely reduce the energy and water intensities of our TOPCon products.

2. We provide a 30-year power warranty for our N-type solar modules and guarantee a power degradation of less than 1% in the first year and less than 0.4% per year thereafter. We have also developed solar modules with an extended lifetime of up to 40 years. With a longer use life and better performance, we expect these modules to generate more electricity over their lifetime, thus lowering GHG emissions per kWh of electricity generated.

3. In 2022, we introduced solar modules with steel frames, which resulted in a 5% reduction in module energy intensity compared to the standard aluminum-framed solar modules. Building on this progress, in 2024, we plan to release glass fiber reinforced composite (GFRC) framed solar modules. These modules are not only lighter and more durable than aluminum-framed modules, but also offer a 4% reduction in energy intensity, equating to 60 tCO_2e/MW.

4. A smaller diameter of diamond wires helps reduce silicon powder waste during solar wafer slicing process and can improve polysilicon utilization rate. We are developing processes to produce thinner wafers with finer diamond wires. Our plan is to reduce wafer thickness from 130 um to 120 um, decrease the diamond wire diameter from 30 um to 24 um, and cut polysilicon consumption by 10% in 2024 compared to 2023.

5. We are developing fluoride-free modules that are easy to recycle, with the aim of achieving an over 95% solar module recycling rate.

We are also developing and manufacturing battery energy storage and power electronic products, including an energy storage Power Conversion System (PCS) and high-power solar inverters. These products are characterized by their high energy density and reliability, with a manufacturing process that is significantly less energy-intensive compared to that of solar module production. They play a pivotal role in reducing the LCOE of solar PV systems and in facilitating a greater integration of renewable energy sources into the global power grids.

Jiaxing Research Center, China

Environmental Stewardship in Project Development and Operations and Maintenance (O&M)

Recurrent Energy's global development of solar and battery energy storage projects significantly enhances environmental sustainability and social progress. To date, we have developed, built, and commissioned over 10 GW of solar projects and over 3 GWh of battery energy storage globally, generating 78,000 MWh of clean energy. This is equivalent to offsetting 41 million metric tons of CO_2, or providing annual power for around 2.5 million homes. We acknowledge the environmental, ecological, and biological concerns that may arise from our operations and maintenance (O&M) activities, such as visual impact, habitat disruption, noise, and waste. We are committed to biodiversity preservation and are implementing comprehensive strategies to mitigate these potential impacts while advancing our clean energy initiatives.

From the outset of each solar and battery energy storage project, we conduct thorough assessments of environmental, ecological, and biological impacts, in conjunction with our community engagement programs. These evaluations are integral to the approval process of our Investment Committee (IC) for each project. Our teams provide extensive impact analyses that encompass the project's entire lifespan.

Following IC approval, we develop a comprehensive project execution plan that guides project execution, safety protocols, and ensures compliance with local environmental laws and regulations. It also outlines initiatives to mitigate potential impacts. Additionally, an environmental O&M compliance plan is established for every project managed by our O&M teams, ensuring adherence to ESG factors throughout the power plant's operational life.

100 MW Shanxi Jincheng Power Plant, China

Project Development Execution

Project Execution Plan (Environmental and Biological Items)

- Environmental and biological permits
- Training on site safety orientation, mandatory training, and certification, emergency response training
- Incident reporting: exposure data, incident notification, and investigation
- Dust control plan
- Fire safety plan
- Emergency response plan
- Spill prevention and response plan
- Storm water pollution prevention plan

Power Plant Operation and Maintenance

Environmental O&M Compliance Plan

- Onsite documentation, site access and ROW restrictions
- Worker Environmental Awareness Program (WEAP)
- General operations and maintenance activities avoidance and minimization measures
- Dust control plan
- Lighting plan and other visual resources management
- Fire safety plan
- Biological Resources Mitigation, Monitoring, and Reporting Plan (BRMMRP)
- Wildlife Prevention and Drainage, Erosion, and Sediment Control Plan (DESCP)
- Stormwater management plan and DESCP

Case Study: Azuma Kofuji Environmental Stewardship

The Azuma Kofuji Power Plant is a 100 MW solar site that was developed as part of a pilot project aimed at converting degraded agricultural land to solar farms. The abandoned, non-productive farmland accounts for 79.4% of the project area, and this project was made possible by newly enacted Japanese legislation promoting renewable energy power generation that minimizes land-use impacts on quality lands. Azuma Kofuji is the largest operational solar project in Fukushima prefecture to date.

Environmental Impact Assessment

For large-scale projects, the Fukushima Prefecture requires an Environmental Impact Assessment (EIA) to evaluate and mitigate environmental impacts resulting from project development. Through the EIA, we conducted vigorous research, prediction modeling, and evaluation with various professionals before determining the detailed design of the project. We also had ongoing conversations with local and public organizations to understand their perspective.

EIA at Azuma Kofuji

In 2018, we started EIA procedures based on the Fukushima Prefecture Environmental Impact Assessment Ordinance. Specifically, we focused on the types of items to be investigated, predicted, and evaluated including water, soil, topography, and geology, the ecosystem of animals and plants, landscape, and human interactions through creating EIA method document. After conducting extensive research and holding several briefing sessions with local communities and authorities, and receiving a written opinion from the prefectural governor, the final report was officially filed at the end of 2019.

Design and construction

The Environmental Impact Assessment research resulted in a detailed project design. We carried out construction in accordance with the requirements of EIA report through its completion in September 2022. Water quality and other environmental data continue to be collected and monitored on an ongoing basis.

The key criteria reflected in the design and construction are:

- Drainage water and ponds made of permeable material instead of using concrete.
- The construction schedule for each area was designed with consideration to the nesting timing of precious birds.
- When designing the layout of the panels, configured the placements to minimize the impacts on the groundwater in the wasabi fields.
- Panels were placed along the original slope of the ground to avoid major cutting and filling work.
- To avoid generating large amounts of noise and affecting the ecology of animals, the PCS was chosen to be string type rather than central.
- Avoided the cutting of tree roots where possible.

100 MW Azuma Kofuji Power Plant, Japan

Protection of Biodiversity

Biological diversity, or biodiversity, is the variety of life on Earth, including the variability among living organisms within an ecosystem. The relationship between earth and aquatic ecosystems is complex and maintaining the biodiversity within and between animal and plant species is crucial to supporting regional ecosystems. With industrial expansion and population growth, many ecosystems are threatened, and the global decline of biodiversity poses fundamental risks to human well-being. When **Recurrent Energy** evaluates locations for project development, we consider our impact to the biodiversity of the surrounding area. Solar projects often require significant land use, so Recurrent Energy seeks ways to minimize or offset any adverse effects on biodiversity. We also explore opportunities to protect biodiversity by creating new habitats for local flora and fauna.

Case Study: Spain's Bird Project

Spain's biodiversity, particularly its avian population, plays a crucial role in the broader ecological landscape of Europe. Among the notable species is the Cercotrichas galactotes, also known as the Rufous-tailed scrub robin, which earned recognition as the Spanish Society for Ornithology's Bird of the Year in 2022. Unfortunately, the survival of this robin species is under threat, and they are listed as vulnerable in many regions according to the Spanish Catalogue of Threatened Species. As the population continues to decrease, the species will soon be reclassified as in danger of extinction. Urgent action is required to prevent this decline from getting any worse and to restore the once thriving Cercotrichas galactotes species.

Source: SEO/BirdLife, P. (2023) El alzacola rojizo, una especie casi exclusiva del continente europeo - SEO/BirdLife. (link)

Compensatory Measures in our PV plants:
To mitigate the impact of our 50 MW El Salobral and El Montecillo PV plants located in Cordoba, Spain on this species, Recurrent Energy is dedicated to implementing measures that include research, project management, and land stewardship. We have partnered with an experienced group of ornithologists specializing in studying the scrub robin to create and execute a biodiversity plan.

Research on the Species:
The research team's work is essential to Recurrent Energy's understanding of the needs and habitat requirements of the Cercotrichas galactotes and informs any necessary changes that need to be made to our project management. The research team conducts extensive sampling across potential habitats in the southern countryside of Cordoba. They examine factors influencing reproductive success, such as clutch size, nestling survival, and predation, while also assessing the impact of agricultural practices on nesting sites. Advanced techniques, including DNA analysis of fecal remains, are employed to identify the species' primary prey and assess prey availability. Additionally, scientific banding and GPS tracking are utilized to monitor the movement and behavior of individuals birds.

Conservation & Habitat Improvement:
In our commitment to safeguarding Cercotrichas galactotes' habitat and promoting environmental stewardship, we aim to eliminate synthetic chemical inputs, such as insecticides and herbicides. This helps protect the natural herbaceous cover that supports insect populations, which is a key food source for the birds. Additionally, we advocate for sustainable land management practices to ensure the long-term sustainability of the species' habitats.

Land Stewardship & Environmental Awareness:
Engaging local communities and landowners is essential for project success and the long-term conservation of the species. We facilitate the collaboration with partner farms to create a broad network of protected habitat for the scrub robin. Furthermore, the promotion of the "Cercotrichas galactotes" wine and olive oil brand serves to highlight the symbolic power and local connection to this species. Through these efforts, Recurrent demonstrates how habitat protection and biodiversity conservation are core values inherent in our project work.

Climate-Related Risks and Opportunities

100% of Canadian Solar's revenues are derived from clean, renewable energy. Our businesses play a vital role in contributing to the global decarbonization goals outlined in the Paris Agreement. Climate-related risks pose a serious threat to human well-being and societal development. Recognizing the environmental impacts of our businesses, particularly solar module and battery energy storage product manufacturing activities, we have established an environmental management system certified under ISO14001 system, and 5-year rolling targets on environmental metrics aimed at measuring, managing, and minimizing these impacts.

Climate-Related Risks

The climate-related risks associated with the development of our businesses are as follows, including but not limited to:

Climate-Related Risks	Time Horizon*	Potential Impacts	Estimated Financial Implications	Management Method
Compliance with climate-related regulations and initiatives	Short to long term	Changes in regulatory policies and initiatives pertaining to climate, energy, and environmental protection may increase costs and administrative responsibilities.	The precise implications depend on how evolving regulations and initiatives impact our business.	Actively monitor and comply with the progression of regulations and initiatives.
Environmental impact from our solar and battery storage manufacturing businesses	Short to long term	While our entire revenue stream stems from renewable energy, our operational activities have environmental impacts, including GHG emissions, consumption of energy and water resources, and generation of waste.	Our environmental-related expenditure for 2023 was approximately $73 million including capital expenditure and other expenses. The environmental-related expenditure depends on the scale of expansion of our business, which we anticipate will continue to increase in 2024 given the expected increase of our solar module and battery energy storage product shipments.	We have established an environmental management system that is certified under ISO14001 and ISO50001 to measure these impacts and we set 5-year rolling targets on environmental metrics to reduce impacts.
Environmental and ecological impacts from our solar and battery storage project development businesses	Short to long term	Our project development has the potential to impact the environment and ecology of the communities where we operate. This can include aesthetic changes, disruptions to natural habitats, risks to wildlife, and increased noise levels from construction activities.	Expenditures associated with project development may increase as we refine project designs to minimize aesthetic changes, select project sites to reduce disturbances to natural environments, and implement measures to mitigate noise generated by construction activities.	Our internal project evaluation and authorization procedures involve a thorough assessment of the environmental and ecological impacts associated with each project we undertake. This process ensures that we work towards minimizing their potential adverse effects.
Product end-of-life management	Short to long term	Environmental impact of our solar modules and battery energy storage products when they reach their end-of-life.	Spending in R&D and other areas such as third-party partnerships for project end-of-life management may increase.	Continue to invest in R&D and design products that are easy-to-recycle and suitable-for-reuse, and to devise cost-effective and environmentally responsible recycling solutions
Environmental impact among our supply chain	Short to long term	Manufacturing operations of our suppliers have environmental impacts such as the release of GHG emissions, consumption of energy and water resources, and the generation of waste materials.		Continue conducting thorough audits of our supply chain's ESG performance to monitor compliance.

**We define the short-term horizon as 0 to 5 years, the medium-term as 5 to 10 years, and the long-term as any period exceeding 10 years.*

Please refer to our annual report on **Form 20-F** (link) filed with the U.S. Securities and Exchange Commission for a more detailed discussion of the risks associated with our businesses.

Climate-Related Risks and Opportunities

Embracing renewable energy sources is crucial for achieving global decarbonization objectives. According to Lazard's 2023 LCOE Report (link), solar energy has emerged as one of the most cost-effective sources, boasting a highly competitive LCOE in major global power markets. It is therefore natural that market forces are propelling its widespread adoption globally.

To meet the 1.5-degree Celsius goal of the Paris Agreement, the International Renewable Energy Agency (IRENA) has outlined that the total installed solar PV capacity needs to increase to 5.5 TW or 5,500 GW by 2030 and to 18 TW or 18,000 GW by 2050, compared to the current 1.6 TW or 1,600 GW in 2023. With solar power constituting only 5% of the current worldwide energy mix, the growth potential for solar energy is substantial, and we are merely at the beginning of this key growth trajectory.

Alongside the growth of renewable energy sources, the need for battery energy storage solutions is projected to increase exponentially. While the growing adoption of renewables reduces power costs and aids in decarbonizing global power grids, it can also create price fluctuations and impact the stability of grids. Battery energy storage systems make renewable energy sources more reliable and dispatchable. Wood Mackenzie projects that total battery energy storage installation will likely surge from 18 GWh in 2018 to nearly 100 GWh in 2022 and is expected to reach 1 TWh or 1,000 GWh by 2028.

The promising growth outlook for both solar energy and battery energy storage presents significant expansion opportunities for our businesses in the near and long terms. Our strategic business models are built to capitalize upon these prospects by delivering cost-effective, clean solar energy and comprehensive energy storage solutions.

We have identified several climate change-related opportunities that are pertinent to our business development, alongside other potential areas for growth.

Climate-Related Opportunities	Time Horizon*	Potential Impacts	Estimated Financial Implications	Management Method
Growing demand for solar modules	Short to long term	Growth of our solar manufacturing business	100% of our revenues are associated with renewable energy. We expect our revenues to continue to grow with the rapid global adoption of solar energy and battery energy storage systems.	Continue to invest in technology R&D to further increase efficiency of solar modules and product quality and reliability
Growing demand for battery storage system solutions	Short to long term	Growth of our battery storage system solutions business		Continue to invest in R&D of battery storage system solutions
Growing demand for solar power plants	Short to long term	Growth of our project development business and O&M business		Capture market opportunities and expand solar project development pipeline
Growing demand for battery storage plants	Short to long term			Capture market opportunities and expand battery storage project development pipeline
Green financing to support the growth of our solar and battery storage development businesses	Short to long term	Enable the continued growth of our solar and battery storage project development businesses	In 2023, we received JPY 18.5 billion ($120 million) through the issuance of a green project bond that attracted a wealth of Japanese financial institution investors to open access to a wide group of both loan and bond investors. The funds will support Recurrent Energy to grow its solar and battery energy storage projects under development and asset management business. We received the Green Project Bond of the Year Award (link) from Environmental Finance, an online news and analysis services headquartered in London, for this green project bond. We anticipate continued support from international financial institutions to support our solar and battery energy storage development business as the demand for solar and battery energy storage continue to increase in the global push for decarbonization.	Maintain good relationships with financial institutions as we execute on and expand our project development pipelines

Case Study: Canadian Solar Infrastructure Fund

Canadian Solar owns approximately 15% of CSIF (link), Japan's largest publicly listed solar infrastructure fund (TSE: 9284). CSIF invests in renewable energy power generation facilities in Japan and embraces ESG (link) as a core tenet to enhance shareholder value. Canadian Solar's subsidiary, Canadian Solar Asset Management K.K. ("CSAM"), serves as the asset manager of CSIF and became **a signatory of the UN PRI (United Nations Principles for Responsible Investment)** in 2019. CSAM is committed to fulfilling its social responsibilities as an asset management company and integrates ESG factors into its investment and ownership decisions. CSAM was the first asset manager of a listed infrastructure fund on the Tokyo Stock Exchange to adopt this approach to sustainable investing.

The table below details green finance that has been secured by CSIF:

	Amount (JPY billion)	Type of Debt	Agency	Rating
2017.11.22	15.7	Green Loan	JCR	Green 1
2020.5.11	N/A	Green Finance Framework (Corporate)	JCR	Green 1
2021.1.26	3.8	Green Investment Bond	JCR	Green 1
2021.3.8	17.0	Green Loan Green Loan	JCR Shinsei	Green 1 Shinsei Green

CSIF's Corporate Green Finance Framework is based on ESG investment guidelines such as the Green Bond Principles (2018 Edition) published by the International Capital Markets Associations and the Green Bond Guidelines (2020 Edition) published by the Ministry of Environment in Japan. CSIF's Green Finance Framework, as well as its other bonds and loans, have received the **highest rating of Green 1** from the Japan Credit Rating Agency, Ltd. (JCR).

100 MW Yixing Power Plant, China

Social Responsibility

As a global leader in solar technology and renewable energy, our mission is to power the world with solar energy and create a better and cleaner Earth for future generations. We uphold the highest standards of ethical business conduct, responsible sourcing, and treat our employees with the dignity and fairness they deserve. We strive to make a meaningful, lasting impact both globally and within the communities where we operate. Placing a high value on diversity, equity, and inclusion, our corporate culture not only shapes our identity but also drives us to provide better products and services. Our culture and the collective efforts of our people form the foundation of our enduring success.

Mission

Lead the energy revolution and create a brighter future together

Vision

Power the world with solar energy and create a better and cleaner Earth for future generations

Core Values

Customer success, innovation, grit, excellence

Slogan

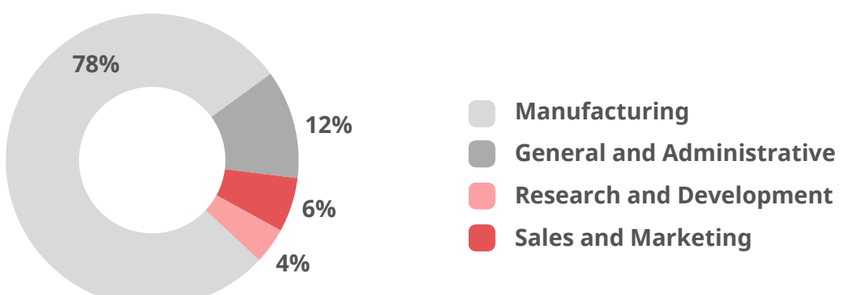
Make the difference!

In this Section

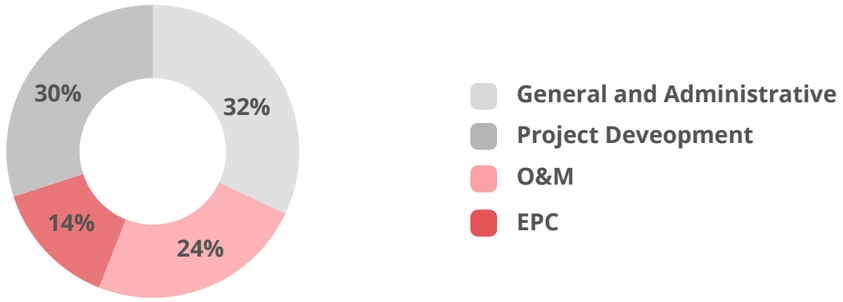
Working at Canadian Solar

As of December 31, 2023, Canadian Solar's global workforce consisted of 22,234 individuals, including 21,948 full-time and 286 part-time employees. Within our workforce, 21,375 were employed at CSI Solar and 859 at Recurrent Energy. We also worked with approximately 3,400 part-time contractors globally in 2023.

CSI Solar



Recurrent Energy



Diversity, Equity, and Inclusion (DE&I)

Diversity, Equity, and Inclusion (DE&I) are at the heart of Canadian Solar's strategy, serving as key drivers of a more competitive and effective business. DE&I not only enrich our talent pool but also provide diversified perspectives in our decision-making processes. Our commitment to DE&I is integral to our corporate culture, nurturing a workforce that drives creativity, innovation, and long-term success.

Canadian Solar is an **equal opportunity employer** (link). We have zero-tolerance against any form of discrimination based on race, ethnicity, gender, religion, political affiliations, sexual orientation, age, disability status, or any other characteristic. As part of our commitment to transparency and fairness, we complete and submit the **Equal Employment Opportunity** (EEO) form (link) for our operations in the U.S. This form provides a detailed demographic breakdown of our U.S. workforce by race and gender. Our latest EEO forms filed in 2023 indicated that 58% of our U.S.-based employees belong to ethnic minority groups.

Canadian Solar stands against any form of forced labor within our operations or supply chain. We are committed to treating all employees and individuals associated with our businesses with fairness, respect, and the utmost dignity. Our **Labor and Human Rights Policy** (link) stipulates these standards, specifying the rights to which all our employees are entitled.

Volunteers for the Pride Month Committee from Our North America Team

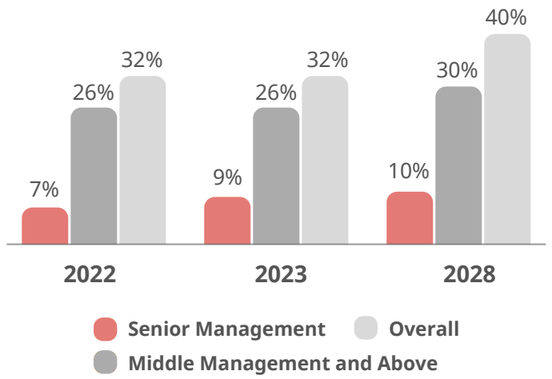
Promoting Diversity, Equity, and Inclusion in All Human Capital Management Areas

Promote Diversity during Hiring and Promotion Processes

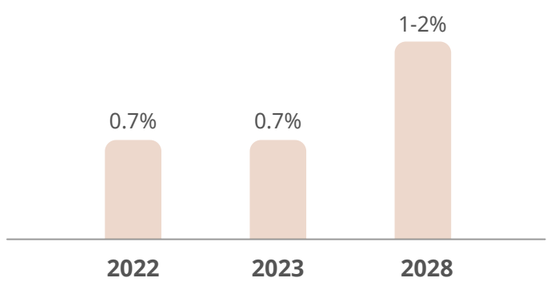
Canadian Solar hires, promotes, and rewards employees based on their qualifications, experience, potential for development, and merit-based performance. We also recognize the value of diversity and actively consider diversity factors in our operations. We believe a diverse workforce contributes to a broader range of perspectives, leading to more robust decision making and in turn driving a more competitive and effective business.

We aim to increase the proportion of our female employees and employees with disabilities. Within our global workforce, our goals are to raise female representation to 40% by 2028, up from 32% in 2023, and the proportion of employees with disabilities to 1-2% by 2028, up from 0.7% in 2023.

Female Employees by Job Class



Employees with Disabilities



Gender Equality

At Canadian Solar, we recognize the importance of gender equality as both a fundamental human rights issue and business imperative. We have made gender equality a top priority. We conduct annual gender pay analyses to make sure our female employees are paid equally and promote initiatives and workshops dedicated to female empowerment.

Gender Pay Analysis

Canadian Solar conducts gender pay analysis covering our entire global workforce, including employees at both CSI Solar and Recurrent Energy on an annual basis, aiming to identify and address any unjustified pay disparities between our female and male employees. The gender pay analysis not only ensures compliance with employment laws and prevents potential legal issues related to discrimination, but also promotes gender equality. Equitable compensation practices are essential to cultivating an inclusive work environment, which in turn enhances employee morale, retention, and trust in the company.

Our latest gender pay analysis covered 100% of full-time employees across Canadian Solar's businesses, totaling approximately 22,000 individuals as of the fourth quarter of 2023. The analysis revealed that women earned approximately **95%** of what men earned at Canadian Solar, which is within a 5% margin that is considered equitable.

Indicator	Definition	2023 Result
Gender pay ratio	Female-Male (total)	95%

The gender pay gap ratio was determined by calculating the ratio of female to male employees across positions occupied by both genders. This analysis did not take into account other job-related factors such as tenure and experience.

To advance gender pay equity, we will prioritize internal communication and target equal pay for each position level across our businesses. We plan to conduct annual gender pay audits, accompanied by the development of action plans to rectify any identified inequalities.

Meanwhile, we will actively support the advancement of women into higher-paying positions and leadership roles through mentorship programs, leadership training, and establishing diversity targets for upper management. Additionally, we will invest in education and professional development for women to ensure they have equal opportunities to upskill and advance in their careers.

International Women's Day Sharing Session

North America Team Celebrating International Women's Day

Celebrating International Women's Day is a cherished tradition across our international offices where we honor the essential contributions of our female colleagues and inspire further progress towards gender equality.

In 2023, our North America team at CSI Solar organized a sharing session for female employees representing diverse backgrounds and career stages. The session was designed to inspire our female colleagues in their pursuit of professional development. It offered a forum where they could celebrate their achievements, discuss challenges encountered in their careers, and gain inspiration for continued success.

Development Group WISE: Women in Solar Energy

In 2019, we launched Women in Solar Energy (WISE), a China-based association which aims to boost women's participation and career growth in solar industry. Comprised of female executives from multiple firms, WISE hosts regular events to explore solar trends, offering mentorship and resources to women in the industry.

Inclusion

Recurrent Energy Town Hall Meetings

To foster direct communication and enhance employee engagement, Recurrent Energy organizes two online town halls every quarter, tailored to accommodate global time zones. These events serve as a platform for employees to interact directly with senior management, offering a unique opportunity to address questions in real-time. For those who prefer not to speak in large groups, there is also an option to submit questions beforehand. The forum is designed to empower employees to ask senior management their questions, celebrate successes, share new initiatives, and stay informed about our strategic goals and annual targets. These meetings also nurture a sense of belonging among our employees, contributing to a more inclusive environment.

To evaluate the impact of our town halls and gather employee feedback on their preferences, we conducted a global engagement survey in the third quarter of 2023. The majority of the feedback received was integrated into subsequent town halls, with an emphasis on showcasing individual and team accomplishments across various regions to enhance recognition. We will continue to utilize this feedback loop to ensure the continued relevance and effective communication of information at a global level.

Employee Engagement Survey

Employee engagement is a collective indicator that assesses the emotional investment employees have in their work. It encompasses employees' sense of belonging and alignment with the organization's objectives, as well as their motivation and job satisfaction.

The Gallup 12 Employee Engagement survey, or Q12, is a respected metric utilized by over 3,900 companies worldwide. Comprised of 12 questions, the Q12 measures the emotional commitment employees have toward their organization. It was designed to provide insights into employees' sense of support, opportunities for development, and alignment with company objectives. For instance, the survey examines whether employees have the chance to leverage their strengths and receive recognition, among other aspects.

Modeled on the Q12, our employee engagement survey is scored out of five points, where higher scores indicate higher levels of engagement. Generally, companies with higher employee engagement have higher retention rates, increased production efficiency, enhanced customer satisfaction, and improved profit margins compared to companies with lower employee engagement. Our 2023 employee engagement survey showed that our average engagement score was 4.44. This represents a 0.04-point increase from 2022 and a more significant rise of 0.14 point from 2021.

Our 2023 survey revealed that our corporate culture, sense of belonging and performance are highly valued by our employees. However, the feedback also suggests areas for improvement, particularly concerning access to information and the communication channels for sharing it. We are using these results to develop targeted measures to improve our management processes and employee engagement.

LATAM Team at Intersolar South America 2023

Training on DE&I

Training plays an instrumental role in our ongoing pursuit of greater DE&I in the workplace.

At **Recurrent Energy**, we have introduced a variety of DE&I training programs to our employees, aiming to address biases and foster a culture of respect and inclusivity. Recognizing the detrimental impact of biases on underrepresented groups, we have integrated unconscious bias training into our Essential Skills for People Leaders program. All new managers are required to complete 8.5 hours of training to learn how to identify, address, and proactively mitigate biases in decision-making. Furthermore, we offer a broad spectrum of training content, ranging from short videos to on-demand courses, to bolster awareness of diversity and inclusion within the company. In 2023, 14% of our global workforce partook in some form of DE&I training. As we look forward, we will use this metric to benchmark our year-on-year progress on awareness and trainings to foster diversity and female empowerment.

At **CSI Solar**, we have partnered with Culture Wizard, an online platform designed to assist organizations in navigating and managing the complexities of cultural differences. The platform offers a range of interactive courses that are designed to deepen employees' understanding of cultural sensitivities. We have also integrated DE&I-centric training courses into our Learning Management System, accessible through LinkedIn Learning. These educational initiatives underscore our commitment to promoting diversity and ensure that our workforce is well-equipped to contribute to an inclusive workplace culture.

North America Team Celebrating Diwali 2023

Raising Awareness

Canadian Solar ESG Town Hall Meeting

At Canadian Solar, we organized our inaugural global ESG townhall meeting in October 2023, aiming to increase our employees' understanding of the evolving ESG landscape and align everyone at Canadian Solar with our company goals and targets. During the townhall, our Chief Sustainability Officer (CSO) and ESG working group introduced Canadian Solar's ESG strategy, including our goals and targets, provided an update on the progress made in achieving them, and outlined the support needed from our global teams. The event also featured a question-and-answer session. More than 800 employees participated, and we received a satisfaction rate of 4.5 out of 5 from the post-event satisfaction survey.

ESG Newsletter

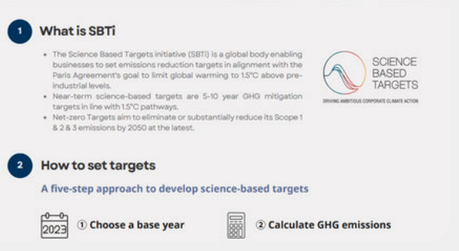
Since 2023, we have been publishing our ESG Newsletter on a quarterly basis to raise awareness about ESG and keep our employees informed of our latest progress towards achieving our sustainability goals. To date, the topics covered in the newsletters have included an introduction to our 2022 sustainability report, an overview of the SBTi, our progress towards meeting the Ten Principles of the UNGC, and our contributions to the UN SDGs.


Canadian Solar joined the United Nations Global Compact (UNGC) in 2023 and by joining UNGC, we are committed to adhering to UNGC's 10 principles on human rights, labor, environmental, and anti-corruption, and contributing to the achievements of the United Nations Sustainable Developments Goals (SDGs). In this newsletter, we will introduce what UN SDGs we have been contributing to and the UNGC Academy that provides free training courses helping us move further faster in implementing the 10 principles of the UNGC and the UN SDGs.

1 What are Sustainable Development Goals

The Sustainable Development Goals are the blueprint to achieve a better and more sustainable future for all. They address the global challenges we face, including those related to poverty, inequality, climate change, environmental degradation, peace and justice.

The 17 Goals are all interconnected, and in order to leave no one behind, it is important that we achieve them all by 2030. Go to UN website to learn more about the 17 UN SDGs and take action.


1 What is SBTi

- The Science Based Targets initiative (SBTi) is a global body enabling businesses to set emissions reduction targets in alignment with the Paris Agreement's goal to limit global warming to 1.5°C above pre-industrial levels.
- Near-term science-based targets are 5-10 year GHG mitigation targets in line with 1.5°C pathways.
- Net-zero Targets aim to eliminate or substantially reduce its Scope 1 & 2 & 3 emissions by 2050 at the latest.

SCIENCE BASED TARGETS

2 How to set targets

A five-step approach to develop science-based targets

① Choose a base year ② Calculate GHG emissions

Talent Strategy, Training, and Development

Our team members are our most valuable assets, central to our sustainable competitiveness and the attainment of our corporate goals and mission. Consequently, we periodically reassess our talent strategy and monitor progress to ensure alignment with our short-, medium-, and long-term objectives.

Talent Review and Succession Planning

We conduct regular talent review projects throughout the year to assess and recognize the talent skillsets vital to our business's long-term success. Each year, we align our organizational structure with strategic priorities and develop succession plans for key positions. Utilizing talent standards, we review our employees and implement tailored development strategies for our varying talents which may include promotions, salary adjustments, job rotation, assigning important tasks, and opportunities to serve as mentors or lecturers, or to participate in leadership development programs.

Talent Retention Strategy

We aim to reduce turnover, increase employees' satisfaction and engagement, and ultimately retain top talents. Our talent retention strategy includes offering competitive compensation and benefits, providing opportunities for career growth and development, creating a positive work environment, fostering strong relationships between employees and managers, and implementing policies that promote work-life balance.

Share Compensation Plan

We offer share-based incentive plans to employees. In 2006, Canadian Solar Inc. adopted a share incentive plan that grants restricted shares, options, and restricted share units to eligible employees, directors, and consultants. A majority-owned subsidiary of Canadian Solar Inc., CSI Solar Co., Ltd. also maintains an Employee Stock Ownership Plan (ESOP) available to eligible directors and employees. We consider share-based compensation, including performance-based share awards, to be crucial for attracting, retaining, and motivating key personnel. We intend to continue offering share-based compensation in the future. For further details on our share-based incentive plans, please refer to our annual report on **Form 20-F** (link).

Talent Training and Development Programs

Canadian Solar University

We are committed to ongoing investment in our leaders to ensure they receive the appropriate guidance and training needed to support and inspire their teams. We offer individual and group-based training opportunities for our leaders. In 2023, two global cohorts of new and first-time leaders graduated from Canadian Solar University's Essential Skills for People Leaders (ES4PL) program.

ES4PL is a comprehensive 34-week program designed to facilitate the transition of new leaders into proficient managers. By integrating asynchronous learning from Franklin Covey with group coaching, the ES4PL program ensures participants can immediately apply acquired knowledge.

In 2023, the Canadian Solar University celebrated the launch of its inaugural Guest Lecturer Series, which featured esteemed external speakers discussing topics of high interest and relevance. The series premiere, titled "Concepts, Frameworks, and Technologies Needed for the Wider Development of Photovoltaic Electricity," achieved a record attendance rate.

Munich Team Holding International Women's Day Event

Recurrent Energy Academy

In 2023, we established Recurrent Energy Academy, a subset of Canadian Solar University, created specifically to provide targeted and distinct development opportunities for our employees.

Recurrent Energy Academy's inaugural program, the Certified Trainer Program (CTP), was designed in 2023 for launch in the first quarter of 2024. This program marks the first instance of in-person training at Recurrent Energy, complementing the virtual courses offered through Canadian Solar University. Following a rigorous selection process, 13 trainers were selected from the regions where Recurrent Energy maintains a local office. Trainers receive continuous coaching to enable them to lead quarterly training sessions for their colleagues. The training programs are collaboratively developed by the training and development team and in-house experts, with a focus on enhancing efficiency in communication and other key soft skills.

In addition to our in-house programs, our ongoing partnership with Cornell University offers professional development opportunities to key talents throughout the organization. Employees have engaged in courses on the following topics:

- Becoming a Strategic Leader
- Developing Executive Presence for Women Leaders
- Giving and Receiving Feedback
- Power and Gender Dynamics
- Concise Communications

Acknowledging the importance of individual development, we implemented LinkedIn Learning across the company in 2023. This partnership grants our employees full access to an extensive suite of training and developmental courses. With a wide range of content available, employees can easily pinpoint resources specific to their developmental needs or to address objectives set during performance management reviews. To date, we have achieved a 74% activation rate, a figure that is well above the industry median for account activation rates. We take pride in this high level of engagement, as it demonstrates the depth to which professional development is integrated into the core of Recurrent Energy.

CSI Solar University

Established in 2022, CSI Solar University (CSIU) aims to enhance professional skills, inspire innovative thinking, and promote effective communication across our workforce. CSIU offers a variety of courses on topics such as strategic management, finance, industry trends, digitalization, and effective communication. These courses are delivered by third party experts, our senior management, and department heads. The courses have been met with enthusiasm, with more than 2,400 employees participating in 2023. Committed to the principle of continuous improvement, CSIU will continue to refine its educational programs and teaching methodologies to support employee development and career growth within our company.

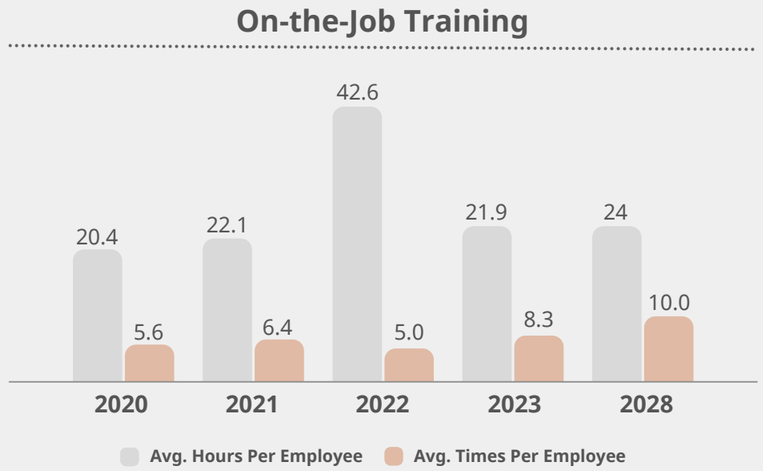
New Manager Development Program

Targeting newly promoted managers, the program is designed to facilitate their transition into new roles, enhance their management skills, and empower them to lead their teams effectively. The program features two-day workshops and a series of five online courses covering topics such as corporate culture, role adaptation, and management techniques. In 2023, a total of 90 managers at CSI Solar China teams participated in the program. Feedback received from managers indicates that they feel more confident in navigating practical management problems. A key result of the program is the continual compilation of case study collections exemplifying best management practices, which can be passed down to future managers.

On-the-Job Training

At **CSI Solar**, we facilitate regular on-the-job training sessions for all employees, covering areas such as Environmental Health and Safety (EHS), compliance, industry and market development, professional skills, and trade knowledge.

In 2023, employees at CSI Solar received an average of 22 training hours, equivalent to over eight training sessions. We organized nearly 2,800 training courses, totaling 407,935 hours, and involving 154,445 participants. These courses can be categorized into five groups listed below.



Category	Examples
Compulsory Courses	Annual Compliance Training, Quality Awareness, Information Security Awareness, Internal Control Concepts and Audit Communication
General Courses	Efficient Office Skills, Project Management Skills, Legal Knowledge Training
Professional Courses	GHG Emission Standards, Introduction to the Photovoltaic Industry, Basic Knowledge of Six Sigma, Knowledge of Shipping Market
Special Skill Courses and Projects	Cross-Cultural Management Talent Development Program, Empowerment Program for Frontline Team Leaders, Government Skills Subsidy Program
Leadership Courses	Leadership for Middle and Senior Managers, Women in Leadership

Employee Performance Appraisal

We changed the frequency of our employee performance appraisal from an annual basis to a quarterly basis. As part of the appraisal process, employees set their quarterly targets and discuss them with their supervisors for alignment with our corporate goals. The performance appraisal is conducted on an online system that tracks employees' contributions.

Supervisors conduct a preliminary assessment of each employee's performance based on their actual performance. After receiving the preliminary results, employees are provided the opportunity to review and provide feedback before the final rating is confirmed. This approach ensures transparency and fosters collaboration in performance management.

Work-Life Balance

We firmly believe that maintaining a healthy and balanced workforce is vital to the success of our mission. Our goal is to accommodate the diverse range of lifestyles our employees lead and allow them to effectively balance their professional and personal responsibilities.

In 2023, we upheld our commitment to a Hybrid Work Policy, allowing employees to work remotely for a portion of their workweek based on their needs and local regulations. This flexibility is designed to boost satisfaction and productivity.

Moreover, we offer generous personal leave to our employees beyond our legal requirements in most locations. For example, we provide 158 days of maternity leave in China, 15 days of paternity leave, and 10 days of annual parental leave for three years; in the U.S., we comply with the Family and Medical Leave Act (FMLA), offering eligible employees 12 weeks of unpaid leave for family care, reinforcing our commitment to work-life balance. We are particularly proud of Recurrent Energy's efforts to normalize maternity leave across geographies, providing an updated maternity leave policy that is best in class.

Freedom of Association and Collective Bargaining

Canadian Solar strictly adheres to local employment laws and regulations, respecting the rights of our employees to form or become members of labor unions or other similar organizations of their choosing, as well as their right to collective bargaining. Our **Labor and Human Rights Policy** (link) explicitly outlines our commitment to uphold the rights of our employees to freedom of association and collective bargaining.

We are committed to upholding the principles of fairness, respect, and dignity in the treatment of our employees and all individuals connected to our company. These principles are enshrined in our Labor and Human Rights Policy and are considered non-negotiable, serving as the foundation for the rights and entitlements of everyone we engage with. We are resolute in our stance against any form of forced labor across our operations and supply chain.

Grievance Procedure and Zero Tolerance for Retaliation

In line with our goal to create a supportive and equitable workplace, we have developed a suite of internal measures to protect our workforce against discrimination and other forms of misconduct. Our established complaint procedure details the steps employees should take to report issues, the subsequent investigative phases, and our unwavering commitment to preventing any form of retaliation. We conduct ongoing awareness campaigns to familiarize our stakeholders with these support frameworks, encouraging them to report any incidents of non-compliance, aggression, bias, harassment, or other concerns without fear. By doing so, we are well-prepared to address grievances in an efficient manner that minimizes risks, controls the repercussions of any violations, and upholds a positive professional atmosphere.

Munich Team Holding International Women's Day Event

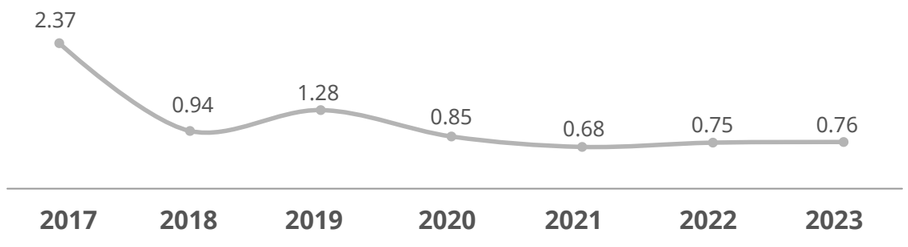
Occupational Health and Safety

Employee safety is our top priority at **CSI Solar**, Canadian Solar's solar and battery energy storage products manufacturing subsidiary. Our operations have been certified under the ISO45001 occupational health and safety management system to ensure a healthy and safe workplace.

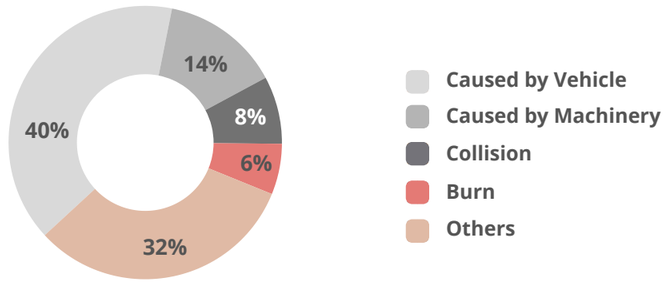
Our safety policies mandate the establishment of a safety committee and a specialized safety operations management team prior to the commencement of operations at any factory. The safety committee convenes regularly to review, discuss, and make decisions on safety-related measures. Before commencing operations, all employees must undergo environment, health, and safety (EHS) training and pass the relevant tests. We also ensure our employees are well-equipped with the appropriate personal protective equipment (PPE). We rigorously document and address safety incidents, including "near misses," in accordance with our safety protocols. Any incidents resulting in lost work time must be reported within 24 hours of occurrence. We conduct internal investigations for all such incidents and implement comprehensive corrective and preventative measures to prevent future accidents.

Our safety policies and procedures have helped us maintain a low rate of safety-related incidents. In 2023, our **total recordable injury rate (TRIR)**, encompassing all injuries that required medical treatment, was **0.76 case per million working hours.** As part of our ongoing commitment to further reduce operational risks and safeguard our employees from potential injuries, we are implementing new programs related to management of change, lockout-tagout (LOTO), and machinery safety procedures.

Recordable Injury Rate *(per million working hours)*



Types of Injuries *(%)*



At **Recurrent Energy**, our commitment to safety and well-being is a fundamental part of our company culture. This commitment is a shared responsibility that extends from the boardroom to the field and is embraced at all organizational levels. We operate under the principle of zero compromise to ensure the welfare of our employees, contractors, and visitors.

We strictly adhere to all relevant occupational safety laws and regulations where we operate.

Our proactive health and safety program is designed not only to meet but to exceed industry standards, with a strong emphasis on prevention and continuous improvement.

We have made significant strides toward achieving compliance with ISO9001 (quality management system) and ISO45001 (occupational health and safety management system). We anticipate achieving full certification by the end of 2025.

Incident Data (2023)	Recurrent Energy		
	Overall	EPC	O&M
Fatalities	0	0	0
Lost Time Injury Rate (LTIR)	0	0	0
Total Recordable Injury Rate (TRIR)	1.481	0.36	1.52

Hazardous Materials and Environmental Management

At CSI Solar, we prioritize safety and environmental responsibility. Our manufacturing operations are certified under ISO14001 Environmental Management System and ISO45001 Occupational Health and Safety Management System, focusing on managing the safety of chemicals and operational equipment. This combined strategy ensures that all workplace hazards are systematically identified, assessed, and controlled across our manufacturing divisions.

Before incorporating any hazardous materials or risky chemicals into our sites, we enforce a formal approval protocol. This includes a detailed review of the Safety Data Sheet (SDS) for each chemical and an evaluation of the potential risks and hazards. Our products are classified as "articles" under the REACH regulation, indicating that they do not release hazardous substances under normal or foreseeable conditions of use.

We offer comprehensive training programs for all our staff, including mandatory environmental, health, and safety (EHS) training for new joiners, as well as routine EHS refresher courses. Employees who handle hazardous chemicals receive additional targeted training to understand the specific risks and safety measures required. To promote awareness, we display warning signs in key areas to provide easy access to relevant safety information. We also provide health check-ups for staff working in environments where exposure to occupational hazards may occur.

Our safety protocols across all factories involve hazard identification and risk assessment, change management, contractor safety, emergency response planning, and confined space procedures. During the construction of new facilities, we perform equipment safety checks to ensure that all equipment is safe. Creating a secure workplace for our employees is imperative for us.

To maintain strict control over hazardous materials entering our premises, we require key suppliers and contractors to sign an EHS agreement before delivering goods or services.

Connecting Employees with Our Mission

Sustainability lies at the heart of Canadian Solar's mission. We encourage our employees to engage with and embrace this vision. To achieve this, we have adopted the following approaches to embed our company's values and culture into our employees' work.

Advocacy

Earth Day Highlights

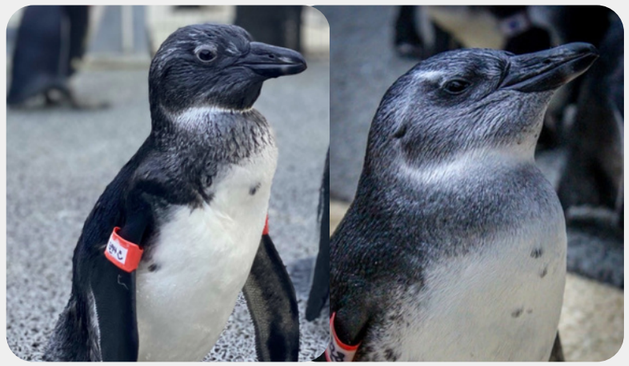
Our annual Earth Day celebrations highlight the significance of sustainability to our employees. We use these occasions to organize educational workshops and team-building activities aimed at cultivating a culture of sustainability and equipping our staff with the knowledge to lead more eco-friendly lives.

On Earth Day 2023, Recurrent Energy's EMEA team initiated a sustainable hive adoption event. We successfully adopted 190 beehives in Calascibetta, Sicily, Italy, reinforcing our ongoing efforts to advocate for biodiversity. Meanwhile, Recurrent Energy's colleagues in Austin, U.S., engaged in a Lady Bird Lake clean-up event in support of the Trail Conservancy. Our cleanup efforts resulted in the collection of 8,000 pounds of waste. We are proud to support the maintenance of Austin's beloved Butler Hike-and-Bike Trail.

Low Carbon Office Week

We launched a Low Carbon Office Week at our offices in China in 2023 to promote our 5R waste reduction strategy of "reduce, refuse, reuse, repair and recycle". Through the campaign, we effectively engaged our staff in environmentally conscious behaviors, highlighting our company-wide commitment to energy efficiency. A notable achievement was the transition of our cafeteria's practices from disposable to reusable and sanitary takeout boxes and utensils. This change led to a significant reduction in single-use items, equivalent to reducing carbon emissions by approximately 466.928 kg per month.

Penguin Adoptions



In 2023, our CSI Solar team in the EMEA region partnered with the South African National Parks and Wildlife College (SANParks) rehabilitation center in Cape Town and adopted five African Penguins, a highly endangered species, which were admitted to the rehabilitation center due to issues such as nest flooding and emaciation. By adopting these penguins, we are contributing to their rehabilitation and veterinary treatment, with the goal of releasing them back into the wild after recovery.

Volunteering

Tree Planting and B2Run in Munich

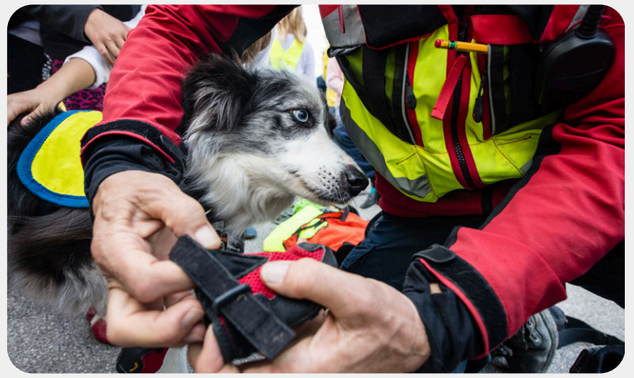
In 2023, CSI Solar's EMEA team launched the B2Run in Munich event. This initiative offered a creative approach to promoting employee health and wellbeing, while simultaneously encouraging participation in our environmental efforts. By logging kilometers through outdoor activities such as jogging and cycling, our employees contributed to a larger cause: for each kilometer recorded, Canadian Solar planted a tree, thereby enriching our environmental contributions.

By December 2023, the efforts of our employees resulted in the planting of 3,258 trees across the EMEA region, which is equivalent to reducing 1,303 tons of CO_2 per year. We also personalized this effort by celebrating our employees' milestones; those marking their 5th or 10th work anniversaries had trees planted in their honor. These trees, along with others planted through our employees' logged kilometers, were all donated through GROW MY TREE (link).

Partners Program

Building on our commitment to social responsibility, our LATAM team launched a partners volunteering program in May 2023. This program empowers our employees to dedicate up to 16 hours of their work time to volunteer at NGOs that are partnered with us. The program is a testament to our belief in the value of community service and the importance of integrating these values into our corporate culture.

Rescuing Abandoned Animals



In April 2023, CSI Solar's LATAM team expanded our community outreach by collaborating with Pegadas do Bem, an NGO in Brazil dedicated to rescuing abandoned animals from the streets. By covering essential costs such as food and medication, our support directly benefited the welfare of these animals.

e-STORAGE Charity

In late 2023, our e-STORAGE team established a steering committee to enhance our charitable efforts, leading to the launch of the e-STORAGE Charity. The committee focuses on identifying initiatives that align with our values for support, promoting a corporate culture of giving and community engagement.

This year, the committee has set the Charity's inaugural mandate: to "help and touch the lives of children in need." In pursuit of this, they have selected two charities to support in 2024, one local to our headquarter office in Canada and the other in the U.K. where many of our committee members are located. The first is Nutrition for Learning (link), an organization dedicated to ensuring universal food access at schools and promoting well-being, healthy relationships, and food literacy. This program has become especially relied upon post-COVID, as food inflation rates in Canada have reached 10.6% in 2023. The second charity is Rainbow Trust (link), which aims to give life-changing support to children battling a life-threatening terminal illness and their families.

By prioritizing the needs of children, e-STORAGE not only confronts the pressing social challenges faced by this highly vulnerable group but also contributes to the future of our community. We hope to make a tangible and positive impact on the well-being of these children.

Each contribution is essential, and we invite our stakeholders to become involved through volunteering, donations, or advocacy. The Charity's initiatives and engagement opportunities can be found on e-STORAGE's website (link).

Charitable Initiatives

We are committed to uplifting underserved communities through donations that target educational and economic disparities.

In January 2023, Canadian Solar donated 65,975 KWp solar modules and two inverters to the Centro Educacional Assistencial Profissionalizante (CEAP), an NGO in São Paulo's Pedreiras neighborhood focused on youth development. We also covered the installation costs, helping the CEAP save about 50% on electricity costs. Our support provided significant financial relief to the NGO, allowing them to redirect more resources towards their youth programs.

In the same month, our EMEA team partnered with the HOPE Foundation, an NGO in South Africa, to provide essential items such as shoes and school uniforms to orphanages, reinforcing our commitment to positively impact the lives of children in need.

Committed to realizing inclusive and quality education for children, our Chinese team made substantial contributions in 2023 by participating in two key events. In November, we actively engaged in a donation event organized by the Suzhou Aixindaren Charity Foundation, aimed at supporting underprivileged families. Our team successfully raised RMB 50,000 within the company, which was then used to purchase school bags for over 200 students across three schools in Guizhou Province, China.

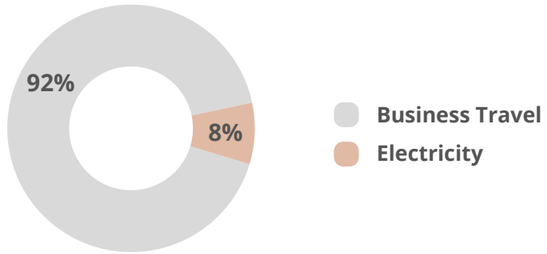
This was followed by a book sharing activity in collaboration with the Stars Youth Development Center – an NGO focused on promoting reading among children. Our employees donated 848 books to Tangwei Elementary School in Yangjiang City, Guangdong Province, China benefiting more than 1,800 students aged six to twelve. Through this book donation, we hope to expand children's access to knowledge, promote literacy, and inspire a sense of community and motivation among students.

Greenhouse Gas Emissions at Our Global Sales Offices

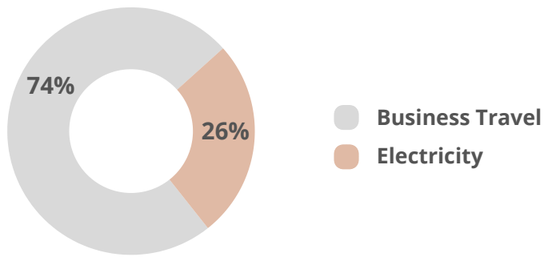
The main sources of carbon emissions for our global sales offices were electricity consumption (scope 2) and business travel (scope 3, category 6). Our calculation of office GHG emissions was based on actual electricity consumption and documented employee travel expenses. The emission factors for electricity were obtained from Climatiq (link), and those for business travel were sourced from the EXIOBASE database v3.3.

Total office GHG emissions rose to 1,926 tons of CO_2 equivalent in 2023, up from 940 tons in 2022. Our per capital emissions also saw an increase, rising to 3.66 tCO_2 in 2023 from 2.31 tCO_2 in 2022. The increases were primarily due to the opening of new offices for our battery energy storage and inverter products, and well as an increase in our product shipments.

Sales Offices Carbon Emission Composition in 2023 *(%)*



Sales Offices Carbon Emission Composition in 2022 *(%)*



We consistently strive to reduce and offset the carbon emissions originating from our offices by prioritizing energy efficiency. Compared to 2022, GHG emissions from electricity consumption decreased in 2023 thanks to our implementation of energy conservation measures.

Making a Difference through Community Commitment

At Recurrent Energy, we collaborate closely with stakeholders in the communities where we develop our projects. From local grid experts to first responders, we partner with local entities to seamlessly integrate solar and battery energy storage projects into the existing energy infrastructures and surrounding communities.

Japan

The Japanese government has announced an ambitious goal of achieving carbon neutrality by 2050, driving the need for more sustainable solutions for the country's power grid. We anticipate regulatory changes aimed at accelerating the installation of renewable energy to meet this target. Wind and solar power are variable resources with intermittent output; thus, transmission system operators must skillfully balance the demand and supply of power within their grid systems to ensure resilience. Our solar solutions, paired with battery energy storage, are well-positioned to address this market opportunity.

To tackle and mitigate potential regulatory and permitting challenges, we prioritize regular consultations at the project level with local communities and government officials throughout all project phases. Our project development adheres to strict design protocols, which include implementing comprehensive drainage systems and stormwater management measures to protect water in and near the project site from contamination. Despite the unique challenges posed by Japan’s mountainous terrain, we have successfully navigated these complexities for over a decade.

Italy

In Italy, Recurrent Energy is executing a strategic, multi-tiered public affairs and advocacy campaign to elevate the company's profile within key decision-making and communication forums. We engage with governmental and local bodies to improve the efficiency of permitting processes for utility-scale plants and contribute to Italy's decarbonization efforts.

The recent decree regulating auctions for new Renewable Energy Sources (RES), including storage, agrivoltaics, and the selection of suitable areas for renewable plant installations, highlights the importance of building partnerships. These partnerships are essential to foster grassroots "Yes In My Backyard" (YIMBY) movements and counteract any "Not In My Backyard" (NIMBY) sentiments.

To achieve this, we deliver lectures at prestigious universities, actively engage in sector seminars and events, and pursue meaningful collaborations to support training, sports, and infrastructure initiatives. We prioritize environmental conservation and the safeguarding of artistic and cultural heritage.

As part of our local engagement strategy, we design projects to align with the unique characteristics of each region where our plants are located. Our goal is to deliver benefits across the environmental, economic, and social dimensions. An example of this approach is our recently inaugurated Anguillara plant in Marsala, Sicily.

South Korea

In South Korea, we have faced challenges related to grid interconnection, stemming from system saturation and a centralized power generation model struggling to meet the growing demand for sustainable energy. These challenges are exacerbated by civil complaints and limitations in South Korea Electric Power Corporation’s (KEPCO's) capacity. To address these issues, the government is restructuring the system to eliminate non-viable projects. This requires us to carefully monitor interconnection capacity to secure our grid connections.

Moreover, transitioning to a distributed power system strategy has proven beneficial. By emphasizing local power generation, we can attract power-consuming industries to our project areas, thereby decentralizing energy distribution and enhancing grid resilience.

Community engagement has been instrumental in the success of our projects. Informational sessions clarify the benefits of our projects, dispel misconceptions about solar energy, and bolster community approval. Offering ongoing in-kind contributions and funding local events throughout the project phases also fosters a positive community perception of our projects. These strategies not only strengthen community relations but also consolidate our reputation as a reliable energy partner.

U.S.

In 2023, the U.S. energy market witnessed a substantial shift towards integrating advanced grid technologies and battery energy storage solutions, which significantly improved the scalability and efficiency of renewable energy systems. Despite these technological advances, the development of successful projects still faces numerous challenges. Effective stakeholder engagement is a critical factor in this evolving landscape. We engage with local, state, and federal agencies early in the development process to identify and mitigate potential risks. By valuing community input and ecological considerations, we work collaboratively with communities to develop pathways that minimize environmental and regulatory hurdles, thereby facilitating smoother project execution.

Colombia

Before proceeding with the Caracolí I solar PV generation project, Recurrent Energy engaged in consultations with the Mokaná indigenous community of Malambo, who reside on the prospective project site. These discussions led to agreements on vital matters such as labor hiring, acquisition of goods and services, and equipment mobilization and transportation. Recurrent Energy assessed potential positive and negative impacts on the community and developed strategies to mitigate any adverse effects. This consultation process emphasized the importance of community engagement, cultural respect, and support for education, and local development. Signed by all parties, the meeting minutes signify the community's voluntary participation in the consultation and the importance of intercultural dialogue in our collaborative efforts.

A Mokaná leader has deemed the recent process as critical for upholding the fundamental rights of indigenous communities. Despite the obstacles posed by the COVID-19 pandemic, our stakeholders and indigenous partners have successfully executed Latin America's first virtual prior consent procedure. The Mokaná people have underscored the project's economic advantages, notably the employment of nearly 100% local workers from their territory. The project is an excellent example of indigenous communities betting on clean energy for their economic and social livelihoods.

289MW Qinghai Power Plant, China

Non-Governmental Organizations and Memberships

Country	Organizations
Australia	Australia Clean Energy Council Modern Slavery Working Group
	Clean Energy Investor Group
	Smart Energy Council
Belgium	Solar Power Europe
Brazil	Brazilian Solar Photovoltaic Energy Association (ABSOLAR)
	Brazilian Association of Distributed Generation
Canada	Canadian Renewable Energy Association
Chile	The Canadian Chamber of Commerce in Chile
	The Chilean Association of Renewable Energies and Storage
China	China Chamber of Commerce for Import and Export of Machinery and Electronic Products (CCCME)
	China Photovoltaic Industry Association (CPIA)
	SEMI Standards
	Jiangsu Photovoltaic Industry Association (JSPV)
	Jiangsu Energy Storage Association (JSESA)
	East Energy Storage Association (EESA)
	Society of Entrepreneurs & Ecology (SEE)
	Women in Solar Energy (WISE)
Colombia	The Association of Renewable Energies Colombia (SER Colombia)
Costa Rica	The Costa Rican Solar Energy Association
France	ENERPLAN
	SER - Syndicat des Énergies Renouvelable
	France Agrivoltaisme
	Elettricita Futura
Italy	Future Electricity
	The Association of the Italian Solar PV Community
Germany	Bundesverband Solarwirtschaft (BSW)
	Bundesverband Energiespeicher Systeme (BES)
Greece	Hellenic Association of Photovoltaic Companies
Ireland	Irish Solar Energy Association (ISEA)
	Energy Storage Ireland
Japan	Asia Pacific Real Assets Association Limited (APREA)
	Japan Climate Initiative (JCI)
	Japan Climate Leaders' Partnership (JCLP)
	Japan Electrical Manufacturers' Association (JEMA)
	Japan Photovoltaic Energy Association (JPEA)
	Principles for Responsible Investment (PRI) Signatory
	Renewable Energy Association for Sustainable Power Supply (REASP)
	Investment Trusts Association, Japan (JITA)
Mexico	The Mexican Solar Energy Association
	The Canadian Chamber of Commerce in Mexico
Netherlands	Holland Solar
	Energy Storage NL
Peru	Peruvian Association of Renewable Energies (SPR)
Portugal	The Portuguese Renewable Energy Association
Puerto Rico	Solar and Energy Storage Association (SESA)
Romania	Romanian Photovoltaic Industry Association (RPIA)
South Africa	South African Photovoltaic Industry Association (SAPVIA)
Spain	Spanish Photovoltaic Union (UNEF)
	Association of Renewable Energy (PPA)
	Association of Storage (AEPIBAL)
	Asociación Española del Hidrógeno (AeH2)
Sweden	Svensk Solenergi
U.K.	Solar Energy UK
USA	Kentucky Solar Industries Association (KYSEIA)
	Mid-Atlantic Renewable Energy Coalition (MAREC)
	Solar Energy Industries Association (SEIA)
	Southern Renewable Energy Association (SREA)
	Texas Solar Power Association

Responsible Supply Chain

Canadian Solar is committed to the responsible procurement of materials in all parts of our business, from manufacturing to project development.

CSI Solar, Canadian Solar's majority-owned subsidiary, is responsible for manufacturing solar modules and battery energy storage products. CSI Solar collaborates with third-party suppliers to ensure a responsible, reliable, and sustainable supply of all raw materials and components. These include solar silicon, ingots, wafers, cells, PV glass, aluminum, silver metallization paste, back sheets, and ethylene vinyl acetate encapsulants (EVA) for solar modules, as well as lithium iron phosphate battery cells for our battery energy storage products. We plan to expand CSI Solar's in-house manufacturing capabilities for ingots, wafers, cells, modules, and battery energy storage products to increase our control over our supply chain and costs. This initiative will further enhance product quality and reinforce our industry-leading position in the solar and battery energy storage sectors.

Recurrent Energy, a subsidiary of Canadian Solar, is a global developer and owner of solar and energy storage assets. Capitalizing on our scale of operations, Recurrent Energy employs centralized procurement strategies to secure a stable, adequate, and cost-effective supply of essential equipment for the project development business. The equipment includes solar modules, inverters, trackers, mounting hardware, grid interconnection and power stability equipment. These procurement strategies support a robust supply chain, optimize project performance, and enhance our market competitiveness.

In this Section 59

ESG Integration in Supply Chain Management

Our procurement management strategy utilizes a centralized approach, overseen at the group level and executed through individual divisions. Canadian Solar actively incorporates ESG considerations into our supply chain management. To ensure adherence to our high quality, cost, and ESG standards, we implement comprehensive supply chain-related policies and conduct rigorous supplier screenings. In addition, our supplier auditing program further aims to cultivate a sustainable, efficient, and robust supply chain that aligns with our company's development requirements and addresses the interests of our stakeholders.

Anti-Modern Slavery Initiatives

Canadian Solar does not tolerate forced labor or any form of modern slavery. We are committed to ensuring that modern slavery does not take place anywhere in our business, including our supply chain. To achieve this, we have implemented robust anti-forced labor measures, including policy development, training, enforcement, and compliance, to prevent modern slavery in our operations and supply chain.

Policy Development, Communication, Training, and Compliance

Canadian Solar has formed dedicated teams to develop and enforce anti-modern slavery policies and processes.

At the Company level:

- Internal Audit, led by the Global Director of Internal Audit
- Global Compliance, led by the Chief Compliance Officer
- Legal Department, led by Lead General Counsel
- Human Resources, led by the Group Head of HR
- Group Procurement, led by Vice President, Strategic Procurement

- Anti-Modern Slavery Policy (link)
- Labor and Human Rights Policy (link)
- Supplier Code of Conduct (link)
- Code of Business Conduct and Ethics (link)
- Environmental, Health and Safety Policy (link)
- Conflict Minerals Policy (link)

Anti-Modern Slavery Task Force:

In October 2021, Canadian Solar established the Anti-Modern Slavery Task Force to fortify our group-wide initiatives against modern slavery, including forced labor. This task force is responsible for formulating and disseminating anti-modern slavery policies and procedures. It also oversees the implementation of training programs and conducts thorough due diligence to ensure the efficacy of our anti-slavery initiatives. The task force includes management personnel from several key areas: compliance, HR, legal, procurement, customer service, and safety, quality, and environment.

Anti-modern slavery efforts in our own operations:

All our global manufacturing entities are required to sign "Statement of Anti-Modern Slavery Risk Management" on an annual basis. As part of this process, our HR directors or managers are required to confirm that their respective manufacturing entities comply with all applicable laws, regulations, and company policies regarding forced labor. They must explicitly affirm that their respective factories are not involved in any activities associated with forced labor. The statement has been developed based on the key internationally recognized principles and guidance, including the Ten Principles of the UN Global Compact (UNGC) (link) and the International Labor Office Indicators of Forced Labor from which UNGC Principles are partially derived.

Furthermore, we administer mandatory training on anti-modern slavery, both as part of our employee onboarding process and through annual training sessions. These programs aim to heighten our employees' awareness of anti-modern slavery initiatives, with a particular focus on combating forced labor.

Many third party ESG audits have been conducted at Canadian Solar's manufacturing sites. In addition to the self-initiated RBA VAP audit conducted at our Thailand module factory in 2023 as discussed earlier, many of our factories have successfully completed and passed external third party ESG audits requested by our customers. These audits involved a detailed review of our labor practice and employee working conditions and were conducted by leading international audit firms such as Achilles, STS and Kiwa. Additionally, we have also worked with our customers and their external advisors in developing and delivering human rights training to the relevant Canadian Solar business areas.

Modern slavery risk assessment and contractual assurance from suppliers:

We extend our anti-modern slavery initiatives to encompass our supply chain. Prior to engaging with new manufacturing suppliers, our central procurement division conducts a modern slavery risk assessment. We also require our suppliers to provide contractual assurances, verifying that they are not involved in any form of modern slavery, which requires them to investigate their supply chain to ensure their suppliers do not engage in modern slavery.

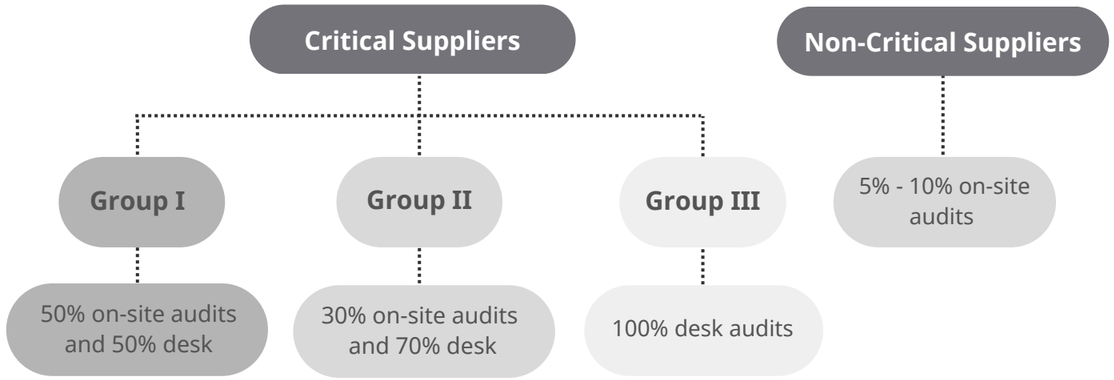
Supplier Code of Conduct

We require all of our suppliers to adhere to Canadian Solar's **Supplier Code of Conduct** (link, the "Code") to maintain a responsible supply chain. This Code transcends the basic requirement of prohibiting modern slavery, extending to broader issues in human rights, environmental protection, health, safety, and business ethics. Compliance with our Code, primarily derived from the Responsible Business Alliance (RBA) Code of Conduct (link), serves as an integral part of our due diligence process for assessing new suppliers. Furthermore, we require our suppliers to ensure that their own suppliers operate in compliance with the Code. This ensures that not only our direct suppliers but also our indirect suppliers – that is, our suppliers' suppliers – uphold the obligations set forth in the Code.

Supplier ESG Audits

We have implemented a rigorous ESG auditing program to ensure that our suppliers comply with our ESG standards and to effectively manage ESG risks across our supply chain. This program covers areas such as quality, human rights, environmental impact, health and safety, and business ethics, aligning with our Code. It involves both on-site and desk-based audits. Non-compliant suppliers risk severing their business relationship with our company, particularly if they fail to adequately address our warnings. To support our suppliers, we provide compliance training on the Code and consultations to enhance their practices in line with our ESG priorities.

Each year, we conduct a thorough mapping of supplier base to identify our critical suppliers, considering our purchase expenditures and the potential ESG risks associated with their industry, size, and operations. These critical suppliers are further categorized into different groups based on their risk level and are subject to onsite or desk audits. Additionally, our supplier auditing program extends to a subset of our non-critical suppliers, ensuring a comprehensive approach to managing ESG risks across our supply chain.



Our auditing program requires suppliers to respond to our questionnaires and provide supporting documentation. Responses are assessed using a system of "veto" and "scored" criteria. Any negative response in the veto criteria, such as the potential presence of forced or child labor, results in the immediate disqualification of the supplier.

Suppliers must attain a minimum score of 60 to pass our audits. Those who fall short of this requirement receive warnings and are offered consultation to help address the identified issues. Continued failure to meet our required standards within a specified period of 1 to 6 months post-consultation leads to disqualification.

In 2023, we completed 129 supplier ESG audits, including 29 on-site audits, compared to 122 total audits and 17 on-site audits in 2022. The major findings in 2023 audits were mostly pertained to environmental issues, with no instances of forced or child labor detected. After consultation and implementing corrective action plans, all our suppliers passed our ESG audits. In addition to our own supplier audits, we plan to do third party RBA VAP audit at one or two of our polysilicon suppliers in 2024.

Conflict Minerals

Conflict minerals refer to certain mineral resources that are produced in the Democratic Republic of the Congo (DRC) and its neighboring countries. According to the U.S. Department of State, serious human rights abuses have been inflicted by local armed forces that mine and trade these minerals to finance their armed conflicts. To address this problem, the U.S. Securities and Exchange Commission (SEC) adopted a mandate by the Dodd-Frank Wall Street Reform and Consumer Protection Act (Section 1502), requiring companies listed on U.S. stock markets to disclose information about the usage of columbite-tantalite (coltan), cassiterite, gold, wolframite, and their derivatives, which are limited to tantalum, tin, and tungsten.

We are committed to keeping our supply chain free of these conflict minerals, as outlined in our **Conflict Minerals Policy** (link).This is one of our key criteria for selecting new suppliers. All our suppliers must sign a Declaration of Conflict-Free Minerals before contracting with us, especially suppliers of tin-containing products. After reviewing the materials used during the production of our products, we determined that tin was the only conflict mineral necessary for the functionality or production of the products that we manufacture or contract to manufacture between January 1, 2023, and December 31, 2023. We require our suppliers to describe the source of the tin used in their products and provide a confirmation statement to ensure that the tin used is not sourced from the DRC or an adjoining country. We do not purchase raw ore or unrefined conflict minerals, and we make no purchases in the DRC or its adjoining countries.

Having taken the above measures, we have no reason to believe that the tin we use may have originated in the DRC or any adjoining country and we are confident that our production is free of conflict minerals. We file a Specialized Disclosure Report, or Form SD, with the U.S. SEC annually regarding conflict minerals. A copy of our filed Form SD can be accessed on SEC or our website (link).

Governance

The board of directors ("Board") at Canadian Solar is responsible for overseeing the management of the company's businesses and affairs. Our board of directors brings a broad spectrum of skills and extensive industry knowledge to our company. Together, their diverse expertise is crucial for supervising management performance, ensuring company success, and creating long-term value for our stakeholders.

Each director is required to stand for election at Canadian Solar's Annual General Meeting (AGM). Our **Corporate Governance Guidelines** (link), serve as the guiding framework for the Board to exercise its responsibilities in the best interests of both the Company and our shareholders.

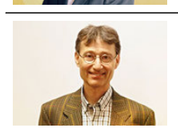
In this Section 63

Board Committees

To effectively fulfill its responsibilities, our Board has established five specialized committees. These include, the Audit Committee, Compensation Committee, and Nominating and Corporate Governance Committee, all chaired and comprised solely of independent board members. These committees convene regularly with our senior management team and external auditor to conduct a comprehensive evaluation of the company's business performance and risk management practices.

Committee Name	Responsibilities
Sustainability Committee	The committee's responsibilities encompass overseeing the Company's ESG strategy, targets and key performance indicators; reviewing, evaluating, and advising the Board and Management regarding 1) the quality, scope, direction and effectiveness of the Company's ESG policies, 2) the Company's progress in achieving its ESG goals, including compliance with applicable laws and regulations, industry standards and best practices, 3) emerging ESG issues and risks, and reviewing and approving all material disclosure regarding ESG issues, including the Company's annual ESG Report.
Audit Committee	The committee supervises the Company's accounting and financial reporting procedures, as well as the auditing of the Company's financial statements.
Compensation Committee	The committee conducts reviews and evaluations of the Company's compensation plans, policies, and programs, and makes revisions, as necessary.
Nominating and Corporate Governance Committee	The committee identifies suitable candidates for the Board, selects nominees for director elections at the subsequent Annual Meeting of Shareholders, and identifies candidates to fill any Board vacancies. Additionally, it develops and proposes a set of corporate governance guidelines and principles for the Board's consideration, which are applicable to the Company. The committee oversees the evaluation of both the Board and Company management, while also monitoring compliance with the Company's Code of Business Conduct and Ethics.
Technology Committee	The committee reviews, provides guidance, and offers recommendations to both the Company's management and the Board on matters pertaining to the Company's technology strategy, initiatives, and investments, all in support of the Company's overarching strategy and performance.

Summary of Board Members and Duties

		Age	Board Tenure	Audit Committee	Compensation Committee	Nominating & Governance Committee	Technology Committee	Sustainability Committee	Independent/Non-Independent
	**Dr. Shawn (Xiaohua) Qu**	60	18				Member		Non-independent
	**Leslie Li Hsien Chang (Lead Independent Director)**	69	4	Member		Member		Member	Independent
	**Dr. Harry E. Ruda**	65	13	Member	Member		Chair		Independent
	**Andrew (Luen Cheung) Wong**	66	10		Chair	Member			Independent
	**Lap Tat Arthur Wong**	64	5	Chair		Member			Independent
	**Lauren C. Templeton**	48	4	Member	Chair			Chair	Independent
	**Yan Zhuang**	60	4						Non-independent
	**Dr. Huifeng Chang**	58	4					Member	Non-independent
	Average	**61**	**8**						

Diversity of the Board of Directors

Canadian Solar's **Corporate Governance Guidelines** (link) and **Nominating and Corporate Governance Committee Charter** (link) clearly outline our dedication to board diversity. We value diversity across various dimensions, including gender, age, nationality, culture, professional background, and industry experience, as we believe it enhances the effectiveness of Board oversight. During the nomination process, diversity is considered in relation to the Board's overall composition.

We are continually working towards enhancing the diversity of our board of directors and aim to meet Nasdaq's new Rule 5605(f) on board diversity within the specified time frame, considering gender, nationality, ethnicity, age, and expertise. The following represents our Board Diversity Matrix, reflecting self-identified attributes:

Board Diversity Matrix (As of February 28, 2023)	
Country of Principal Executive Offices	Canada
Foreign Private Issuer	Yes
Disclosure Prohibited Under Home Country Law	No
Total Number of Directors	8

	Female	Male	Non-Binary	Did Not Disclose Gender
Part I : Gender Identity				
Directors	1	7	0	0
Part II : Demographic Background				
Underrepresented Individual in Home Country Jurisdiction			7	
LGBTQ+			0	
Do Not Disclosure Demographic Background			1	

Board Expertise and Training

Our Board boasts diverse professional backgrounds and industry experiences, collectively bolstering its capacity to oversee the company's overall performance. Our board members are proficient in many areas, including solar and storage technologies, strategy, international operations, corporate finance, auditing, accounting, capital markets, investing, research and development, risk management, marketing management, and corporate branding. Please refer to our annual report on **Form 20-F** (link) for more details.

To ensure that our Board has the right skill sets and knowledge to act in the best interests of our stakeholders, we conduct comprehensive training programs. These cover a broad spectrum of areas such as securities laws in the U.S., where the Company is listed, and Canada, where the Company is legally domiciled. Additional continuing education training ensures that each Board member remain abreast of developments and best practices in corporate governance as well as their committee assignments and other Board responsibilities.

Board Meeting Attendance

In 2023, our board of directors held a total of fifteen Board meetings, and twenty-three committee meetings. Additionally, they passed 66 resolutions with unanimous written consent. Both Board and committee meetings maintained a flawless attendance rate of 100% in 2023, a testament to our board members' dedication and commitment to fulfilling their roles and responsibilities.

Mandate from the Board for Third Party Audit of our Operations and Supply Chain

In May 2022, our Board passed a resolution mandating a third-party assessment, at a reasonable cost, on the extent to which Canadian Solar's policies and procedures effectively protect against forced labor in its operations, supply chains, and business relationships. The assessment would draw upon international standards such as the UN Guiding Principles on Business and Human Rights, ILO Declaration on Fundamental Principles and Rights at Work, and ILO Forced Labor Convention 1930 (No. 29).

In response, the Company engaged RBA to conduct VAP audits at our operations and suppliers. The VAP audit is an extensive on-site review carried out by an RBA-accredited auditing firm, verifying a company's compliance with the **RBA Code of Conduc**t (link) through document reviews, facility tours, and employee interviews. This on-site audit covers labor practice (including no force labor), health and safety, environment, ethics, and management systems. The RBA audit is an industry gold standard in manufacturing facility on-site evaluations.

In 2023, we initiated an RBA VAP audit at our module manufacturing facility in Thailand and earned a silver-level recognition, demonstrating full compliance with the "Freely Chosen Employment" rules, in other words, **no presence of forced labor.** In 2024, we have initiated an RBA VAP audit at our cell factory in Suqian, Jiangsu Province, China. The auditing agreement has been signed and we are working with RBA to schedule the onsite audit date. In addition, we plan to do another RBA VAP audit at one of our ingot factories in Qinghai Province, China commencing in 2024. Meanwhile, one of our polysilicon suppliers has initiated an RBA VAP audit at our request. This supplier is operated in Qinghai Province, China. The RBA VAP auditing process is lengthy and may take several months to complete.

Executive Management

Our Chief Sustainability Officer (CSO), Ms. Hanbing Zhang, is responsible for shaping and executing our sustainability strategy. She leads an ESG working group that comprises representatives from various departments such as strategy, EHS, HR, R&D, certifications, investor relations, global marketing, and project development. The group actively engages with external advisors on implementing our ESG strategy, ensuring we stay abreast of the latest ESG regulatory requirements and disclosure standards. The ESG team collaborates closely with the Company's management team to integrate ESG strategies into the Company's strategic decision-making process. This includes incorporating sustainability targets, such as those on environmental metrics, into our operational team's KPIs. Ms. Zhang also communicates with the Board's Sustainability Committee, offering periodic updates on the progress and initiatives tied to our sustainability targets.

Dr. Shawn Qu Visiting Our Walnut Creek Office

Executive Management Team*

	Title	Work Experience
 **Dr. Shawn (Xiaohua) Qu**	Chairman and CEO Canadian Solar Inc.	• Founded Canadian Solar in 2001 with NASDAQ IPO in 2006 • Director and VP at Photowatt International S.A. • Research scientist at Ontario Hydro (Ontario Power Generation)
 **Hanbing Zhang**	Chief Sustainability Officer CSI Solar Co., Ltd.	• Global Head of Marketing at Canadian Solar • Founder and President of Women in Solar Energy (WISE)
 **Yan Zhuang**	President CSI Solar Co., Ltd.	• Head of Asia of Hands-on Mobile, Inc. • Asia Pacific regional director of marketing, planning, and consumer insight at Motorola Inc.
 **Ismael Guerrero Arias**	Chief Executive Officer Recurrent Energy, LLC	• President, Head of Origination, and COO at TerraForm Global • Vice President of Global Projects at Canadian Solar • Director of Operations for Asia at the Global Sustainable Fund
 **Inés Arrimadas**	Chief Communications and ESG Officer Recurrent Energy, LLC	• Spokesperson of the centrist political party Ciudadanos at Congress of Deputies in Spain and opposition leader in the Parliament of Catalonia • Consultant in areas such as employment, European Funds, territorial development, and new technologies
 **Thomas Koerner**	Corporate Senior VP, Global Sales, CSI Solar Co., Ltd.	• General Manager North America of Astronergy (the solar division of the Chint Group) • Prokurist and Head of Sales Operations, Sourcing and Product Management Solar at Schuco Solar
 **Xinbo Zhu**	Senior VP and Chief Financial Officer Canadian Solar Inc.	• Chief Supply and Risk Officer of Recurrent Energy • Vice President and Finance Controller of Canadian Solar • Finance Director of Vishay Intertechnology
 **Dr. Huifeng Chang**	Senior VP and Chief Strategy Officer Canadian Solar Inc.	• Co-Head of Sales & Trading at CICC US in New York • CEO of CSOP Asset Management in Hong Kong • Vice President of Citigroup Equity Proprietary Investment in New York
 **Linhong Gao**	Chief Financial Officer CSI Solar Co., Ltd.	• Finance Director of China Grand Enterprises
 **Guangchun Zhang**	Senior VP CSI Solar Co., Ltd.	• Vice President for R&D and Industrialization of Manufacturing Technology at Suntech Power Holdings • Centre for Photovoltaic Engineering at the University of New South Wales and Pacific Solar Pty. Limited

For details on executive compensation, please refer to Canadian Solar Inc.'s annual report on **Form 20-F (link)*

Ethical Business Conduct

Canadian Solar is dedicated to maintaining the highest standards of business ethics. Our Code of Business Conduct and Ethics applies to all directors, officers and employees of Canadian Solar and its subsidiary entities.

Outlined below is a summary of our principal governance documents and guidelines:

Policy	Area of Focus
Code of Business Conduct and Ethics (link)	• Environment, health, and safety • Harassment and discrimination • Employment practices, including anti-discrimination, freedom of association, privacy, and collective bargaining • Conflict of interests • Confidential information • Competition and fair trading • Gifts and entertainment expenses
Whistleblower Policy (link)	• Provides a 24/7 reporting channel where internal and external stakeholders can report their concerns on financial reporting and disclosure, fraudulent activity, breaches of compliance policies, etc. to the Board • Protection from retaliation for whistleblowers • Anonymous reporting and confidentiality
Insider Trading Policy (link)	• Procedure for preventing insider trading
Related-Party Transactions (link)	• Policy and procedures on reporting, approval, and disclosure of related-party transactions
Anti-Corruption Policies	• Prohibition against giving bribes (link) • Prohibition against accepting bribes (link)

Policy	Area of Focus
Anti-Modern Slavery (link)	• Measures taken to ensure modern slavery does not occur anywhere in Canadian Solar's business, including through its supply chain
Labor and Human Rights Policy (link)	• Labor and human rights standards to which Canadian Solar's employees are entitled
Equal Employment Opportunity Policy (link)	• Canadian Solar's commitment to providing an equal opportunity and discrimination-free workplace
Diversity Policy (link)	• Emphasize our commitment to diversity at all levels, including its senior management and board of directors
EHS Policy (link)	• Canadian Solar's guiding principles and objectives for environmental preservation and providing a healthy and safe workplace for employees
Supplier Code of Conduct (link)	• Canadian Solar's standards on human rights, environmental protection, health, safety, and business ethics for our suppliers and their suppliers
Conflict Minerals Policy (link)	• Measures taken to ensure Canadian Solar's supply chain remains free of conflict minerals illegally produced in the Democratic Republic of the Congo and its neighbors

Business Ethics Awareness and Compliance Trainings

At Canadian Solar, we ensure that all our employees are well-informed and trained on our compliance policies, which are publicly available on our website (link). We conduct annual training sessions for all employees. These sessions cover key definitions, responsibilities of Canadian Solar employees, supplier expectations, among other topics. As part of our thorough training process, we may also administer assessments to measure the successful completion of each training by our employees. Below are examples of business ethics awareness and compliance training sessions offered to our employees at Canadian Solar:

Training/Result Review	Scope	Frequency
Business ethics training, including Foreign Corrupt Practices Act (FCPA)	All employees	Annual; at least quarterly for new employees
Anti-modern slavery training	All employees	Annual; at least quarterly for new employees
Data protection	All employees	Annual; at least quarterly for new employees
Compliance Declaration and Questionnaire, declaring conflict of interest and related party transactions, if any, and the acknowledgement and adherence to Canadian Solar's policies and procedures	All employees from Sales, Business Development and Procurement departments, and employees at managerial level or higher from other departments	Annual
Compliance test of compliance awareness and Canadian Solar's policies and procedures	All employees	Annual

Cybersecurity

Cybersecurity is paramount at Canadian Solar as we are dedicated to safeguarding our people, data, and assets. Our approach is proactive and risk-based, emphasizing technology investments, enhancements, personnel development, and process improvements. Our program is designed and assessed in accordance with leading industry standards and frameworks, including the International Organization for Standardization (ISO), National Institute of Standards and Technology (NIST), and Information Technology Infrastructure Library (ITIL). Meanwhile, we collaborate with third-party cybersecurity professionals to conduct security assessments of our enterprise-wide cybersecurity practices. This collaboration includes penetration testing and the identification of areas for continuous improvement within our information security program.

Risk Management

We collect and maintain information in digital form that is necessary to conduct our operations and engage with our customers and business partners. We are increasingly dependent on information technology systems and network infrastructure to operate our business.

Our information technology organization aims to employ best practices, including the implementation of a cybersecurity risk management program. This program is designed to protect the confidentiality, integrity, and availability of our critical systems and information. Our cybersecurity risk management program encompasses several processes, including, but not limited to, the following:

- **Cybersecurity incident response plan.** The plan outlines the processes and procedures necessary for addressing, remediating, and resolving security incidents involving potential or actual compromises of our digital information. The plan also describes the structure, roles, and responsibilities of internal information technology personnel involved in responding to such incidents and provides a process for alerting management of such incidents. The response plan is reviewed on an annual basis and revised as necessary.

Risk Management

- **Incident detection and prevention.** We have implemented and deployed technologies and solutions to assist in the prevention of potential cybersecurity incidents. These safeguards include, among other things, intrusion prevention, and detection systems, software patch management, including anti-virus and anti-malware installations, and ongoing vulnerability assessments.
- **Internal user and third-party information technology access.** We employ various security measures, including data encryption, firewalls, email security, and network segmentation with access control lists to restrict data availability to authorized systems and networks.
- **Information technology change management and physical security.** We implement safeguards, protocols, and procedures to protect data integrity, device vulnerabilities and secure our information technology infrastructure through network tools and systems. We aim to enhance information security by consolidating business systems and information systems on integrated platforms. We further conduct cybersecurity awareness training for our employees.

Cybersecurity Oversight and Governance

The board of directors oversees the Company's risk management processes directly and through its committees. Our cybersecurity risk management program is integrated into our overall enterprise risk management program, and shares common methodologies, reporting channels and governance processes that apply across the enterprise risk management program to other areas, including legal, compliance, strategic, operational, and financial risks.

The Nominating and Corporate Governance Committee oversees management's implementation of our cybersecurity risk management program. The Nominating and Corporate Governance Committee receives periodic reports from management on our cybersecurity risks. Additionally, management updates the Nominating and Corporate Governance Committee as necessary on any material cyber security incidents, as well as on incidents with lesser impact potential. The Nominating and Corporate Governance Committee reports its activities, including those related to cybersecurity, to the full board of directors.

Our management supervises efforts to prevent, detect, mitigate, and remediate cybersecurity risks and incidents through various means. These include briefings from internal information technology personnel, utilization of threat intelligence and insights from external consultants, and analysis of alerts and reports generated by security tools within our IT infrastructure. Our internal IT personnel, responsible for supporting our information security program, possess relevant educational backgrounds and industry experience, often having previously served in similar positions within large companies.

Please refer to our annual report on **Form 20-F** (link) for our complete disclosure related to cybersecurity.

About this Report

Canadian Solar's Sustainability Report was prepared in accordance with the Sustainability Accounting Standards Board (SASB) framework under the Solar Technology & Project Developers standards and the Sustainability Reporting Standards (2021 version) issued by the Global Reporting Initiative (GRI), and with reference to the International Financial Reporting Standards (IFRS) for Sustainability-Related Disclosures issued by the International Sustainability Standards Board (ISSB).

This report was designed to showcase our Environmental, Social, and Governance (ESG) strategy and disclosures, incorporating insights gathered from the investment community and other stakeholders. Unless specified otherwise, the reporting period detailed in this document extends from January 1, 2023, to December 31, 2023.

Our greenhouse gas emissions inventories for scopes 1, 2, and 3 were calculated according to the methodology recommended by SGS, a globally recognized organization specializing in inspection, verification, testing, and certification services.

This report represents a collective effort across all departments at Canadian Solar. Special recognition goes to our manufacturing operation teams for their substantial contributions to energy conservation and waste reduction, as well as their roles in advancing our circular economy initiatives.

My sincere appreciation is extended to the core members of our Sustainability Report project team for their efforts in information collection, data analysis, drafting, editing, and layout design: Mary Ma, Holly Zhang, Yuan Zhou, Heidi Peng, Angela Zhang, Andrea Zhu, Linda Yin, Huizhen Gao, and Julie Zhang. Their commitment was crucial in ensuring the timely and thorough development of this report.

Gratitude is also expressed to those who contributed to the production of this report: Wina Huang, Inés Arrimadas, Cari Collins, Emma Goldfield, Cecilia Tian, Isabel Zhang, Yu Chen, Pauline Wong, Antonio Adami, Byron Xu, Emma Lenze, Andrew Williams, Katherine Wang, Susan Chen, Gray Fan, Tina Qin, Pauline Levean, Joe Jones, Inmaculada Asencio, Mark Feenstra, and Brian Bayne.

Finally, I would like to thank our Board members, particularly those on the Sustainability Committee, for their leadership and valuable feedback.

Hanbing Zhang
Chief Sustainability Officer

To provide feedback on our sustainability report, please contact ESG@canadiansolar.com.

Materiality Assessment and Stakeholder Engagement

Canadian Solar actively engages with both internal and external stakeholders to identify and prioritize ESG topics central to the Company's business and stakeholders. Our materiality assessment incorporates insights from an array of internal stakeholders – including our board of directors, executive management, employees across our global operations – and external stakeholders, such as our customers, suppliers, investors, creditors, local communities, industry associations, NGOs, media outlets, and the scientific community.

This sustainability report outlines key ESG topics and our strategies and actions based on our materiality analysis, all of which have undergone review by our Chief Sustainability Officer and the Sustainability Committee. The results of this comprehensive assessment enable us to identify opportunities, mitigate risks, and better integrate ESG principles into our business fabric.

The following chart describes Canadian Solar's approach to stakeholder engagement in 2023:

Stakeholders	Engagement Methods	Engagement Frequency	Focus Areas
Employees	Trainings, meetings, emails, surveys, townhalls	Ongoing	Company performance, environmental impact and social responsibility
Customers	Meetings, emails, conferences, trade shows, technical workshops	Ongoing	Company performance, product quality, social responsibility, supplier assessments
Suppliers	Meetings, emails, conferences, trade shows, technical workshops, surveys, audits	Ongoing	Company performance, product quality, procurement practices
Investors/Shareholders	Meetings, earnings calls, emails, conferences, roadshows	Ongoing	Company performance, ESG performance
Creditors	Meetings, emails, conferences, trade shows	Ongoing	Company performance, credit quality, key risks, ESG performance
Rating Agencies	Meetings, emails, conferences	Ongoing	Company performance, credit quality, key risks, ESG performance
Media	Interviews, emails, meetings, trade shows	Ongoing	Company performance, ESG performance
Local Communities	Community presentations and meetings, local tours, training programs	Ongoing	Environmental and ecological impacts, job creation, occupational health & safety
NGOs	External surveys, emails, partnerships, meetings, workshops	Ongoing	Environmental, ecological, and social impacts
Scientific Community	Conferences, emails, standards development meetings, technical workshops	Ongoing	Product quality, environmental impacts, social responsibility, job creation, supplier assessment

Appendix: Global Reporting Frameworks

In this Section 74

SASB Content Index

Topic	Accounting Metric	Category	Unit of Measure	Code	Response
Energy Management in Manufacturing	(1) Total energy consumed	Quantitative	Gigajoules (GJ)	RR-ST-130a.1	12,225,091
	(2) Percentage grid electricity		Percentage (%)		98
	(3) Percentage renewable		Percentage (%)		1.3 (only including solar energy generation on site for self-consumption). **The percentage would be 33% if including renewable electricity from the grid**
Water Management in Manufacturing	(1) Total water withdrawn	Quantitative	Thousand cubic meters (m^3)		14,857
	(1) Total water consumed		Thousand cubic meters (m^3)		5,544
	(2) Total water withdrawn, percentage of each in regions with High or Extremely High Baseline Water Stress		Percentage (%)		34
	(2) Total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress		Percentage (%)		42
	Description of water management risks and discussion of strategies and practices to mitigate those risks	Discussion and Analysis	n/a	RR-ST-140a.2	2023 Sustainability Report, Environmental Metrics and Targets, Water Risk Management Strategy, p.30
Hazardous Waste Management	Amount of hazardous waste generated	Quantitative	Metric tons (t)	RR-ST-150a.1	13.7
	Hazardous waste percentage recycled	Quantitative	Percentage (%)	RR-ST-150a.1	3.3
	Number and the aggregate quantity of reportable spills		Number		0
	Spills quantity recovered		Kilograms (kg)		0
Ecological Impacts of Project Development	Number and duration of project delays related to ecological impacts	Quantitative	Number, Days	RR-ST-160a.1	None
	Description of efforts in solar energy system project development to address community and ecological impacts	Discussion and Analysis	n/a	RR-ST-160a.2	2023 Sustainability Report, Environmental Metrics, Environmental Stewardship in Project Development and Operations and Maintenance, p.35-37

Topic	Accounting Metric	Category	Unit of Measure	Code	Response
Management of Energy Infrastructure Integration & Related Regulations	Description of risks associated with integration of solar energy into existing energy infrastructure and discussion of efforts to manage those risks	Discussion and Analysis	n/a	RR-ST-410a.1	2023 Sustainability Report, Social Responsibility, Making the Difference through Community Commitment, p.55-57
	Description of risks and opportunities associated with energy policy and its impact on the integration of solar energy into existing energy infrastructure	Discussion and Analysis	n/a	RR-ST-410a.2	2023 Sustainability Report, Social Responsibility, Making the Difference through Community Commitment, p.55-57
Product End-of-life Management	Percentage of products sold that are recyclable or reusable	Quantitative	Percentage (%)	RR-ST-410b.1	2023 Sustainability Report, Environmental Metrics and Targets, Product End-of-Life Management and Recycling, p.33
	Weight of end-of-life material recovered, percentage recycled	Quantitative	Metric tons (t), Percentage (%)	RR-ST-410b.2	2023 Sustainability Report, Environmental Metrics and Targets, Product End-of-Life Management and Recycling, p.33
	Percentage of products by revenue that contain IEC 62474 declarable substances, arsenic compounds, antimony compounds, or beryllium compounds	Quantitative	Percentage (%)	RR-ST-410b.3	Our modules are free of IEC 62474 declarable substances except for lead, which is a material used for soldering crystalline PV modules. Lead accounts for 0.03% of a solar module's weight. One of our top R&D and sustainability priorities over the coming years is to reduce lead content in our modules. IEC 62474 is an international standard for material declarations for the electrical and electronics industry and its suppliers. It provides requirements for material declarations including a Declarable Substance List and a material declaration procedure.
	Description of approach and strategies to design products for high-value recycling	Quantitative	n/a	RR-ST-410b.4	2023 Sustainability Report, Environmental Metrics and Targets, Product End-of-Life Management and Recycling, p.33
Materials Sourcing	Description of the management of risks associated with the use of critical materials	Discussion and Analysis	n/a	RR-ST-440a.1	Not applicable, as the company does not use the critical materials defined by SASB
	Description of the management of environmental risks associated with the polysilicon supply chain	Discussion and Analysis	n/a		Polysilicon manufacturing processes involve the use of volatile or dangerous chemicals and waste. Those chemicals are required to be handled with proper training provided. Wastewater and waste gas are processed through various treatments so that they meet the respective discharge standards. Most solid waste generated during the manufacturing process can be reused and does not contain hazardous materials. Pollution control systems are set in place to reduce, treat, and recycle the waste generated in the manufacturing process. Furthermore, laws and regulations are in place to govern water, air, solid waste, and noise pollution, as well as hazardous chemicals, among others, in places where the upstream polysilicon suppliers operate. Polysilicon suppliers are required to obtain all the necessary environmental permits to conduct business and are subject to regulation and periodic monitoring by local environmental protection and work safety authorities. Where there are environmental non-compliance incidents, the polysilicon suppliers are subject to substantial fines and potentially suspension of production or cease operations.

IFRS S2

IFRS S2 Recommended Disclosures	Response
Governance	
A) Describe the governance body(s) or individual(s) responsible for oversight of climate-related risks and opportunities.	2023 Sustainability Report, 1) Environmental Metrics and Targets, Climate-Related Risks and Opportunities, p.38 2) Governance, Sustainability Committee, p.64
B) Describe management's role in the governance process, controls and procedures used to monitor, manage, and oversee climate-related risks and opportunities.	2023 Sustainability Report, Governance, Executive Management, p.67-68
Strategy	
A) Describe the climate-related risks and opportunities that could reasonably be expected to affect the company over the short, medium, and long term and explain whether the risk is considered a climate-related physical risk or climate-related transition risk	2023 Sustainability Report, Environmental Metrics and Targets, Climate-Related Risks and Opportunities, p.38
B) Explain how the company defines "short term", "medium term" and "long term" and how these definitions are linked to the planning horizons used by the entity for strategic decision-making	2023 Sustainability Report, Environmental Metrics and Targets, Climate-Related Risks and Opportunities, p.38
C) Describe the current and anticipated effects of climate-related risks and opportunities on the company's business model and value chain (including where they are concentrated); and the company's strategy and decision-making	2023 Sustainability Report, Environmental Metrics and Targets, Climate-Related Risks and Opportunities, p.38
D) Describe quantitative and qualitative information about the current and anticipated effects of climate-related risks and opportunities on the company's financial position, financial performance, and cash flows over the short, medium, and long term with reference the company's financial planning	2023 Sustainability Report, Environmental Metrics and Targets, Climate-Related Risks and Opportunities, p.38
E) Describe how the company has and plans to respond to, climate-related risks and opportunities in its strategy and decision-making, including how it plans to achieve and resource any climate-related targets it has set or is required to meet by law or regulation. Provide qualitative and quantitative information about the progress of such plans.	2023 Sustainability Report, Environmental Metrics and Targets, Climate-Related Risks and Opportunities, p.38
F) Describe the climate resilience of the company's strategy and business model to climate-related changes, developments, and uncertainties with reference to the identified climate-related risks and opportunities using climate-related scenario analysis	2023 Sustainability Report, Environmental Metrics and Targets, Climate-Related Risks and Opportunities, p.38
Risk Management	
A) Describe the company's processes and related policies for identifying, assessing, prioritizing, and monitoring climate-related risks, including whether and how the company uses climate-related scenario to inform its identification of climate-related opportunities.	2023 Sustainability Report, 1) Environmental Metrics and Targets, Climate-Related Risks and Opportunities, p.38 2) Governance, Executive Management, p.67-68
C) Describe the extent to which and how processes for identifying, assessing, and managing climate-related risks are integrated into the company's overall risk management process.	2023 Sustainability Report, Governance 1) Sustainability Committee, p.64 2) Executive Management, p.67-68

Metrics and Targets	
A) Disclose the metrics and targets used by the company to assess climate-related risks and opportunities, including progress towards any climate-related targets it has set and any targets it is required to meet by law or regulation	2023 Sustainability Report, 1) Environmental Metrics and Targets, Climate-Related Risks and Opportunities, p.18-36 2) Governance, Sustainability Committee, p.64
B) Disclose the company's absolute gross scope 1, scope 2, and scope 3 greenhouse gas (GHG) emissions in accordance with the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (2004) and the Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (2011) and the approach it uses to measure emissions.	2023 Sustainability Report, Governance, Executive Management, p.67-68
C) Disclose the amount of capital expenditure, financing or investment deployed towards climate-related risks and opportunities and internal carbon prices, if any	2023 Sustainability Report, Environmental Metrics and Targets, Climate-Related Risks and Opportunities, p.38
D) Disclose the quantitative and qualitative climate-related targets set by the company to monitor progress towards achieving its strategic goals as well as to fulfil any legal or regulatory requirements	2023 Sustainability Report, Environmental Metrics and Targets, Climate-Related Risks and Opportunities, p.38
E) Describe the company's approach to setting and reviewing each target; how it monitors progress against each target; and its performance against each climate-related target with reference to past performance	2023 Sustainability Report, Environmental Metrics and Targets, Climate-Related Risks and Opportunities, p.38

Global Reporting Initiative Metrics

Statement of use	Canadian Solar has reported the information cited in this GRI content index for the period January to December 2023, unless otherwise specified, in accordance to the GRI standards.
GRI 1 used	GRI 1: Foundation 2021
Applicable GRI Sector Standard(s)	Not applicable

GRI 2: General Disclosures		
2-1	Report its legal name	Canadian Solar Inc.
2-1	Report its nature of ownership and legal form	Investor-owned corporation, NASDAQ: CSIQ
2-1	Report the location of its headquarters	Guelph, Ontario, Canada
2-1	Report its countries of operation	2023 Sustainability Report, About Canadian Solar, p.8
2-2	Entities included in the organization's sustainability reporting	2023 Sustainability Report, About Canadian Solar, p.8
2-3	Reporting period, frequency and contact point	Reporting period: January 1 to December 31, 2023, unless otherwise stated Frequency: annual Contact point: ESG@canadiansolar.com
2-4	Restatements of information	None
2-5	External assurance	2023 Sustainability Report, About this Report, p.72
2-6	Activities, value chain and other business relationships	2023 Sustainability Report, 1) About Canadian Solar, p.7-8 2) Environmental Metrics and Targets, Environmental Stewardship in Project Development and Operations and Maintenance, p.35 3) Responsible Supply Chain, Supplier ESG Audits, p.61 2023 Annual Report (link), Results of Operations, p.98-101
2-7	Employees	2023 Sustainability Report, Social Responsibility, Working at Canadian Solar, p.42
2-8	Workers who are not employees	2023 Sustainability Report, Social Responsibility, Working at Canadian Solar, p.42
2-9	Governance structure and composition	2023 Sustainability Report, Governance, 1) Board Committees, p.64 2) Board Members and Duties, p.65
2-10	Nomination and selection of the highest governance body	2023 Sustainability Report, Governance, Board Committees, p.64-65
2-11	Chair of the highest governance body	2023 Sustainability Report, Governance, Board Committees, p.64-65
2-12	Role of the highest governance body in overseeing the management of impacts	2023 Sustainability Report, Governance, Board Committees, p.64-65
2-13	Delegation of responsibility for managing impacts	2023 Sustainability Report, Governance, 1) Board Committees, p.64-65 2) Executive Management, p.67-68
2-14	Role of the highest governance body in sustainability reporting	2023 Sustainability Report, Governance, Board Committees, p.64
2-15	Conflicts of interest	2023 Sustainability Report, Governance, Ethical Business Conduct, p.69 Code of Business Conduct and Ethics (link)

GRI 2: General Disclosures		
2-16	Communication of critical concerns	2023 Sustainability Report, 1) Social Responsibility, Grievance Procedure and Zero Tolerance for Retaliation, p.49, 2) Whistleblower Policy (link)
2-17	Collective knowledge of the highest governance body	2023 Sustainability Report, Governance, 1) Board Committees, p.64-65 2) Board Expertise and Training, p.66
2-18	Evaluation of the performance of the highest governance body	2023 Sustainability Report, Governance, Board Committees, p.64
2-22	Statement on sustainable development strategy	2023 Sustainability Report, 1) Message from the Chief Executive Officer, p.3 2) Highlights, p.4-6 3) Governance, Executive Management, p.67-68
2-23	Policy commitments	2023 Sustainability Report, 1) About Canadian Solar, Sustainability at Canadian Solar, p.9 2) Governance, Ethical Business Conduct, p.68
2-24	Embedding policy commitments	2023 Sustainability Report, 1) About Canadian Solar, Sustainability at Canadian Solar, p.9 2) Social Responsibility, Making the Difference through Community Commitment, p.55-57 3) Responsible Supply Chain, Supplier Code of Conduct, p.61 4) Governance, Ethical Business Conduct, p.68 5) Supplier Code of Conduct (link)
2-25	Processes to remediate negative impacts	2023 Sustainability Report, Social Responsibility, 1) Grievance Procedure and Zero Tolerance for Retaliation, p.49 2) Whistleblower Policy (link)
2-26	Mechanisms for seeking advice and raising concerns	2023 Sustainability Report, Social Responsibility, 1) Grievance Procedure and Zero Tolerance for Retaliation, p.49 2) Whistleblower Policy (link)
2-27	Compliance with laws and regulations	We comply with laws and regulations in every jurisdiction where we operate.
2-28	Membership associations	2023 Sustainability Report, Social Responsibility, Non-Governmental Organizations and Memberships, p.58
2-29	Approach to stakeholder engagement	2023 Sustainability Report, About this Report, Materiality Assessment and Stakeholder Engagement, p.73
2-30	Collective bargaining agreements	2023 Sustainability Report, Social Responsibility, Freedom of Association and Collective Bargaining, p.49
GRI 3: Material Topics		
3-1	Process to determine material topics	2023 Sustainability Report, About this Report, Materiality Assessment and Stakeholder Engagement, p.73
3-2	List of material topics	2023 Sustainability Report, About this Report, Materiality Assessment and Stakeholder Engagement, p.73
3-3	Management of material topics	2023 Sustainability Report, About this Report, Materiality Assessment and Stakeholder Engagement, p.73
GRI 201: Economic Performance		
201-1	Direct economic value generated and distributed	2023 Sustainability Report, 1) About Canadian Solar, Approach to Environment, Health, and Safety (EHS), p.12 2) Social Responsibility, Share Compensation Plan, p.46 2023 Annual Report (link), Results of Operations, p.98-101
201-2	Financial implications and other risks and opportunities due to climate change	2023 Sustainability Report, Environmental Metrics and Targets, Climate-Related Opportunities and Risks, p.38-39
GRI 203: Indirect Economic Impacts		
203-1	Infrastructure investments and services supported	2023 Annual Report (link), p.63-66, 92-96; p.F4, F-13, F-15, F18-20, F63
203-2	Communication and training about anti-corruption policies and procedures	2023 Sustainability Report, 1) Climate-Related Risks and Opportunities, p.38-39

GRI 205: Anti-corruption		
205-1	Operations assessed for risks related to corruption	2023 Sustainability Report, Governance, Ethical Business Conduct, p.68 Prohibition against Giving Bribes (link) Prohibition against Accepting Bribes (link)
205-2	Communication and training about anti-corruption policies and procedures	2023 Sustainability Report, Governance, 1) Ethical Business Conduct, p.68 2) Business Ethics Awareness and Compliance Trainings, p.61 Prohibition against Giving Bribes (link) Prohibition against Accepting Bribes (link)
205-3	Confirmed incidents of corruption and actions taken	None
GRI 206: Anti-competitive Behavior		
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	None
GRI 302: Energy		
302-1	Energy consumption within the organization	Unit: Gigajoules (GJ) Total energy consumption: 12,225,091 Gas: 24,057 Diesel: 4,287 Gasoline: 3,109 Steam: 113,323 Grid electricity: 11,926,271 Solar PV electricity: 154,044
302-2	Energy consumption outside of the organization	Environmental Metrics and Targets, Greenhouse Gas Emissions, Scope 3 emissions, p.23
302-3	Energy intensity	Unit: MWh/MW Ingot production: 54.33 Wafer production: 10.83 Cell production: 60.70 Module production: 15.57
302-4	Reduction of energy consumption	2023 Sustainability Report, Environmental Metrics and Targets, Energy Intensity, p.26-28
302-5	Reductions in energy requirements of products and services	2023 Sustainability Report, Environmental Metrics and Targets, Module Carbon Footprint Improvement, p.25
GRI 303: Water and Effluents		
303-1	Interactions with water as a shared resource	2023 Sustainability Report, Environmental Metrics and Targets, Water Intensity, p.29-31
303-2	Management of water discharge-related impacts	2023 Sustainability Report, Environmental Metrics and Targets, Water Intensity, p.29-31
303-3	Water withdrawal	14,857 thousand cubic meters (m^3)
303-4	Water discharge	9,309 thousand cubic meters (m^3)
303-5	Water consumption	5,544 thousand cubic meters (m^3)
GRI 304: Biodiversity		
304-2	Significant impacts of activities, products and services on biodiversity	2023 Sustainability Report, 1) Environmental Metrics and Targets, Environmental Stewardship in Project Development and Operations and Maintenance, p.35-37 2) Social Responsibility, Non-Governmental Organizations and Memberships, p.58
304-3	Habitats protected or restored	2023 Sustainability Report, 1) Environmental Metrics and Targets, Environmental Stewardship in Project Development and Operations and Maintenance, p.35-37 2) Social Responsibility, Non-Governmental Organizations and Memberships, p.58

GRI 305: Emissions		
305-1	Direct (Scope 1) GHG emissions	54,982 metric tons of CO_2 equivalent (tCO_2eq)
305-2	Energy indirect (Scope 2) GHG emissions	Location-based: 2,274,291 metric tons of CO_2 equivalent (tCO_2eq) Market-based: 2,260,125 tCO_2eq
305-3	Other indirect (Scope 3) GHG emissions	803,362 metric tons of CO_2 equivalent (tCO_2eq)
305-4	GHG emissions intensity	Unit: tCO_2eq/MW Ingot production: 42.1 Wafer production: 6.3 Cell production: 38.2 Module production:10.1
305-5	Reduction of GHG emissions	2023 Sustainability Report, Environmental Metrics and Targets, Greenhouse Gas Emissions, p.22-24
305-7	Nitrogen oxides (NO_x), sulfur oxides (SO_x), and other significant air emissions	Unit: metric tons (t) Nitrogen oxides (NO_x): 16.7 Sulfur oxides (SO_x): 0.4 Fine dust (PM10): 19.7 Hazardous air pollutants (HAP): 18.3 Volatile organic compounds (VOC): 29.9 Persistent organic pollutants (POP): 0 Other standard air emissions: 20.2
GRI 306: Waste		
306-1	Waste generation and significant waste-related impacts	2023 Sustainability Report, 1) About Canadian Solar, Understanding the Environmental Impact of Manufacturing, p.20 2) Environmental Metrics and Targets, Waste Intensity, p.31-32 Climate-Related Risks and Opportunities, p.38
306-2	Management of significant waste-related impacts	2023 Sustainability Report, 1) About Canadian Solar, Approach to Environment, Health, and Safety (EHS), p.12 2) Environmental Metrics and Targets, Waste Intensity, p.31-32 Climate-Related Risks and Opportunities, p. 38
306-3	Waste generated	Unit: Metric kilotons (kt) Disposed hazardous waste: 7.2 Recycled or reused hazardous waste: 6.5 Disposed non-hazardous waste: 15.2 Recycled or reused non-hazardous: 170.1
306-4	Waste diverted from disposal	2023 Sustainability Report, About Canadian Solar, Environmental Metrics and Targets, Waste Intensity, p.31-32
306-5	Waste directed to disposal	2023 Sustainability Report, About Canadian Solar, Environmental Metrics and Targets, Waste Intensity, p.31-32
GRI 308: Supplier Environmental Assessment		
308-1	New suppliers that were screened using environmental criteria	2023 Sustainability Report, Responsible Supply Chain, Supplier ESG Audits, p.61
308-2	Negative environmental impacts in the supply chain and actions taken	The major findings from our 203 audits were mostly pertained to environmental issues, with no instances of forced or child labor detected. After consultation and implementing corrective action plans, all our suppliers passed our 2023 ESG audits.
GRI 401: Employment		
401-3	Parental leave	2023 Sustainability Report, Social Responsibility, Work-life-balance, p.48
GRI 403: Occupational Health and Safety		
403-1	Occupational health and safety management system	2023 Sustainability Report, Social Responsibility, Occupational Health and Safety, p.50
403-2	Hazard identification, risk assessment, and incident investigation	2023 Sustainability Report, Social Responsibility, Hazardous Materials and Environmental Management, p.51
403-3	Occupational health services	2023 Sustainability Report, Social Responsibility, Occupational Health and Safety, p.50
403-4	Worker participation, consultation, and communication on occupational health and safety	2023 Sustainability Report, Social Responsibility, Occupational Health and Safety, p.50

403-5	Worker training on occupational health and safety	2023 Sustainability Report, Social Responsibility, Occupational Health and Safety, p.50
403-6	Promotion of worker health	2023 Sustainability Report, Social Responsibility, Occupational Health and Safety, p.50
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	2023 Sustainability Report, Social Responsibility, Occupational Health and Safety, p.50
403-8	Workers covered by an occupational health and safety management system	2023 Sustainability Report, Social Responsibility, Occupational Health and Safety, p.50
403-9	Work-related injuries	2023 Sustainability Report, Social Responsibility, Occupational Health and Safety, p.50
403-10	Work-related ill health	2023 Sustainability Report, Social Responsibility, Hazardous Materials and Environmental Management, p.51
GRI 404: Training and Education		
404-1	Average hours of training per year per employee	21.9 hours per employee for 2023 2023 Sustainability Report, Social Responsibility, On-the-Job Training, p.48
404-2	Programs for upgrading employee skills and transition assistance programs	2023 Sustainability Report, Social Responsibility, Talent Strategy, Training and Development, p.46-47
404-3	Percentage of employees receiving regular performance and career development reviews	100% of full-time employees
GRI 405: Diversity and Equal Opportunity		
405-1	Diversity of governance bodies and employees	2023 Sustainability Report, 1) Social Responsibility, Diversity, Equity, and Inclusion, p.42-44 2) Governance, Diversity of the Board of Directors, p.66
GRI 406: Non-discrimination		
406-1	Incidents of discrimination and corrective actions taken	None
GRI 407: Freedom of Association and Collective Bargaining		
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	2023 Sustainability Report, 1) Social Responsibility, Freedom of Association and Collective Bargaining, p.49 2) Responsible Supply Chain, Supplier ESG Audits, p.61
GRI 408: Child Labor		
408-1	Operations and suppliers at significant risk for incidents of child labor	None
GRI 409: Forced or Compulsory Labor		
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	None, we have been taking action to prevent this. 2023 Sustainability Report, Responsible Supply Chain, 1) Anti-Modern Slavery Initiatives, p.60-61 2) Supplier ESG Audits, p.61
GRI 411: Rights of Indigenous Peoples		
411-1	Incidents of violations involving rights of indigenous peoples	None
GRI 413: Local Communities		
413-1	Operations with local community engagement, impact assessments, and development programs	2023 Sustainability Report, 1) Environmental Metrics, Environmental Stewardship in Project Development and Operations and Maintenance, p.35-37 2) Social Responsibility, Making a Difference through Community Commitment, p.55-57
413-2	Operations with significant actual and potential negative impacts on local communities	None

GRI 414: Supplier Social Assessment		
414-1	New suppliers that were screened using social criteria	2023 Sustainability Report, Responsible Supply Chain, p.59-61
414-2	Negative social impacts in the supply chain and actions taken	2023 Sustainability Report, Responsible Supply Chain, p.59-61
GRI 416: Customer Health and Safety		
416-1	Assessment of the health and safety impacts of product and service categories	2023 Sustainability Report, 1) About Canadian Solar, Approach to Environment, Health, and Safety (EHS), p.12
GRI 417: Marketing and Labeling		
417-1	Requirements for product and service information and labeling	2023 Sustainability Report, Environmental Metrics and Targets, Understanding the Environmental Impact of Manufacturing, p.20
417-2	Incidents of non-compliance concerning product and service information and labeling	None
417-3	Incidents of non-compliance concerning marketing communications	None
GRI 418: Customer Privacy		
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	None

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